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# Work-family trajectories in young adulthood: Associations with mental health problems in adolescence

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## ABSTRACT

During young adulthood, several transitions in work and family lives occur, but knowledge of the work-family trajectories of the current generation of young adults, i.e. people born in the 1990s, is lacking. Moreover, little is known about whether the mental health status before the start of the working life may shape work-family trajectories. We used 18-year follow-up data from the TRAILS cohort study of individuals born between 1989 and 1991 ( $n = 992$ ; 63.2% women). Internalising and externalising problems were measured with the Youth Self-Report at ages 11, 13 and 16 years. Monthly employment, education and parenthood states were recorded between 18 and 28 years. Applying sequence analysis, we identified six work-family trajectories in women and men. The first five trajectories were labelled: *long education*, *continuous education and work*, *education and work to work*, *early work*, and *inactive*. The main difference between trajectories of women and men was in the timing of parenthood, thus the remaining trajectory of women was labelled *active with children*, and the remaining trajectory of men *active*. Women who experienced externalising problems in adolescence were more likely to belong to the trajectory characterised by parenthood. Men who experienced internalising problems in adolescence were more likely to belong to the trajectory characterised by a long time spent in education. The TRAILS data allowed us to consider timing, duration and ordering of the work and family states in young adulthood, and to use multiple assessments of mental health in adolescence. Further research needs to examine the mechanisms through which early mental health affects later work and family outcomes.

## 1. Introduction

Work and family domains are deeply intertwined in many ways. In Western societies, the rise of women's education and employment has been shown to be one of the main reasons for delaying parenthood (Mills et al., 2011). Conversely, starting a family and becoming a parent affects working life by generating disadvantages in labour market participation (Kahn et al., 2014), occupational status (Abendroth et al., 2014) and income (Gangl and Ziefle, 2009). Additionally, with the shift from the traditional division of gender roles to dual-earner couples in which both partners participate in the labour market, the domains of work and family have become even more intertwined (Comolli et al., 2021). Alongside the changes in how people combined work and family roles, theoretical frameworks on the interaction between the work and family domain have shifted from theorising work-family conflict and negative consequences of combining multiple roles (Greenhaus and Beutell, 1985) to more positive hypotheses of how work and family roles may enhance one another. For instance, work-family enrichment theory

describes positive influence of experiences in one role on the quality of life in the other role (Greenhaus and Powell, 2006). The increase in studies examining positive aspects of combining multiple work and family roles might help to identify circumstances that contribute to work-family enhancement (Warner and Hausdorf, 2009). Moreover, the way people combine work and family roles across their life course cannot be discussed without considering gender roles in work and family domains. Gender roles are the beliefs and expectations that are assigned to individuals on the basis of their perceived sex (Eagly, 2009) that inevitably affect how people combine work and family roles. For instance, it is women whose working lives are disproportionately affected after the transition to parenthood by parental leave, reducing working hours or leaving the labour market altogether (Begall and Grunow, 2015; Herrarte et al., 2012; Schober, 2013). In a recent comprehensive review on work-family trajectories, i.e. longitudinal representations of work and family lives over various life stages, it was found that work-family trajectories of men and women have become more complex and diverse in younger generations (Machû et al., 2022).

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In particular, women's work-family trajectories changed over time, i.e. women born before 1950 were more often inactive in the labour market and active in the family domain while the work-family trajectories of women born after 1950 grew in complexity and were more often characterised by longer periods of employment and later transition to parenthood (Machù et al., 2022).

To date, little is known about the combined work-family trajectories of the current generation of young adults, i.e. people who were born in the 1990s and are currently at the end of their 20s. Traditionally, five markers of transition to adulthood were suggested: finishing education, getting a job, leaving home, getting married and having a child (Settersten et al., 2015). In recent decades, the transition to adulthood has shifted from the traditional gendered and relatively quick achievement of the five traditional markers to a highly diverse and complex spectrum of often prolonged pathways to adulthood. Young adults today build their lives in times of turbulent societal changes and labour market challenges, such as increasing non-standard work arrangements (e.g. temporary contracts, platform work or part-time work), a shift in gender roles (e.g. more fluid gender roles) and non-traditional family structures (e.g. increased number of single-parent families, cohabitation and divorce). Given these changes and challenges, the question arises how the current generation builds their work-family trajectories in young adulthood.

As young people transition to adulthood, their work and family choices can have long-term consequences for their health, which makes understanding how they balance work and family lives crucial (Lacey et al., 2016). Earlier, it was shown that work-family trajectories were associated with health at different life stages (Machù et al., 2022). For example, trajectories characterised by an early transition to parenthood, single parenthood and weak ties to employment were associated with worse health outcomes, e.g. depression (McDonough et al., 2015) and mortality (Sabbath et al., 2015). While early parenthood, early employment and longer spells of inactivity in young adulthood are not necessarily negative, they are associated with limited growth opportunities, especially when the time spent in education is shortened (Arnett, 2000). In turn, low educational attainment may lead people into health-damaging work-family trajectories and further increase health inequalities (McDonough et al., 2015). Additionally, fulfilling the context-specific age-appropriate transitions on time contributes to happiness, success with later tasks and satisfaction with life, whereas unintentional postponement of the important transitions may lead to unhappiness and depressive symptoms (Salmela-Aro et al., 2014).

While we do know that some work-family trajectories are associated with worse mental health outcomes in later life, little is known about whether the mental health status before the start of the working life may shape work-family trajectories. The theoretical foundations for expecting the association between early mental health and later work and family lives lie in life course theory. Life course theory suggests that events in early life shape outcomes in subsequent life stages. According to life course theory, periods of rapid development, such as fetal and infant periods and adolescence, are critical for subsequent adult health (Viner et al., 2015). Adolescence is considered a sensitive period not only for later health but also other life outcomes (Bültmann et al., 2020). Several studies showed that early mental health affects subsequent educational attainment, work outcomes and family transitions. For instance, depressive symptoms during adolescence were associated with a failure to complete high school in girls and a failure to enter tertiary education in boys (Needham, 2009). Experiencing internalising problems throughout adolescence was associated with fewer work hours and a lower income at age 22 (Veldman et al., 2017) and not having a paid job in young adulthood at age 26 (de Groot et al., 2021). As for the family domain, mental health problems in adolescence were found to be associated with life course fertility, specifically with an earlier transition to parenthood and a higher risk of adverse pregnancy outcomes (Evensen and Lyngstad, 2020). In this study, we are particularly interested in better understanding whether mental health in adolescence is

associated with specific combined work-family trajectories because these might further influence health in later life.

Previous studies showed that mental health in adolescence affected later work and family lives through several mechanisms. For example, young people who experienced internalising problems during adolescence reported more difficulties with forming relationships and postponed their family formation due to a social withdrawal (Jokela, 2014; Salmela-Aro et al., 2014). Young people who experienced externalising problems more frequently engaged in behaviours that placed them at risk for early childbearing (Schofield et al., 2008). In contrast, young people with psychological resources (e.g. well-being) and social resources (e.g. close ties with parents) were more likely to pursue activities that put them on a path towards education and occupation rather than early parenthood (Amato and Kane, 2011).

The important transitions in both work and family domains happen simultaneously and the timing of events in one domain influences the timing of events in the other domain. Yet, previous research almost exclusively focused on the association between adolescent mental health problems and work or family outcomes separately. Only a few studies analysed the impact of earlier mental health problems on subsequent combined work-family trajectories (Amato and Kane, 2011; Carmichael and Ercolani, 2016; Salmela-Aro et al., 2014). Two studies focused on the general population and found that mental health problems were associated with a higher likelihood of belonging to work-family trajectories characterised by single motherhood and more intensive informal caregiving (Amato and Kane, 2011; Carmichael and Ercolani, 2016). In contrast, in a sample of university students, Salmela-Aro et al. (2014) found that higher levels of depressive symptoms were associated with postponed work-family trajectories. Although these studies showed that mental health problems affect subsequent work-family trajectories, they assessed mental health only once and closely before the start of work-family trajectories. Also, these studies analysed work-family trajectories of samples born before the 1990s and it is unknown how early mental health affects work-family trajectories of people who are currently in their late 20s. The importance of understanding the sample characteristics and the context, both historical and socioeconomic, in which people build their work and family lives has been emphasised in prior studies examining work-family trajectories (e.g. Aisenbrey and Fasang, 2017; McDonough et al., 2015; Van Hedel et al., 2016). Additionally, as women and men occupy different roles in society and face different gender stereotypes that define the expected behaviour (Eagly et al., 2000; Eagly and Sczesny, 2019), the association between mental health and work-family trajectories needs to be examined in both women and men.

In the present study, we are focusing on Dutch young adults who were born in 1989–1991. The Netherlands differ from other EU countries in several aspects related to work and family transitions in young adulthood. Firstly, the Netherlands have a very low youth unemployment rate. The Dutch long-term unemployment rate for youth was 0.5% in 2021 while the EU average was 3.5% in the same year (Eurostat, 2022). Secondly, the proportion of Dutch young people between ages 25 and 29 years who have completed their tertiary education is 57.8%, which is above the EU average of 40.7% (Eurostat, 2022). Accordingly, the proportion of young people who are neither in employment nor in education or training is 5.5%, the lowest among the EU countries (Eurostat, 2022). Finally, Dutch young adults transition to parenthood at a later age. The mean age at first childbirth is 30.2 years for Dutch women while the EU average is 29.5 years (Eurostat, 2021). Drawing from the theories about consequences of combining multiple work and family roles, our objective for this study was to examine how young adults within the Dutch context combine work and family. Therefore, the first aim of this study was to identify work-family trajectories of Dutch young women and men, using data of the TRacking Adolescents' Individual Lives Survey (TRAILS) cohort study with an 18-year follow-up. The second study aim was to examine whether mental health problems in adolescence were associated with work-family

trajectories in young adulthood.

## 2. Methods

### 2.1. Study design and sample

Participants were included from the TRAILS study, a prospective population-based cohort study that started in 2001 (Huisman et al., 2008; Oldehinkel et al., 2015). In total, 3145 children from five municipalities in the North of the Netherlands who were born between October 1, 1989 and September 30, 1991 were invited to participate. The first wave of TRAILS included 2230 participants (76.0% response rate of the initial sample) who were on average 11.1 years old (SD = 0.55). The six follow-up measurement waves took place at the average ages of 13.5 years (SD = 0.53, n = 2149, response rate 96.4% of baseline sample), 16.3 years (SD = 0.69, n = 1816, response rate 81.4%), 19.1 years (SD = 0.58, n = 1881, response rate 84.3%), 22.3 years (SD = 0.65, n = 1775, response rate 79.6%), 25.7 years (SD = 0.60, n = 1618, response rate 72.6%) and 28.9 years (SD = 0.60, n = 1231, response rate 55.2%). Participants who were lost to follow-up were more likely to come from single-parent families and families with low parental SES. In our analysis, we included respondents who participated in the last 7th wave, provided data on their employment history at the 5th and 7th wave, reported their educational history at the 7th wave and reported the age of their oldest child at the 7th wave. The analytical study sample consisted of 992 respondents (80.6% of the sample at the 7th wave). Excluded participants (n = 239) were more likely to be men, parents and lower educated than included participants. No significant differences in mental health scores at ages 11.1, 13.5 and 16.3 years between excluded participants and the analytical sample were observed.

### 2.2. Measures

#### 2.2.1. Work and family

We derived work-family trajectories from monthly information about work, education, and parenthood states between ages 18–28 years. Work states were assessed by the history event calendar at monthly detail. Respondents reported the start and end date of all their employment contracts at the 5th and the 7th wave measurement. Education states were based on data collected at the 7th wave measurement. We have derived monthly states of respondents' work and education as 1) not working and not in education; 2) in education; 3) working; 4) working and in education. The family trajectory was defined by parenthood based on the age of the oldest child reported in the 7th wave. The age when the respondent became a parent was derived by subtracting the age of the oldest child from the respondents' age. To reduce measurement error, we added 0.5 years to the children's age as their age was reported as the age at last birthday whereas respondents' age was reported as the current age. Finally, we combined work and family states and derived a sequence alphabet consisting of eight combined work-family states: 1) not in work, not in education, not a parent (000); 2) in education, not a parent (OE0); 3) in work, not a parent (W00); 4) in work, in education, not a parent (WE0); 5) not in work, not in education, parent (OOP); 6) in education, parent (OEP); 7) in work, parent (WOP); 8) in work, in education, parent (WEP). Thus, each sequence was composed of 120 consecutive monthly states covering work, education and parenthood over 10 years between the 18th and 28th birthday.

Out of the 992 respondents who participated in the last wave and reported their work and family history, 71 respondents (8.6%) did not yet reach the age of 28. The youngest of these respondents was 27.7 years at the last wave. Therefore, the length of the missing states for the 71 youngest respondents ranged between 1 and 4 months. For each respondent, we imputed these missing values by the respondent's last observed value.

#### 2.2.2. Mental health

Mental health was measured by Youth Self-Report (Achenbach and Rescorla, 2001) at the 1st, 2nd and 3rd wave of measurement at average ages of 11.1, 13.5 and 16.3 years. The YSR captures mental health problems in two domains: internalising and externalising problems. Internalising problems reflect anxious/depressed behaviour, somatic complaints, and withdrawn/depressed behaviour, while externalising problems capture aggressive and delinquent behaviour. We have coded internalising and externalising problems separately at each wave as dichotomous variables (no mental health problems, mental health problems), using a cut-off of the 80th percentile of the respondents' mental health score (de Groot et al., 2021; OECD, 2014). Firstly, we have created two dichotomous variables that capture whether the respondent experienced internalising and externalising problems at least once during the three measurement waves in adolescence. Secondly, we have created two dichotomous variables that capture whether the respondent experienced *persistent* internalising and externalising problems, i.e. mental health problems reported at least twice during adolescence.

#### 2.2.3. Parental socioeconomic status

Parental socioeconomic status (SES) was measured at the 1st measurement wave as a categorical variable with three levels: low, middle, high. The variable combines the educational level of mother and father, occupational status of mother and father, and family income. The cut points for the low and high SES are 25% and 75% of the sample. For further information on the SES measure in the TRAILS sample, see Amone-P'Olak et al. (2009).

### 2.3. Statistical analyses

Sequence analysis was conducted in R Studio (version April 1, 1106) by using the TraMiner package (Gabadinho et al., 2011). Multiple imputation and regression analyses were conducted in SPSS Statistics 26.

#### 2.3.1. Sequence analysis

We used sequence analysis to construct individual work-family sequences of 120 months and to identify typical work-family trajectories. Sequence analysis is an analytic technique that aims to create and compare individual sequences that can be defined as ordered listings of elements (Brzinsky-Fay and Kohler, 2009). In this study, the elements are monthly work-family states as described above. After creating individual work-family sequences, our analysis proceeds in two steps. First, we calculated distances between individual sequences. We applied an optimal matching (OM) distance metric with constant costs. Other distance measures that we have tested, i.e. longest common subsequence, Hamming distance and OM with defining our costs, yielded similar results. Second, we identified typical work-family trajectories by clustering the individual sequences. The matrix of dissimilarities between individual work-family sequences, produced using OM, served as the input for cluster analysis. We performed Ward hierarchical clustering known to generate homogeneous clusters. All analyses were performed for women and men separately.

#### 2.3.2. Regression analysis

The association between mental health problems in adolescence and subsequent work-family trajectories was examined by multinomial logistic regression models with the trajectory membership as the dependent variable. Firstly, we examined associations between experiencing internalising and externalising problems at least once during adolescence and work-family trajectory membership. Secondly, we examined associations between experiencing persistent internalising and externalising problems, i.e. reported at least twice during adolescence, and work-family trajectory membership. All analyses were conducted separately for women and men. First, the crude associations were estimated (model 1). Second, parental SES was included in the models as a



potential confounder (model 2), as it was shown to be associated with mental health in childhood and adolescence (Letourneau et al., 2013; Reiss, 2013) and also with work-family trajectories (Amato et al., 2008; Arpino et al., 2018). The trajectory *long education* served as a reference category.

### 2.3.3. Missing data and multiple imputation

Multiple imputation was used to impute information on mental health problems experienced in adolescence. The information on internalising problems was missing for 1.8%, 1.9% and 9.1% of respondents in the 1st, 2nd and 3rd measurement waves respectively. The information on the externalising problems was missing for 1.3%, 1.4% and 8.4% of respondents in the 1st, 2nd and 3rd measurement waves respectively. None of the respondents had missing values at all measurements, and overall, 4.0% of values were missing. The imputations were conducted by using mental health at all time points (1st to 7th measurement), sex and parental socioeconomic status as predictors. We generated 35 imputed datasets. Thirteen respondents had missing values in SES (1.3%). Simple mean imputation was used to replace the missing data.

## 3. Results

Our sample consisted of 992 respondents (63.2% women). At age 28, 705 respondents (71.1%) were working, 186 respondents (18.8%) were in education or combined education with work, and 101 respondents (10.2%) were inactive, i.e. not in education and not in work. A total of 200 respondents (20.2%) had become parents. Parenthood at age 28 was more common for women compared with men (24.6% versus 12.6%, respectively). More than half of the respondents (N = 559, 56.4%) experienced either internalising or externalising problems at least once at ages 11, 13.5 and/or 16 years. Internalising problems were slightly more common in women (40.6% women and 36.4% men) and externalising problems were almost as common in men as in women (39.9% women and 39.3% men).

### 3.1. Work-family trajectories

Six work-family trajectories were identified in both women and men based on quality criteria, theory and our knowledge of the Dutch context (see Appendix 1 for Average Silhouette Width, pseudo R<sup>2</sup> and Calinski-Harabasz index of the 5- 6- and 7-cluster solutions). State distribution plots illustrating monthly distributions of work and family states covering a total of 10 years (120 months) in the six work-family trajectories of women and men are presented in Fig. 1 and 2, respectively. The sequence index plots are provided in Appendix 2. The characteristics of the six 10-year work-family trajectories of women and men, including medoid sequences and most common states, are described in Appendix 3. Five trajectories were comparable between women and men and were given the same labels: *long education*; *continuous education and work*; *education and work to work*; *early work* and *inactive*. The remaining trajectories showed more differences, mainly with regard to the parenthood status, and were labelled *active with children* for women, and *active* for men. The most common trajectory in women was *long education* (28.4%), and in men *active* (30.4%).

#### 3.1.1. Women's and men's work-family trajectories

The first trajectory was labelled *long education*. Women in this trajectory (28.4%) spent on average 40 months (out of the observed 120 months), in education without working or having children. By the end of the trajectory, most of the women (60.1%) have transitioned into work. Men in this trajectory (13.2%) spent on average 72.3 months in education without working or having children. In comparison with women, more men were still in education or combining education and work at the end of the trajectory (28.7% women vs 52.1% men). Parenthood was not common in this trajectory with 6.8% of women and 2.1% of men transitioning into parenthood before the end of the trajectory.

The second trajectory *continuous education and work* was characterised by the longest time spent combining education and work. Both women and men in this trajectory (9.9% women and 11.5% men) spent

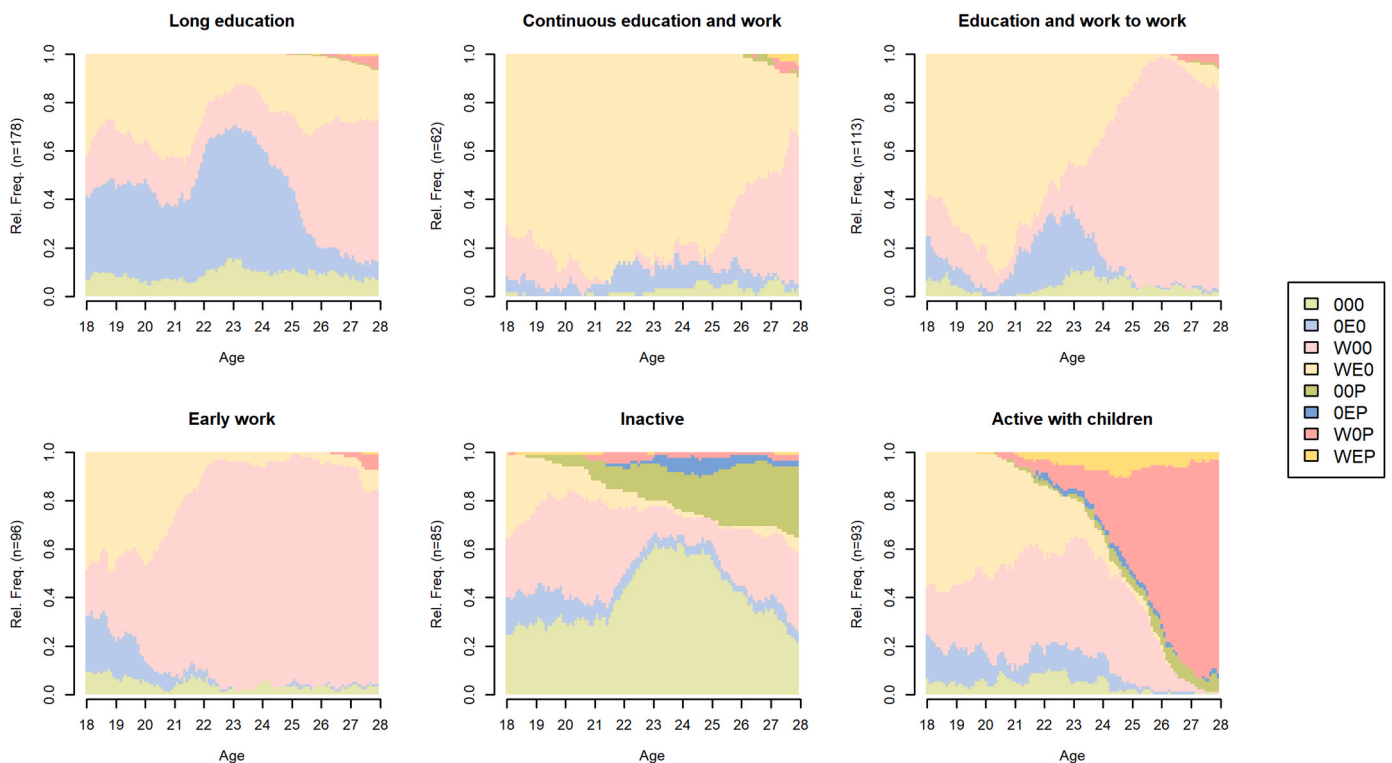


Fig. 1. State distribution plot of work-family trajectories, 18–28 years, women (n = 627)

000: not in work, not in education, not a parent; OE0: in education, not a parent; W00: in work, not a parent; WE0: in work, in education, not a parent; O0P: not in work, not in education, parent; E0P: in education, parent; W0P: in work, parent; WEP: in work, in education, parent.

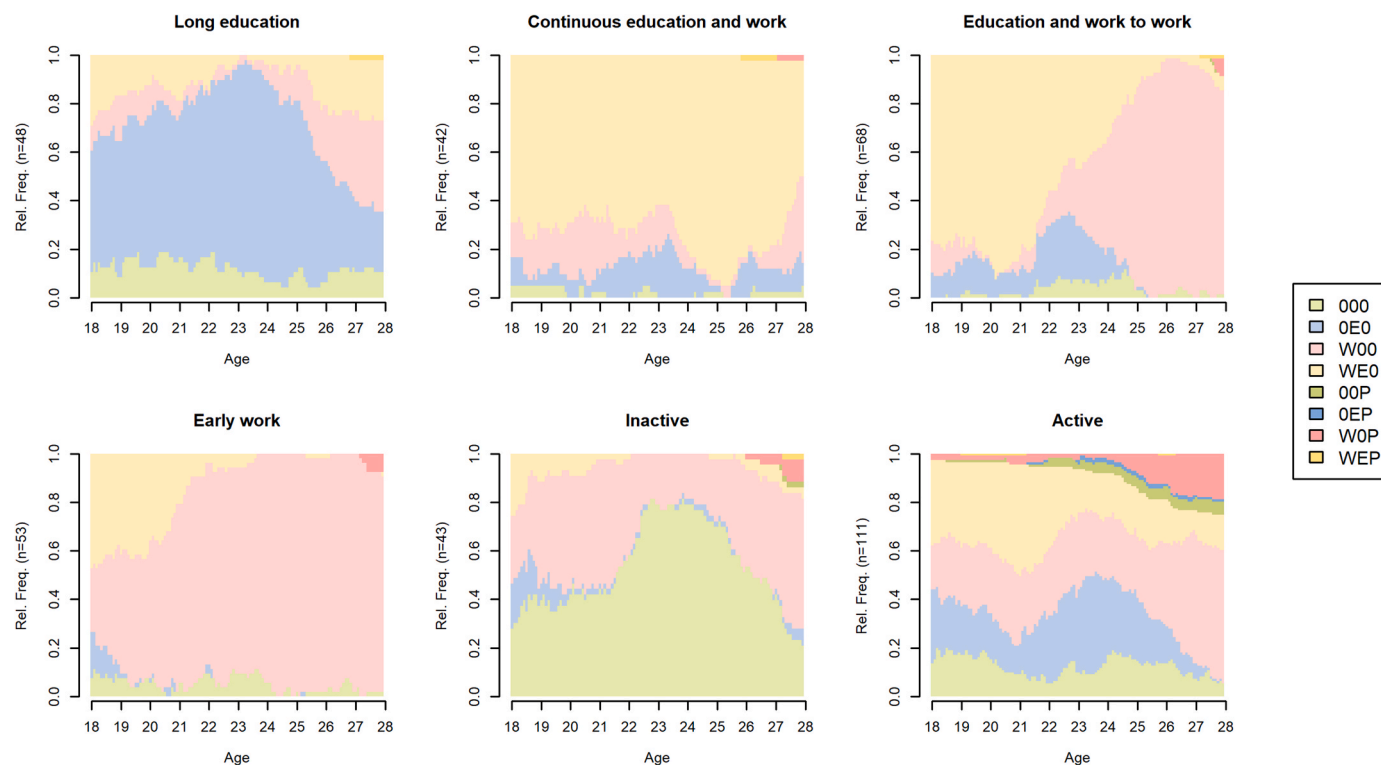


Fig. 2. State distribution plot of work-family trajectories, 18–28 years, men ( $n = 365$ )

000: not in work, not in education, not a parent; OE0: in education, not a parent; W00: in work, not a parent; WE0: in work, in education, not a parent; O0P: not in work, not in education, parent; E0P: in education, parent; W0P: in work, parent; WEP: in work, in education, parent.

on average more than 88 months combining work and education. At the end of the trajectory, 64.5% of women were in work only, either with or without children, compared with 38.1% of men. Parenthood was more common for women (9.6%) than for men (2.4%).

The third trajectory *education and work to work* was characterised by combining work and education until the approximate age of 24 and subsequently transitioning into work only. This trajectory was the second most common in both women (18.0%) and men (18.6%). On average, women and men spent 51.6 months and 53.9 months respectively combining work and education. Parenthood was not common in this trajectory with 6.2% women and 8.9% men transitioning into parenthood before the end of the trajectory.

The fourth trajectory *early work* was characterised by a short period of combining work and education and a relatively early transition into work only, i.e. 68.5% respondents were exclusively in work by age 21. Women in this trajectory (15.3%) spent on average 87.1 months in work without being in education or being a parent. Men in this trajectory (14.5%) spent on average 95.1 months in work only. By the end of the trajectory, 7.3% of the women and 7.5% of the men had become a parent.

The fifth trajectory was labelled *inactive*. Women in this trajectory (13.6%) spent on average 48 months being inactive and not being mothers and 16 months being inactive mothers, i.e. more than 5 years in inactive states in total. By the end of the trajectory, 50.6% women remained in inactive states, either as non-mothers or as mothers. A total of 35.4% women became mothers by the end of the trajectory. Men in this trajectory (11.8%) combined periods of inactivity with periods of work. On average, they spent 63 months being inactive, and 44 months working. By the end of the trajectory, 13.9% men in this trajectory became fathers.

The sixth trajectories were labelled *active with children* in women and *active* in men. Work-family trajectories of women in this group (14.8%) were characterised by a relatively early transition into work and parenthood with almost half of women becoming mothers already

between ages 24 and 26. While almost all women in this trajectory had children by the end of the trajectory, this was the case for 25.2% men. Men in this trajectory (30.4%) spent on average 75.8 months in work or combining education with work. Out of those who became fathers by the age of 28, the majority (75.0%) combined parenthood with work.

### 3.2. Mental health in adolescence and work-family trajectories in young adulthood

The proportion of respondents in the distinct work-family trajectories who experienced mental health problems at least once during adolescence varied between 30.5% and 47.7% for internalising problems and 29.6% and 49.4% for externalising problems. Women in the trajectory *long education* had the lowest rates of experiencing both internalising and externalising problems. Men in the trajectory *active* had the lowest rate of internalising problems, while men in the trajectory *education and work to work* had the lowest rate of externalising problems. Details on the prevalence of mental health problems experienced once or persistently during adolescence are presented in [Appendix 4](#).

#### 3.2.1. Associations between mental health problems at least once in adolescence and work-family trajectories in young adulthood

We found differences in the associations between mental health problems during adolescence assessed at ages 11.1, 13.5 and 16.3 and subsequent work-family trajectories between ages 18 and 28. Women who experienced internalising problems in adolescence were more likely to be in the trajectory *education and work to work* than in the trajectory *long education*. After adjustment for parental SES, the association attenuated and was no longer significant. Women who experienced externalising problems in adolescence were more likely to be in the trajectories *education and work to work*, *early work*, *inactive* and *active with children* than in the trajectory *long education*, even after adjustment for parental SES (see [Table A1](#) in [Appendix 5](#)).

**Table 1**

Association between persistent mental health problems in adolescence at ages 11.1, 13.5 and 16.3 and work-family trajectories in women (n = 627).

	Long education (n = 178)	Continuous education and work (n = 62)	Education and work to work (n = 113)	Early work (n = 96)	Inactive (n = 85)	Active with children (n = 93)
		OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Persistent internalising problems						
Crude model	ref.	1.27 (0.60; 2.68)	1.19 (0.64; 2.21)	1.19 (0.61; 2.31)	1.10 (0.55; 2.19)	0.88 (0.44; 1.80)
Adjusted model	ref.	1.27 (0.60; 2.69)	1.19 (0.64; 2.21)	1.21 (0.62; 2.37)	1.14 (0.56; 2.31)	0.92 (0.45; 1.90)
Persistent externalising problems						
Crude model	ref.	1.22 (0.50; 2.93)	1.59 (0.80; 3.15)	1.77 (0.87; 3.62)	2.01 (0.97; 4.16)	2.14 (1.08; 4.24)*
Adjusted model	ref.	1.21 (0.50; 2.91)	1.56 (0.78; 3.11)	1.73 (0.84; 3.56)	1.96 (0.93; 4.10)	2.05 (1.02; 4.12)*

Persistent mental health problems operationalised as experiencing problems at least twice during three measurement waves in adolescence at ages 11.1, 13.5 and 16.3. Odds Ratios and 95% Confidence Intervals (OR (95% CI)) derived from multinomial logistic regression; crude and adjusted for parental SES; \*p < 0.05.

Men who experienced internalising problems in adolescence were less likely to be in the trajectory *active* than in the *long education*, also after adjustment for parental SES. Associations between externalising problems and subsequent work-family trajectories were not found (see [Table A2 in Appendix 5](#)).

### 3.2.2. Associations between persistent mental health problems in adolescence and work-family trajectories in young adulthood

Persistent internalising problems were not associated with subsequent work-family trajectories in women. Women who experienced persistent externalising problems in adolescence were more likely to be in the trajectory *active with children* than in *long education*, also after adjustment for parental SES ([Table 1](#)).

Men who experienced persistent internalising problems in adolescence were less likely to be in the trajectory *active* than in *long education*, even after adjustment for parental SES. Associations between persistent externalising problems and subsequent work-family trajectories were not found ([Table 2](#)).

## 4. Discussion

This study aimed to identify work-family trajectories from age 18 to 28 in Dutch young adults, and to examine the associations between mental health problems in adolescence and the work-family trajectories. We identified six work-family trajectories for both women and men of which five were characterised by various transitions in the work domain and low rates of parenthood. The remaining trajectories differed among women and men in the transition to parenthood that was more common in women. Apart from the timing of the transition to parenthood, we found few sex differences in the type of work-family trajectories. Women who experienced externalising problems in adolescence were more

likely to belong to the trajectory characterised by parenthood. Men who experienced internalising problems in adolescence were more likely to belong to the trajectory characterised by a long time spent in education.

Reflecting on the work-family conflict and work-family enrichment theories, we found that young adults in our sample did not often combine work and family roles. Combining multiple work and family roles was more common in young women than men, which is in line with previous studies examining older cohorts (e.g. [McMunn et al., 2015](#)). However, what is not reflected in theories on combining multiple roles and what seems to be relevant in the current generation of young adults is combining work and education in various stages of young adulthood.

Previous studies examining work-family trajectories in older cohorts in various countries (e.g. [Aeby et al., 2019](#); [Lacey et al., 2016](#)) found more differences between women and men with men's trajectories being characterised by steady employment and women's trajectories being more complex and diverse, i.e. trajectories of women had higher within-person and between-person differentiation. A study comparing the work-family trajectories between ages 16–42 years of UK women and men across three birth cohorts born in 1946, 1958 and 1970 concluded that trajectories of women and men were becoming more similar (e.g. [McMunn et al., 2015](#)). Our study may suggest convergence of work-family trajectories of women and men, but this needs to be investigated in comparison with older cohorts in the Dutch context.

Several studies examined work-family trajectories in young adulthood in other countries (e.g. [Vidal et al., 2020](#)), but only two studies analysed work-family trajectories of people belonging to the generation of millennials, i.e. born after 1981 ([Bennett and Waterhouse, 2018](#); [Mooyaart et al., 2019](#)). The first study examined work-family trajectories of South African women born in 1991–93 ([Bennett and Waterhouse, 2018](#)) and the second study examined US women and men born in 1980–84 ([Mooyaart et al., 2019](#)). While respondents in these two

**Table 2**

Association between persistent mental health problems in adolescence at ages 11.1, 13.5 and 16.3 and work-family trajectories in men (n = 365).

	Long education (n = 48)	Continuous education and work (n = 42)	Education and work to work (n = 68)	Early work (n = 53)	Inactive (n = 43)	Active (n = 111)
		OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Persistent internalising problems						
Crude model	ref.	0.55 (0.21; 1.47)	0.35 (0.13; 0.88)*	0.50 (0.20; 1.25)	0.34 (0.11; 1.07)	0.21 (0.09; 0.52)**
Adjusted model	ref.	0.54 (0.20; 1.45)	0.32 (0.12; 0.82)*	0.41 (0.15; 1.08)	0.31 (0.10; 0.98)*	0.18 (0.07; 0.46)***
Persistent externalising problems						
Crude model	ref.	1.35 (0.49; 3.74)	0.67 (0.24; 1.85)	1.67 (0.64; 4.35)	0.55 (0.16; 1.83)	0.56 (0.22; 1.44)
Adjusted model	ref.	1.34 (0.48; 3.73)	0.66 (0.24; 1.85)	1.63 (0.60; 4.45)	0.54 (0.16; 1.84)	0.56 (0.21; 1.46)

Persistent mental health problems operationalised as experiencing problems at least once during three measurement waves in adolescence at ages 11.1, 13.5 and 16.3. Odds Ratios and 95% Confidence Intervals (OR (95% CI)) derived from multinomial logistic regression; crude and adjusted for parental SES; \*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001.

studies and our study were born in the same historical time, the contexts in which they grew up and were building their work and family lives differed in several aspects that influenced work and family decisions, e. g. access to education, quality of healthcare, parenthood policies, employment policies and other labour market characteristics. Comparing our study with these two studies shows the important role the context may play in how young people combine their work and family lives. First, a substantial proportion of the participants in our sample belonged to the trajectories characterised primarily by being in education (56.3% of women and 43.3% of men). In contrast, 33% of young adults in the US sample followed trajectories in which education and stable employment stood central (Mooyaart et al., 2019). This difference may be explained by the contextual factors at the country level. For instance, following higher education is relatively inexpensive in the Netherlands compared with the US (OECD, 2019). Second, while 25% of the women in our sample gave birth by age 28, women in the South African sample transitioned to parenthood more often in young adulthood as 72% gave birth by the end of the trajectory, i.e. by age 21–23 (Bennett and Waterhouse, 2018). Several factors may explain differences in fertility outcomes between the Netherlands and South Africa, for example availability of family planning services, educational and economic opportunities for young women or differences in desired family size. Comparative studies might help to elucidate how contextual factors shape work-family trajectories in the current generation of young adults.

Our second research aim was to examine the association between mental health in adolescence and work-family trajectories in young adulthood. In line with life course theory and viewing adolescence as a sensitive period, we found an association between adolescent mental health and work-family trajectories in young adulthood. Adjusting for parental SES did not eliminate the observed association between mental health and work-family trajectories, and differences between the crude and adjusted estimates were relatively small. Therefore, our findings suggest that the association between adolescent mental health and work-family trajectories in young adulthood is present independently of parental SES.

The results showed that women who experienced externalising problems at least once during adolescence were more likely to belong to almost all other trajectories compared with the reference trajectory *long education*. Women who experienced persistent externalising problems (i.e. experienced externalising problems at two time points or more) were more likely to belong to the trajectory *active with children* in comparison with the trajectory *long education*. The association between persistent externalising problems and the trajectory *inactive* was borderline significant with women experiencing persistent externalising problems being more likely to belong to the trajectory *inactive* than *long education*. Thus, women with persistent externalising problems were most likely to belong to a trajectory characterised by parenthood. This finding is in line with previous studies showing that externalising problems experienced in adolescence are associated with a higher rate of pregnancies in adolescence and young adulthood (Jokela, 2014). Although previous studies linked externalising problems to higher fertility in both women and men (Jokela, 2014), we did not find an association between externalising problems and subsequent work-family trajectories in men. In our sample, only few men transitioned into parenthood until the age of 28. Possibly, in a study with a follow-up until a higher age, the association might be observed in men as well.

Men who experienced internalising problems both at least at one time point as well as persistently during adolescence were more likely to belong to the trajectory *long education* compared with the trajectory *active*. Participants in the trajectory *long education* may have spent a long time in education due to acquiring further degrees, but they may have also needed more time to finish education. Salmela-Aro et al. (2014) also found among a sample of university students that a higher level of depression at the beginning of young adulthood was associated with work-family trajectories characterised by prolonging university studies,

later transition to working life and no or later family formation. They found this association for both males and females while we did not find the association between internalising problems and work-family trajectories in women. Comparably, a study of the Danish Vestliv sample born in 1989 (Veldman et al., 2022) showed that depressive symptoms in adolescence were associated with subsequent inactive status in young adulthood in men only. However, when mental health was assessed early in young adulthood at ages 18 and 21, the association was observed in both women and men. These findings show, among others, the importance of longitudinal assessment of health. Also, our results show that women with a history of externalising problems were more likely to combine work and family roles in young adulthood, whereas young men with a history of internalising problems were less likely to combine multiple roles from either the work or family domain. To address the differences in the association of mental health and later life outcomes between women and men, more longitudinal research in larger samples of women and men is needed.

#### 4.1. Strengths and limitations

This study has several strengths. Our dataset contained detailed information on work, education and parenthood history that allowed us to build individual sequences with monthly detail. Instead of focusing on individual events or transitions in the work and family domain, we applied sequence analysis to show dynamics in work and family domains over the early life course. In addition, we analysed prospectively collected information on mental health during adolescence from ages 11 to 16. This allowed us to examine associations between experiencing mental health problems at least once versus persistently during adolescence and work-family trajectories. Overall, the high-quality longitudinal data from the prospective TRAILS cohort study allowed us to connect repeatedly measured mental health experiences in early life with longitudinal assessments of work and family states in young adulthood.

This study also has some limitations. Firstly, our sample consisted of 44% of the baseline population. Due to loss to follow-up and our inclusion criteria, the results might be underestimating the proportion of trajectories characterised by inactivity, shorter education and early transitions to work and parenthood. Secondly, due to a lack of quality information on partnership history, the family trajectory was defined by parenthood only without information on partnership status. Partnership is an important aspect of work-family trajectories. For example, McKetta et al. (2018) found that work-family trajectories of never-married women had higher rates of mortality in comparison with their married counterparts. Including partnership status in work-family trajectories may provide us with more detailed insights into the complex relationships between work, family and health.

#### 4.2. Recommendations

Future studies are recommended to distinguish between part-time and full-time work states when building work-family trajectories. The distinction seems to be particularly important in the assessment of combined work and family life courses in young adulthood. For instance, young people in temporary jobs often postpone parenthood, mostly due to their lower income (van Wijk et al., 2021). Adjusting working hours is also a common consequence of family formation, especially of childbirth. Between 1970 and 2008, Dutch women became more likely to decrease their working hours than to leave the labour market after childbirth (Begall and Grunow, 2015). The distinction between part-time and full-time work is also important when examining the association between work-family trajectories and health. Previously, it has been shown that returning to work part-time after childbirth has different consequences for health in comparison with returning to work full-time (e.g. Engels et al., 2019). One of our conclusions is that work-family trajectories of young women and men were relatively similar in our sample. While work-family trajectories were similar, we



need to recognize the possibility of underlying inequalities in work and family domains between women and men. Future studies need to look deeper into how young people combine their work and family lives. This might include investigating working hours, income, work-family balance or household chores distribution along work-family trajectories. We have also shown that early life mental health is associated with later life work and family experiences. We recommend to further unravel the mechanisms explaining why internalising and externalising problems are associated with work-family trajectories and why these mechanisms differ between women and men. The possible mechanisms might be related to poor physical health, a poor financial situation or problems in romantic relationships, and the mechanisms may vary by the examined life stage (Jokela, 2014). Finally, it is important to investigate how mental health develops across time in people with different work-family trajectories. This would enable determining whether some of the trajectories are associated with worse later mental health outcomes and if this depends on the mental health status before the work-family trajectories.

Our findings on the association between mental health problems in adolescence and work-family trajectories in young adulthood provide some practical implications. Firstly, we found that young women who have previously experienced externalising problems were more likely to transition to parenthood already during young adulthood. The mean age at first childbirth in the Netherlands is 30.2 years (Eurostat, 2021), while most women in the trajectory active with children transitioned to parenthood by age 26. As transition to parenthood around career entry has shown to affect career opportunities (Abele and Spurk, 2011), young women with a history of externalising problems may benefit from support in achieving a transition into parenthood in their desired timing, also taking into account their desired future careers. Secondly, men who experienced internalising problems in adolescence were more likely to belong to the trajectory characterised by long education. While spending a longer time in education might be positive for career prospects when achieving additional qualifications, it might also signal difficulties with attainment of a qualification. Therefore, more attention needs to go out to men with a history of internalising problems within the tertiary educational system. Accessible low-threshold support in this educational context is important and should not only focus on educational problems but also mental health counselling and support with the transition to work.

## 5. Conclusion

We found six highly comparable work-family trajectories for women and men. In line with life course theory, experience of mental health problems in early life were associated with subsequent work-family trajectories. These results were based on high-quality longitudinal data that allowed us to consider timing, duration and ordering of the work and family states in young adulthood from the ages of 18 and 28, and to use multiple assessments of mental health problems in adolescence. Further research is needed to understand the mechanisms through which early mental health affects later life work and family outcomes in women and men.

## Credit author statement

Machù Vendula: Conceptualization, Methodology, Formal analysis, Writing – original draft. Veldman Karin: Conceptualization, Methodology, Writing – review & editing. Arends Iris: Conceptualization, Methodology, Writing – review & editing. Bültmann Ute: Conceptualization, Methodology, Writing – review & editing, Funding acquisition.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence

the work reported in this paper.

## Data availability

The authors do not have permission to share data.

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## Appendix. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.socscimed.2022.115460>.

## References

- Abele, A.E., Spurk, D., 2011. The dual impact of gender and the influence of timing of parenthood on men's and women's career development: longitudinal findings. *Int. J. Behav. Dev.* 35, 225–232. <https://doi.org/10.1177/0165025411398181>.
- Abendroth, A.K., Huffman, M.L., Treas, J., 2014. The parity penalty in life course perspective: motherhood and occupational status in 13 European countries. *Am. Socio. Rev.* 79, 993–1014. <https://doi.org/10.1177/0003122414545986>.
- Achenbach, T.M., Rescorla, L.A., 2001. Manual for the ASEBA School-Age Forms & Profiles: Child Behavior Checklist for Ages 6-18, Teacher's Report Form, Youth Self-Report: an Integrated System of Multi-Informant Assessment. University of Vermont, research center for children youth & families. <https://aseba.org/wp-content/uploads/School-age-bpm-manual.pdf.pdf>.
- Aeby, G., Gauthier, J.-A., Widmer, E.D., 2019. Beyond the nuclear family: personal networks in light of work-family trajectories. *Adv. Life Course Res.* 39, 51–60. <https://doi.org/10.1016/j.alcr.2018.11.002>.
- Aisenbrey, S., Fasang, A., 2017. The interplay of work and family trajectories over the life course: Germany and the United States in comparison. *Am. J. Sociol.* 122, 1448–1484. <https://doi.org/10.1086/691128>.
- Amato, P.R., Kane, J.B., 2011. Life-course pathways and the psychosocial adjustment of young adult women. *J. Marriage Fam.* 73, 279–295. <https://doi.org/10.1111/j.1741-3737.2010.00804.x>.
- Amato, P.R., Landale, N.S., Havasevich-Brooks, T.C., Booth, A., Eggebeen, D.J., Schoen, R., McHale, S.M., 2008. Precursors of young women's family formation pathways. *J. Marriage Fam.* 70, 1271–1286. <https://doi.org/10.1111/j.1741-3737.2008.00565.x>.
- Amone-P'Olak, K., Ormel, J., Huisman, M., Verhulst, F.C., Oldehinkel, A.J., Burger, H., 2009. Life stressors as mediators of the relation between socioeconomic position and mental health problems in early adolescence: the TRAILS study. *J. Am. Acad. Child Adolesc. Psychiatry* 48, 1031–1038. <https://doi.org/10.1097/CHI.0b013e3181b39595>.
- Arnett, J.J., 2000. Emerging adulthood: a theory of development from the late teens through the twenties. *Am. Psychol.* 55, 469–480. <https://doi.org/10.1037/0003-066X.55.5.469>.
- Arpino, B., Gumà, J., Julià, A., 2018. Early-life conditions and health at older ages: the mediating role of educational attainment, family and employment trajectories. *PLoS One* 13, 1–17. <https://doi.org/10.1371/journal.pone.0195320>.
- Begall, K., Grunow, D., 2015. Labour force transitions around first childbirth in The Netherlands. *Eur. Socio Rev.* 31, 697–712. <https://doi.org/10.1093/esr/jcv068>.
- Bennett, R., Waterhouse, P., 2018. Work and family transitions and the self-rated health of young women in South Africa. *Soc. Sci. Med.* 203, 9–18. <https://doi.org/10.1016/j.socscimed.2018.03.001>.

- Bzinsky-Fay, C., Kohler, U., 2009. New developments in sequence analysis. *Socio. Methods Res.* 38, 359–364. <https://doi.org/10.1177/0049124110363371>.
- Bültmann, U., Arends, I., Veldman, K., McLeod, C.B., Van Zon, S.K.R., Iii, B.C.A., 2020. Investigating young adults' mental health and early working life trajectories from a life course perspective: the role of transitions. *J. Epidemiol. Community Health* 74, 179–181. <https://doi.org/10.1136/jech-2019-213245>.
- Carmichael, F., Ercolani, M.G., 2016. Unpaid caregiving and paid work over life-courses: different pathways, diverging outcomes. *Soc. Sci. Med.* 156, 1–11. <https://doi.org/10.1016/j.socscimed.2016.03.020>.
- Comolli, C.L., Bernardi, L., Voorpostel, M., 2021. Joint family and work trajectories and multidimensional wellbeing. *Eur. J. Popul.* <https://doi.org/10.1007/s10680-021-09583-3>.
- de Groot, S., Veldman, K., Amick III, B.C., Oldehinkel, T.A.J., Arends, I., Bültmann, U., 2021. Does the timing and duration of mental health problems during childhood and adolescence matter for labour market participation of young adults? *J. Epidemiol. Community Health* 75, 896–902. <https://doi.org/10.1136/jech-2020-215994>.
- Eagly, A.H., 2009. The his and hers of prosocial behavior: an examination of the social psychology of gender. *Am. Psychol.* 64, 644–658. <https://doi.org/10.1037/0003-066X.64.8.644>.
- Eagly, A.H., Sczesny, S., 2019. Editorial: gender roles in the future? Theoretical foundations and future research directions. *Front. Psychol.* 10 <https://doi.org/10.3389/fpsyg.2019.01965>.
- Eagly, A.H., Wood, W., Diekmann, A.B., 2000. Social role theory of sex differences and similarities: a current appraisal. In: Eckes, T., Trautner, H.M. (Eds.), *The Developmental Social Psychology of Gender*. Psychology Press, New York, pp. 123–174. <https://doi.org/10.4324/9781410605245>.
- Engels, M., Weyers, S., Moebus, S., Jöckel, K.H., Erbel, R., Pesch, B., Behrens, T., Dragan, N., Wahrendorf, M., 2019. Gendered work-family trajectories and depression at older age. *Aging Ment. Health* 23, 1478–1486. <https://doi.org/10.1080/13607863.2018.1501665>.
- Evensen, M., Lyngstad, T.H., 2020. Mental health problems in adolescence, first births, and union formation: evidence from the Young HUNT Study. *Adv. Life Course Res.* 43, 100324 <https://doi.org/10.1016/j.alcr.2020.100324>.
- Eurostat, 2022. Dashboard of EU Youth Indicators. Retrieved September 22, 2022, from: <https://ec.europa.eu/eurostat/web/youth/data/eu-dashboard>.
- Eurostat, 2021. Fertility Indicators. Retrieved September 22, 2022, from: <https://ec.europa.eu/eurostat/web/population-demography>.
- Gabardin, A., Ritschard, G., Müller, N.S., Studer, M., 2011. Analyzing and visualizing state sequences in R with TraMineR. *J. Stat. Software* 40, 1–37. <https://doi.org/10.18637/jss.v040.i04>.
- Gangl, M., Ziefle, A., 2009. Motherhood, labor force behavior, and women's careers: an empirical assessment of the wage penalty for motherhood in Britain, Germany, and the United States. *Demography* 46, 341–369. <https://doi.org/10.1353/dem.0.0056>.
- Greenhaus, J.H., Beutell, N.J., 1985. Sources of conflict between work and family roles. *Acad. Manag. Rev.* 10, 76–88. <https://doi.org/10.5465/amr.1985.4277352>.
- Greenhaus, J.H., Powell, G.N., 2006. When work and family are allies: a theory of work-family enrichment. *Acad. Manag. Rev.* 31, 77–92. <https://doi.org/10.5465/amr.2006.19379625>.
- Herrarte, A., Moral-Carcedo, J., Sáez, F., 2012. The impact of childbirth on Spanish women's decisions to leave the labor market. *Rev. Econ. Househ.* 10, 441–468. <https://doi.org/10.1007/s11150-012-9151-z>.
- Huisman, M., Oldehinkel, A.J., de Winter, A., Minderaa, R.B., de Bildt, A., Huizink, A.C., Verhulst, F.C., Ormel, J., 2008. Cohort profile: the Dutch 'TRacking adolescents' individual lives' survey'; TRAILS. *Int. J. Epidemiol.* 37, 1227–1235. <https://doi.org/10.1093/ije/dym273>.
- Jokela, M., 2014. Life-course fertility patterns associated with childhood externalizing and internalizing behaviors. *Eur. Child Adolesc. Psychiatr.* 23, 1201–1210. <https://doi.org/10.1007/s00787-014-0519-x>.
- Kahn, J.R., García-Mangano, J., Bianchi, S.M., 2014. The motherhood penalty at midlife: long-term effects of children on women's careers. *J. Marriage Fam.* 76, 56–72. <https://doi.org/10.1111/jomf.12086>.
- Lacey, R.E., Sacker, A., Kumari, M., Worts, D., McDonough, P., Booker, C., McMunn, A., 2016. Work-family life courses and markers of stress and inflammation in mid-life: evidence from the National Child Development Study. *Int. J. Epidemiol.* 45, 1247–1259. <https://doi.org/10.1093/ije/dyv205>.
- Letourneau, N.L., Duffett-Leger, L., Levac, L., Watson, B., Young-Morris, C., 2013. Socioeconomic status and child development: a meta-analysis. *J. Emot. Behav. Disord.* 21, 211–224. <https://doi.org/10.1177/1063426611421007>.
- Machù, V., Arends, I., Veldman, K., Bültmann, U., 2022. Work-family trajectories and health: A systematic review. *Adv. Life Course Res.* 52 <https://doi.org/10.1016/j.alcr.2022.100466>.
- McDonough, P., Worts, D., Booker, C., McMunn, A., Sacker, A., 2015. Cumulative disadvantage, employment-marriage, and health inequalities among American and British mothers. *Adv. Life Course Res.* 25, 49–66. <https://doi.org/10.1016/j.alcr.2015.05.004>.
- McKetta, S., Prins, S.J., Platt, J., Bates, L.M., Keyes, K., 2018. Social sequencing to determine patterns in health and work-family trajectories for U.S. women, 1968–2013. *SSM - Popul. Heal.* 6, 301–308. <https://doi.org/10.1016/j.ssmph.2018.10.003>.
- McMunn, A., Lacey, R., Worts, D., McDonough, P., Stafford, M., Booker, C., Kumari, M., Sacker, A., 2015. De-standardization and gender convergence in work-family life courses in Great Britain: a multi-channel sequence analysis. *Adv. Life Course Res.* 26, 60–75. <https://doi.org/10.1016/j.alcr.2015.06.002>.
- Mills, M., Rindfuss, R.R., McDonald, P., te Velde, E., 2011. Why do people postpone parenthood? Reasons and social policy incentives. *Hum. Reprod. Update* 17, 848–860. <https://doi.org/10.1093/humupd/dmr026>.
- Mooyaart, J.E., Liefbroer, A.C., Billari, F.C., 2019. Becoming obese in young adulthood: the role of career-family pathways in the transition to adulthood for men and women. *BMC Publ. Health* 19, 1–12. <https://doi.org/10.1186/s12889-019-7797-7>.
- Needham, B.L., 2009. Adolescent depressive symptomatology and young adult educational attainment: an examination of gender differences. *J. Adolesc. Health* 45, 179–186. <https://doi.org/10.1016/j.jadohealth.2008.12.015>.
- OECD, 2019. Education at a Glance 2019: OECD Indicators, Education at a Glance. OECD Publishing, Paris. <https://doi.org/10.1787/f8d7880d-en>.
- OECD, 2014. Mental Health and Work: Netherlands, Mental Health and Work. OECD. <https://doi.org/10.1787/9789264223301-en>.
- Oldehinkel, A.J., Rosmalen, J.G.M., Buitelaar, J.K., Hoek, H.W., Ormel, J., Raven, D., Reijneveld, S.A., Veenstra, R., Verhulst, F.C., Vollebergh, W.A.M., Hartman, C.A., 2015. Cohort profile update: the tracking adolescents' individual lives survey (TRAILS). *Int. J. Epidemiol.* 44 <https://doi.org/10.1093/ije/dyu225> pages 76–76n.
- Reiss, F., 2013. Socioeconomic inequalities and mental health problems in children and adolescents: a systematic review. *Soc. Sci. Med.* 90, 24–31. <https://doi.org/10.1016/j.socscimed.2013.04.026>.
- Sabbath, E.L., Mejía-Guevara, I., Noelke, C., Berkman, L.F., 2015. The long-term mortality impact of combined job strain and family circumstances: a life course analysis of working American mothers. *Soc. Sci. Med.* 146, 111–119. <https://doi.org/10.1016/j.socscimed.2015.10.024>.
- Salmela-Aro, K., Kiuru, N., Nurmi, J.E., Eerola, M., 2014. Antecedents and consequences of transitional pathways to adulthood among university students: 18-year longitudinal study. *J. Adult Dev.* 21, 48–58. <https://doi.org/10.1007/s10804-013-9178-2>.
- Schober, P.S., 2013. Maternal labor market return and domestic work after childbirth in Britain and Germany. *Community Work. Fam.* 16, 307–326. <https://doi.org/10.1080/13668803.2013.820096>.
- Schofield, H.-L.T., Bierman, K.L., Heinrichs, B., Nix, R.L., 2008. Predicting early sexual activity with behavior problems exhibited at school entry and in early adolescence. *J. Abnorm. Child Psychol.* 36, 1175–1188. <https://doi.org/10.1007/s10802-008-9252-6>.
- Settersten, R.A., Ottusch, T.M., Schneider, B., 2015. Becoming adult: meanings of markers to adulthood. *Emerg. Trends Soc. Behav. Sci.* 1–16. <https://doi.org/10.1002/9781118900772.etrds0021>.
- Van Hedel, K., Mejía-Guevara, I., Avendaño, M., Sabbath, E.L., Berkman, L.F., Mackenbach, J.P., Van Lenthe, F.J., 2016. Work-family trajectories and the higher cardiovascular risk of American women relative to women in 13 European countries. *Am. J. Publ. Health* 106, 1449–1456. <https://doi.org/10.2105/AJPH.2016.303264>.
- van Wijck, D.C., de Valk, H.A.G., Liefbroer, A.C., 2021. Temporary employment and family formation: an income or insecurity effect? *Eur. Socio Rev.* 37, 641–658. <https://doi.org/10.1093/esr/jcab007>.
- Veldman, K., Reijneveld, S.A., Hviid Andersen, J., Nøhr Winding, T., Labriola, M., Lund, T., Bültmann, U., 2022. The timing and duration of depressive symptoms from adolescence to young adulthood and young adults' NEEET status: the role of educational attainment. *Soc. Psychiatr. Psychiatr. Epidemiol.* 57, 83–93. <https://doi.org/10.1007/s00127-021-02142-5>.
- Veldman, K., Reijneveld, S.A., Verhulst, F.C., Ortiz, J.A., Bültmann, U., 2017. A life course perspective on mental health problems, employment, and work outcomes. *Scand. J. Work. Environ. Health* 43, 316–325. <https://doi.org/10.5271/sjweh.3651>.
- Vidal, S., Lersch, P.M., Jacob, M., Hank, K., 2020. Interdependencies in mothers' and daughters' work-family life course trajectories: similar but different? *Demography* 57, 1483–1511. <https://doi.org/10.1007/s13524-020-00899-z>.
- Viner, R.M., Ross, D., Hardy, R., Kuh, D., Power, C., Johnson, A., Wellings, K., McCambridge, J., Cole, T.J., Kelly, Y., Batty, G.D., 2015. Life course epidemiology: recognising the importance of adolescence. *J. Epidemiol. Community Health* 69, 719–720. <https://doi.org/10.1136/jech-2014-205300>.
- Warner, M.A., Hausdorf, P.A., 2009. The positive interaction of work and family roles. *J. Manag. Psychol.* 24, 372–385. <https://doi.org/10.1108/02683940910952732>.