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Mental health from a life-course perspective

Veldman, Karin

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1

General introduction



Mental health problems in childhood and adolescence may hinder young adults to transition successfully from school to work, but evidence on this topic is inconclusive. Therefore, the aim of this thesis is to assess the impact of mental health problems from childhood to young adulthood on the school-to-work transition from a life course perspective. In this thesis, the association of childhood adversities with mental health problems and educational attainment is examined. Furthermore, trajectories of mental health problems from childhood to young adulthood are identified and linked to the educational and employment status as well as to employment conditions and psychosocial work characteristics of young adults. In this first chapter we introduce a life course perspective to work and health research, provide background information on the Dutch educational and youth care system and labor market, define the main concepts and present the outline of the thesis.

Adding a life course perspective on mental health problems: the transition from school to work

A life course perspective is essential when linking mental health problems during childhood and adolescence to educational and employment outcomes later in life. Such a perspective enables to examine which exposures precede later life outcomes, and implies that different life stages cannot be fully understood isolated from each other.¹⁻⁴ A life course perspective takes account of (parts of) the life span and the context people are living in. The life course is then seen as a framework, in which early experiences and exposures are affected by contextual and individual factors, and, in turn, will have their effect on later life outcomes.^{1,3,4} For example, early life experiences, such as mental health problems in adolescence, can only be understood when the context, e.g., family and living conditions, are taken into account. Consecutively, mental health problems are likely to affect educational attainment or labor market participation in later life. From this life course perspective, critical periods (e.g., adolescence) and transitions (e.g., the transition from school to work) are key elements to be considered when examining the working life course.¹

Viner⁵ concluded that adolescence can be viewed as a critical period for later life outcomes, but is more or less neglected within life course epidemiology. Adolescence is a turbulent period that is characterized by physical growth and cognitive, psychological and social developmental processes. Another aspect that shows the importance of adolescence is that about 75% of all mental health

problems have their onset in adolescence, of which the majority tracks into adulthood.⁶

Mental health problems from childhood to young adulthood

Mental health problems comprise various behavioral and emotional problems, including externalizing, internalizing and attention problems, and are common among adolescents. Externalizing problems are behavioral problems that concern others or the environment, like aggressive and delinquent behavior. Internalizing problems are emotional problems that concern the self, like anxiety, depression or (psycho)somatic complaints. Attention problems are concentration problems, inability to focus attention for a longer period, daydreaming and getting lost in thoughts. When measuring mental health problems, roughly two approaches can be distinguished: a diagnostic/normative approach (i.e., based on DSM-criteria) and an empirical approach (i.e., based on questionnaires). In community-based samples, few participants are likely to meet the criteria for mental health disorders, and the empirical approach may function as an early indicator of mental health disorders.

A considerable number of adolescents, i.e., 10 to 25%, has to deal with the burden of mental health problems.^{7,8} A recent study of Ormel et al.⁸ showed that the life time prevalence of having any mental disorder is 44.8%. On average, the onset of mental health problems, both mild and severe, is around 14 years of age.⁹ The onset of mental health disorders varies per type of disorder: 10 years of age for behavioral disorders, 14 years of age for mood disorders, 9 years of age for anxiety disorders, and 5 years of age for Attention Deficit Hyperactivity Disorder (ADHD).⁸ Research has shown a high persistency of mental health problems from childhood to young adulthood.^{10,11}

The burden of mental health problems is also enormous from an economic perspective. Estimates yield that total costs for mental health problems in European countries are equal to 3.5% of the Gross Domestic Product (GDP).¹² For the US, Smith and Smith¹³ calculated that childhood mental health problems cause a reduction in family income of about 10,400 USD per year.

The Dutch educational and youth care system

The provision of care for children and adolescents is partly embedded within the Dutch educational system. Since August 2014, Dutch schools have the responsibility for care, as introduced by the Act of Tailored Education (in Dutch:

Wet Passend Onderwijs). Schools have to provide tailored education and facilitate support for children and adolescents with special needs. Schools are responsible for the development of a care plan, in alignment with youth social and health care. The Dutch educational system consists of eight years of primary education, four to six years of secondary education and two to six years of higher education. Children attend primary school from age 4 to 12 years. Admission to secondary school is based on the teachers' advice in primary school in combination with the outcome of a national test. Secondary education consists of a differentiated, multi-track system: schools that provide vocational education or job training and preparatory schools for entrance to tertiary education. Adolescents follow compulsory education until the age of 18 years or until the age of 16 years when at least some type of secondary education has been completed. The Dutch educational system is presented in Figure 1. The majority of secondary and vocational schools have an internal care team, consisting of an internal care manager, a social worker, and in half of the schools, also a psychologist or pedagogue. The internal care team aims to detect educational needs and signs of (mental) health problems, to initiate help for the children/adolescents and their parents and support for the teacher. For more complex problems, children and adolescents are referred to youth social care (e.g., youth social work, youth protection), and youth mental healthcare (e.g., child psychologist, psychiatrist), which are under the responsibility of the municipality.

The transition from school to work

The transition from school to work is an important milestone on the pathway from adolescence to adulthood, as its success is decisive for many later life health and employment outcomes.¹⁴ A report from the OECD labels young adults in the Netherlands 'study late while working', i.e., the median age of leaving school in the Netherlands is above the OECD average (i.e., 23 vs. 21 years of age) and more than one-third of the students combines study and work.¹⁵ For some young adults, the transition from school to work is problematic, i.e., a small percentage of young adults are inactive, (i.e., they do not participate in school or work) and others face unemployment (but are actively seeking for a job) when entering the labor market. Young adults who do not participate in school or work are referred to as Neither in Employment, Education nor Training (NEET). Young adults in NEET are at high risk of social exclusion, with a poor financial, social and health status as a consequence.¹⁶

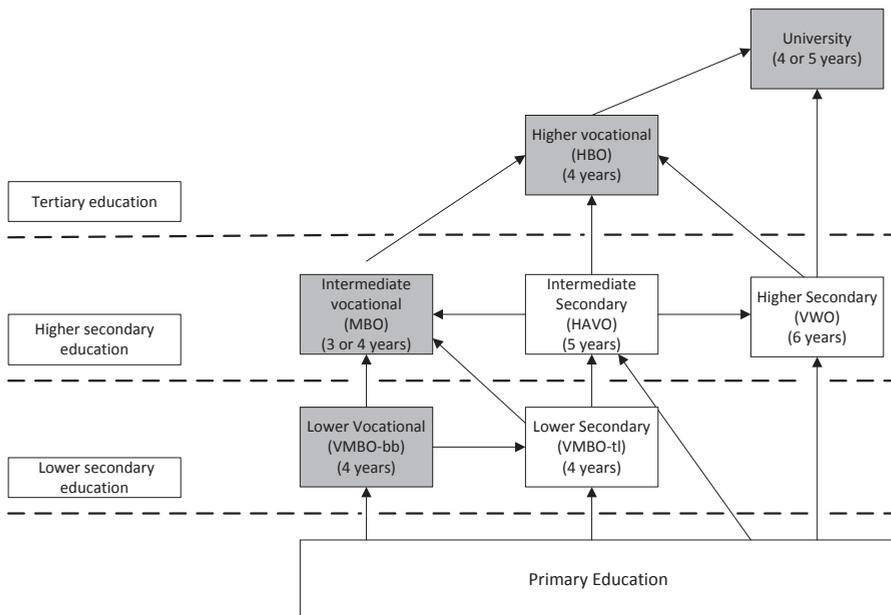


Figure 1. The Dutch educational system

Note: The grey boxes are types of education with specialized programs, those in white boxes are general educational programs.

During the financial crisis, the percentage of young adults in NEET in the Netherlands has increased from 2.0% in 2008 to 5.0% in 2011. These percentages are relatively low compared to the 13.0% young adults in NEET in OECD countries in 2011 (OECD, 2013).¹⁷ Youth unemployment rates are also relatively low in the Netherlands: in 2013, 11.0% of all youth between age 15 and 24 years was unemployed, compared to 23.4 % in European OECD countries.¹⁷ Given its severe consequences, understanding pathways and risk factors of becoming in NEET or unemployed is of high importance to prevent young adults from becoming in NEET or unemployed.

Mental health problems and the transition from school to work

Adolescents' mental health problems can have long lasting negative consequences, as they may have a negative effect on the transition from school to work. Adolescents suffering from mental health problems are at risk of dropping out from high school, and when entering adulthood, to be unemployed and having lower wages.¹⁸⁻³⁰

McLeod and Fettes²⁷ found that young adults (age 21 years) with decreasing or increasing trajectories of internalizing and externalizing problems from childhood into adolescence were less likely to complete high school, compared to young adults with low-stable trajectories. Furthermore, young adults with a history of high-stable, decreasing and increasing trajectories of inattention in childhood are more likely to drop out from high school at age 22 years.³¹ Other studies found that adolescents with severe mental health problems were less likely to complete high school.^{20,28}

Young adults with mental health problems seem to be at risk of becoming in NEET. Benjet et al.³² showed that mental health problems in adolescence were associated with being at work or in NEET. Cornaglia et al.³³ showed that adolescent girls (age 14–15 years) with mental health problems had a higher risk of being in NEET, than healthy adolescent girls. However, abovementioned studies used cross-sectional data and longitudinal research on mental health problems and young adults in NEET is lacking, leaving it unclear whether mental health problems precede the status of being in NEET.

Mental health problems also affect labor market status, as several studies have shown that childhood and adolescent mental health problems negatively affect the employment conditions of young adults. Research of Fletcher²² and Johar et al.²⁴ showed that depressive symptoms in childhood and adolescence are associated with higher unemployment rates, lower wages and receiving social payment in young adulthood. Furthermore, research of Wickrama et al.³⁰ has shown that adolescent conduct disorder, anti-social behavior and depressive symptoms were negatively associated with work stability (i.e., full-time job without disruptions in previous year) and economic stability (i.e., no financial cutbacks or negative economic events) in adulthood.

Despite this body of evidence, pathways between mental health problems and later life outcomes are not yet fully understood. Besides a lack of research, there are methodological weaknesses in the research that has been done. For example, Viner's editorial⁵ clearly pronounced that processes and experiences in adolescence are related to a variety of later life health outcomes, but work outcomes in adulthood were not mentioned. An important knowledge gap concerns the perception of the work environment by young workers, i.e., their level of possibilities for development or meaning of work, and how this perception is affected by mental health problems. Furthermore, the majority of research on the association of early mental health problems with educational and work outcomes

later in life, measured mental health problems only at one time point.^{18,19,21,22,24,26} This approach might be biased by measurement error, as the onset and development of mental health problems varies between children and adolescents.^{10,34} Another concern is that most research on early mental health problems and educational and employment status has been conducted in the US, whereas studies in the European setting are sparse.^{20–23,28–30,35}

The overall aim of the thesis and research questions

The overall aim of the thesis was to examine the association between mental health problems in childhood and adolescence and the transition from school to work. By adapting a life course perspective, our knowledge on this topic has improved, as it covers mental health problems during childhood and full adolescence and an important transition into adulthood. The following research questions were addressed:

1. Are mental health problems in childhood and changes in mental health problems between childhood and adolescence associated with educational attainment in young adulthood? (Chapter 2)
2. Do mental health problems in adolescence explain the relationship between childhood adversities and educational attainment in young adulthood? (Chapter 3)
3. Do trajectories of mental health problems from childhood to young adulthood affect the educational and employment status of young adults? (Chapter 4)
4. What is the role of educational attainment in the association between depressive symptoms in adolescence and labor market participation in young adulthood? (Chapter 5)
5. Do trajectories of mental health problems from childhood to young adulthood affect the employment conditions and psychosocial work characteristics of young adults? (Chapter 6)

Study samples: The TRAILS study and Vestliv study

We used data from two prospective cohort studies: the Dutch TRacking Adolescents' Individual Lives Survey (TRAILS) and the Danish West Jutland cohort study (Vestliv). Table 1 provides an overview of the concepts, the measurement instruments, the informants and the age at measurement.

To answer research questions 1 to 3 and 5 we used data from the TRAILS study, a prospective cohort study aiming to examine the psychological, social and physical development of children towards adulthood.³⁶⁻³⁸ TRAILS started in 2001 when children were 10-12 years of age. In total, 3145 children were approached for participation, of which 2230 children (76.0%, mean age 11.1 years, SD = 0.55) were eligible to be included into the study. Reasons for exclusion were language problems or mental or physical incapability (6.7%). Both child and parent provided informed consent. In the second wave, N=2149 children participated (96.4% of baseline, mean age 13.5 years, SD = 0.53), in the third wave N=1816 (81.4% of baseline, mean age 16.3 years, SD = 0.69) in the fourth wave N=1881 (84.3% of baseline, mean age 19.1 years, SD = 0.58) and in the fifth wave N=1775 (79.6% of baseline, mean age 22.3 years, SD = 0.65). Data was obtained from questionnaires completed by the children/adolescents and their parents at all measurement waves.

To answer research question 4, data from the Vestliv study were used, a prospective cohort study among 3681 Danish adolescents born in 1989 in the county of Ringkjøbing, Denmark.^{39,40} Of this sample, 3054 participants (83.0% of the initial sample, mean age 14.4 years, SD = 0.49) were eligible and completed the baseline questionnaire in 2004. In 2007, 2181 participants (71.3 % of baseline, mean age 17.8 years, SD = 0.38) completed a follow-up questionnaire. Depressive symptoms were measured by questionnaire and labor market participation and educational attainment were derived from registers (DREAM register⁴¹ and Register of Education⁴², respectively). Data from questionnaires and registers was merged by using the CPR number (a personal identification number) of each participant.

Outline of this thesis

In Chapter 2, we assessed whether mental health problems in childhood (age 11 years) and changes in mental health problems between childhood and adolescence (age 11 and 16 years) predict educational attainment of adolescents in young adulthood (age 19 years). In Chapter 3, we examined the association between childhood adversities and educational attainment in young adulthood, thereby taking mental health problems in adolescence into account. In Chapter 4, we identified trajectories of mental health problems from childhood to young adulthood and we examined the association of the trajectories with the educational and employment status of young adults. In Chapter 5, we studied the effect of depressive symptoms in adolescence on labor market participation in

young adulthood. Furthermore, we investigated whether educational attainment moderates or mediates the association between depressive symptoms and labor market participation. In Chapter 6, we identified trajectories of mental health problems from childhood to young adulthood, and examined the association of the trajectories with employment conditions and psychosocial work characteristics of young adults.

Table 1. Overview of concepts, measurement instruments and informants in TRAILS and Vestliv

	Measurement instrument or register (if relevant)	Informant	Age in years	Chapter
TRAILS study				
Educational attainment	Self-constructed	Participant	19	2, 3, 4, 6
NEET ^a	Self-constructed	Participant	19	4
Employment conditions	Self-constructed	Participant	22	6
Psychosocial work characteristics	COPSOQ ^b	Participant	22	6
Externalizing problems	YSR ^b , ASR ^b	Participant	11, 13.5, 16, 19, 22	2, 3, 4, 6
	CBCL ^b	Parent(s)	11, 16	2
Internalizing problems	YSR ^b , ASR ^b	Participant	11, 13.5, 16, 19, 22	2, 3, 4, 6
	CBCL ^b	Parent(s)	11, 16	2
Attention problems	YSR ^b , ASR ^b	Participant	11, 13.5, 16, 19, 22	2, 3, 4, 6
	CBCL ^b	Parent(s)	11, 16	2
Childhood adversities	Self-constructed (11 items)	Participant, parent(s), peers	11	3
Vestliv study				
Educational attainment	Dream register		21	5
Labor market participation	Register of Education		23	5
Depressive symptoms	CES-DC ^b	Participant	14, 18	5

^a Neither in Education, Employment nor Training

^b COPSOQ = Copenhagen Psychosocial Questionnaire, YSR = Youth Self-Report, ASR = Adult Self-Report, CBCL = Child Behavioral Checklist, CES-DC = Center for Epidemiology Studies Depression scale for Children

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