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Different mental health disorders and childlessness: The importance of partnership status

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Abstract

Mental health problems are increasing, while childlessness is becoming more common. We examine how mental health disorders (MHD) of varying prevalence, severity, and symptoms (common, severe, and behavioural and addiction-related disorders) are related to childlessness, and whether these associations are explained by partnerships and the partner's mental health.

We use Finnish total population register data on cohorts born between 1977 and 1980 and follow individuals from the age of 18 to 39. We estimate discrete-time event history models for the annual likelihood of having a child for men and women, with MHDs, co-residential partnership, and the partner's MHDs as the main explanatory variables. We measure MHD by using both diagnose information (ICD-10 codes) from the special health care registers and medication information (ATC-codes).

All types of MHDs predicted lower likelihood of having a child, the annual probability being 0.8–1.3%-points lower for women and 1.0–1.8 %-points for men in age-controlled models. The

strongest association was observed for severe mental disorders. Co-residential partnerships explained part of the difference between those with and without MHD (for any MHD 13% for women and 36% for men compared to age-controlled model). When both partners have an MHD, the likelihood for childlessness was higher compared to partners where only one of the partners had an MHD.

We conclude that partnerships and partner's mental health are important factors in explaining the relationship between mental health disorders and childlessness, particularly among men.

Keywords: mental health, childlessness, partnerships, partner, fertility

Introduction

The prevalence of mental health disorders has increased significantly, while fertility rates have concurrently declined, with rising levels of childlessness observed among men and women over recent decades in Western countries (Jalovaara & Miettinen, 2024; Abbing-Karahagopian et al., 2014; Noordam et al., 2015; Statistics Finland 2024). These overlapping trends highlight the importance of exploring the relationship between mental health disorders and childlessness. Previous research has shown that mental health disorders are associated with both lifetime childlessness and having fewer children (e.g., Power et al., 2013; Golovina et al., 2023; Kalucza et al., 2015; Kailaheimo-Lönnqvist et al., 2024). However, the underlying mechanisms driving these relationships remain largely unexamined. For instance, while mental health disorders and

having a partner are known to be interrelated, only one prior study (Kailaheimo-Lönnqvist et al., 2024) has explicitly accounted for this connection when studying fertility.

This study contributes to the existing literature in three ways. First, while only a limited number of studies have compared the strength of associations across different types of mental health disorders and childlessness (with some exceptions, e.g., Liu et al., 2024), our study seeks to fill this gap by examining the association in more detail. Second, we address the role of having a co-residential partner in the associations between mental health disorders and childlessness. Third, we examine how the partner's mental health condition may further influence childlessness. Finnish register data, uniquely comprehensive and covering co-residential partnerships over nearly 40 years, provides an unparalleled opportunity to explore these connections. This dataset allows us to develop a novel approach to understanding the intricate links between mental health disorders, partnerships, and childlessness.

Background

The rise in mental health problems has been well documented (Abbing-Karahagopian et al., 2014; Noordam et al., 2015). In Finland, the use of antidepressants has doubled over the past 15 years (Suomen lääketilasto 2011; Suomen lääketilasto 2023) and according to the Finnish School Health Survey, one in five girls experiences moderate or severe anxiety. Anxiety among boys is less common but has still increased (Kouluterveyskysely, 2023). During the same period, over the 2010s, fertility levels have declined in many high-income countries, including but not limited to the Nordic countries and the United States (e.g., Root et al., 2024; Hellstrand et al., 2021). The incidence of childlessness has also risen in recent decades. For example, in Finland, the proportion of men childless at age 45 increased from 19% in 1987 to 29% in 2020,

and the proportion of childless women from 14% to 20% (Jalovaara & Miettinen, 2024). These coinciding trends underscore the importance of exploring the link between mental health disorders and childlessness.

The average age of onset for many mental health conditions often precedes or coincides with the typical age for becoming a parent (Liu et al., 2024; Golovina et al., 2023; Solmi et al., 2022). Consequently, many individuals experience mental health problems during the critical time period for partnership formation and entering parenthood. Mental health disorders are associated with difficulties in forming and maintaining relationships, for instance, with an increased risk of separation and reduced likelihood of marrying (Breslau et al., 2011; Mojtabai et al., 2017; Idstad et al., 2015; Butterworth & Rodgers, 2008; Metsä-Simola et al., 2018; Kailaheimo-Lönnqvist et al., 2024). Although partnership formation and relationship stability play crucial roles for having children, many studies on the links between mental health and likelihood of having a child have overlooked these aspects. However, recent Finnish findings show that accounting for co-residential partnership status reduced the association between depression and childlessness by one third for women and over 50 percent for men (Kailaheimo-Lönnqvist et al., 2024). This highlights the importance of accounting for partnerships when examining the relationship between mental health and childlessness. We thus hypothesize the following:

> *H1: Not having a co-residential partner is a mechanism that links mental health with childlessness, with a stronger effect for men than women.*

The characteristics of both partners influence childbearing aspirations and relationship stability. For instance, depression and other mental health disorders of both partners may reduce a couple's desire and perceived feasibility of having children (Carlsson & Kim, 2024; Sorsa et

al., 2023). Furthermore, mental health disorders tend to cluster within relationships due to assortative mating, which underlines the importance of mental health for couples' childbearing (Torvik et al., 2023; Peyrot et al., 2016). Additionally, a recent study found that the likelihood of having a first child was lower when both co-residential partners had depression compared to cases where only one partner had depression (Kailaheimo-Lönnqvist et al., 2024). Thus, we hypothesize that:

H2: Among partnered individuals, childlessness is most likely if both partners have a mental health disorder.

Furthermore, variation in the association between mental health disorders and childlessness could stem from the differing severity and nature of these disorders, plausibly through their impact on partnership formation and stability. Evidence from Finland and Sweden suggests that severe mental disorders, such as schizophrenia, are more strongly related to childlessness than less severe, but also more common, mood disorders (Liu et al., 2024). Other mental health conditions such as substance use disorders are known to have adverse effects on relationship quality and stability (Birkeland et al., 2018), which could be expected to decrease the probability of having a child. However, people with substance use disorders are also more likely to engage in high-risk sexual behaviours (Chen et al., 2018), which could lead to unplanned pregnancies and thus reduce the likelihood of staying childless. We hypothesize that:

H3: Severe mental disorders, such as psychotic disorders, are more strongly associated with childlessness than mood and anxiety disorders.

H4: Substance use disorders are associated with an increased risk of having a child outside the context of a co-residential partnership.

We test these four hypotheses by using Finnish total population register data with links to individuals' co-residential partnership history and partners' characteristics. Our findings enhance understanding on the relationships between mental health disorders and childlessness by, first, comparing the associations of different mental health disorders with childlessness and thus extending the knowledge beyond depression (e.g., Kailaheimo-Lönnqvist et al., 2024). Second, the current study incorporates a comprehensive history of co-residential partnerships of individuals. Third, it examines the role of current partners' mental health conditions on childlessness. These are important and unique features of this study given that mental health disorders affect both the formation and stability of partnerships, and as partners' mental health disorders may have joint effects on a couple's likelihood of having a child (c.f. Kailaheimo-Lönnqvist et al., 2024).

Data and methods

Data

We use Finnish total population register data on cohorts born between 1977 and 1980, following individuals annually from the age of 18 to 39. The sample is restricted to individuals born in Finland, as for these persons we were able to achieve nearly complete linkage of education, healthcare, and sociodemographic data throughout the study period. Our final analytical sample includes 123,182 women and 128,468 men.

The outcome variable is whether an individual has a first child in a given year. Mental health disorders are coded as partly time-varying dummy variables, meaning that when an individual has received a diagnose or has been prescribed medication for a mental health disorder, s/he will be categorized as having mental health disorder from that year onwards, i.e., we allow no recovery in the measurement. Individual's mental health disorder is the primary independent

variable, and we distinguish between three categories of disorders: common mental disorders, severe mental disorders, and behavioural and addiction-related disorders (Table 1).

The category of the *common* mental disorders includes depression and anxiety disorders that do not involve psychosis or major cognitive dysfunction, and that are typically treated in primary care. The category of behavioural and addiction-related disorders (*behav*) includes disorders characterized by problematic behaviour such as alcohol misuse and gambling that may cause significant harm in everyday life. The category of *severe* mental disorders includes conditions with psychotic symptoms (such as schizophrenia, bipolar disorder), higher functional impairment, and complex treatment needs, and they are typically treated in specialized health care. The category of *any mental disorder* is coded as one since the year of first observation of any of these conditions.

Mental disorders are measured using diagnose information (ICD-10 codes) from the special health care registers and medication information (ATC-codes) from the prescription register of Social Insurance Institution of Finland (measured from a first diagnose or medication information from the registers). All psychotropic medication is prescribed by clinical doctors, and all persons residing in Finland are entitled to reimbursement for medication expenses by the Social Insurance Institution of Finland, thus increasing the validity of our measure. The partner's disorders are measured in the same way as the index person's disorders.

The fully time-varying control variables include current partnership status, the (cumulative) number of partners, age, highest achieved educational level, and student status. We can define partnerships as co-residential unions, including both marriages and cohabitations, which is a unique strength of the Finnish register data. The current partnership status is classified into

three categories: 1) having a partner without a mental health disorder, 2) having a partner with a mental health disorder, 3) not having a partner. Number of partners refers to the cumulative number of co-residential partners an individual has ever had by each observation year; it remains constant when a partnership dissolves and increases when a new partnership is formed. Age is treated as a categorical variable with 1-year steps ranging from 18 to 39 years. Educational attainment is categorized into three levels: basic, secondary (including vocational and general tracks), and tertiary (which includes those with a bachelor's degree or higher). Student status refers to individuals who are enrolled in education.

Table 1. Categories for mental health disorder and their construction. Each mental health condition is defined both by diagnosis data and medication data.

	ICD-10	Medication	Labelled
Common mental disorders: Neurotic, stress-related, somatoform, depressive and mood disorders	F32-39 (excluding F32.3 & F33.3), F40-F45	N05B, N05C, N06A, N06C	Common
Behavioral and addiction-related disorders: Mental and behavioral disorders due to psychoactive substance use, habit and impulse disorders and paraphilias	F10-F19, F63, F65	N07BB, N07BC	Behav
Severe mental disorders: Schizophrenia, schizotypal, and delusional disorders, manic episodes, bipolar disorders and depression with psychotic symptoms	F20-F29, F30-F31, F32.3, F33.3	N05A	Severe

Methods

We use discrete-time event history models with a logistic link, conducting all analyses separately for women and men. We predict the time-varying binary variable 'birth of a first child' in time t by mental health disorder status in year t-1. We use similar lagging of covariates for all time-varying variables. Our analytical procedure consists of two parts. First, we fit discrete-time event history models to examine the annual likelihood of having a first child. These results are presented as predicted probabilities in the figures. Right-censoring occurs upon emigration, death, or at age 39. We conduct the models first for any mental health disorder and then separately for different mental health disorders. There are separate stepwise models where we first control only for age (M1), then for current partnership status and number of partners (M2), and in the last model for education and student status (M3). We use stepwise models because they help us to determine the role of the partnerships – how much does the estimate change when partnerships are accounted for (H1).

Second, to assess the potential impact of the accumulation of mental health disorders within couples, we will include an interaction term between an individual's mental health disorder and current partnership status which includes the potential partner's mental health status (H2). These results are presented as predicted probabilities from fully controlled models. To assess any differences in these associations between different mental health conditions, we similarly present these results from analyses both for any mental health disorder and for different mental health disorders (H3–H4).

Results

Descriptive results

Table 2 shows the prevalence of different mental health disorders (MHD) and childlessness by the age of 39 by sex. The categories are not mutually exclusive. In general, mental health disorders are more common among women than men, with 37% of women and 28% of men having (had) a mental health disorder by age 39. However, severe disorders (8%) are about as common among men and women, whereas men are substantially more often diagnosed with behavioural disorder (6%) than women (3%). Childlessness is very common among those with severe disorders (38% of women, 56% of men).

Table 2. The percentages of mental health disorders and childlessness in the sample at the age of 39. Note that the mental health categories are not mutually exclusive.

	Women		Men	
	% with MHD	% childless	% with MHD	% childlessness
No MHD	62.7	21	72.5	30
Any MHD	37.3	27	27.5	42
Mood & anxiety disorders (Common)	36.3	26	25.7	41
Behavioural and addiction-related disorders (Behav)	2.7	33	6.3	46
Schizophrenia, schizotypal, delusional disorders, bipolar (Severe)	8.6	38	8.1	56

Note: MHD=Any mental health disorder.

The descriptive statistics of variables at the age of 39 (i.e., end of the follow-up period) are presented in Table 3 by both sex and mental health disorder (=MHD). Individuals with any

mental health disorder are less educated and less likely to have a partner or a child compared to individuals without a mental health disorder. In addition, having a mental health disorder is more strongly associated with the likelihood of being in a partnership in men than in women. Individuals with a mental health disorder have more often also a partner with mental health disorder (Table 3; Table A1)

Table 3. Descriptive statistics by mental health disorder status at the age of 39.

		Women (%)		Men (%)	
		No MHD	Any MHD	No MHD	Any MHD
Highest education					
	Primary	5.1	8.8	9.1	21.1
	Secondary	40.0	45.8	52.2	55.0
	Tertiary	54.9	45.4	38.7	23.9
Student status		2.6	3.6	1.2	1.95
Partnership					
	Partner, no MHD	87.5	82.6	81.2	70.8
	Partner, any MHD	5.0	8.9	7.4	10.8
	No partner	7.5	8.5	11.4	18.4
		Mean (SD)		Mean (SD)	
Number of partners		1.14 (0.99)	1.09 (1.13)	1.05 (0.98)	0.86 (1.11)
Age					

Note: MHD=Any mental health disorder, Min/Max for number of partners is 0 and 9 in all categories. Age is treated as a categorical variable in the models.

Mental health disorders and likelihood of having a child

As expected, the results show that having *any mental* health disorder is negatively related to the likelihood of having a first child (Figure 1). The decrease in the annual probability of having

a child was 0.8 %-points for women and 1.1 %-points for men in age-controlled models (Table A3). Controlling for the current partnership status and number of partners reduced the estimate more for men than women (Figure 1 M1 vs M2 13% for women and 36% for men) but taking into account education reduced the estimate of any mental health disorder more for women (Figure 1 M2 vs M3 38% for women and 14% for men). This suggests that partnerships are generally more important mediators of the relationship between mental health and the likelihood of having a first child for men while education seems to be more important for women.

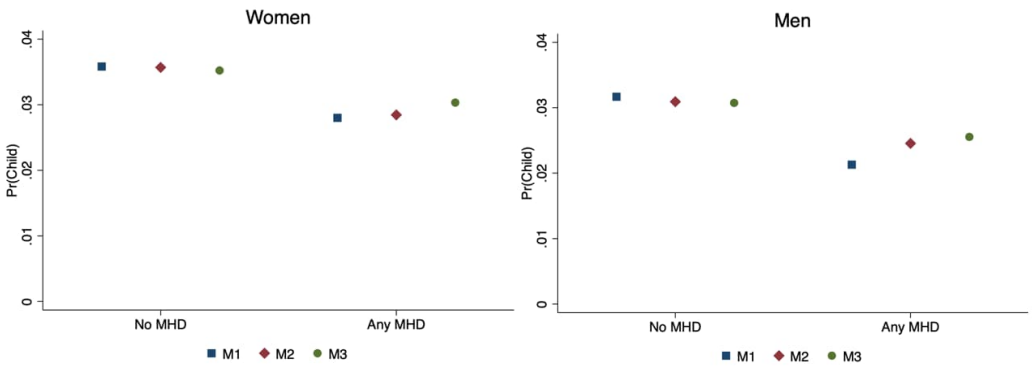

Figure 1. The association between any mental health disorder and likelihood of having a child. Discrete-time event history model presented as predicted probabilities with 95% CIs. Note: M1: age, M2: M1 + current partnership status, number of partners, M3: M2 + highest education and student status.

Figure 2 shows associations between *different mental health disorders* and the likelihood of having a child in a stepwise manner. For both women and men, the strongest associations were for severe disorders.

Controlling for partnerships (M2) explained a large share of the negative association between severe mental disorders and likelihood of having a first child (especially for men) and the estimates became rather similar to other mental health disorders. This suggests that partnerships explain differences in the strength of the associations between different mental health disorders and childlessness. In contrast, controlling for the highest education and student status (M3) explained more of the negative association between mental health disorders and likelihood of having a child for women, especially for those diagnosed with severe mental disorders. To summarize, controlling for partnerships explains more of the negative association for men than for women, thus suggesting that partnerships play a more important role for the association of mental health disorders and childlessness for men. In turn, education seems to be more decisive for the relationship in women (controlling for education explains 25% of negative association for women and 10% for men compared to age-controlled models), plausibly related women's higher average levels of education.

Across all mental health disorders, those with a disorder were less likely to have a child than those without a disorder. Compared to those without any mental health disorder, the annual likelihood of having a child decreased by 0.8–1.3 %-points for women in age-controlled models and 1,0–1.8 %-points for men respectively. In fully controlled models these attenuations were 0.5-0.7 %-points for women and 0.5–0.8 %-points for men (Figure 2).

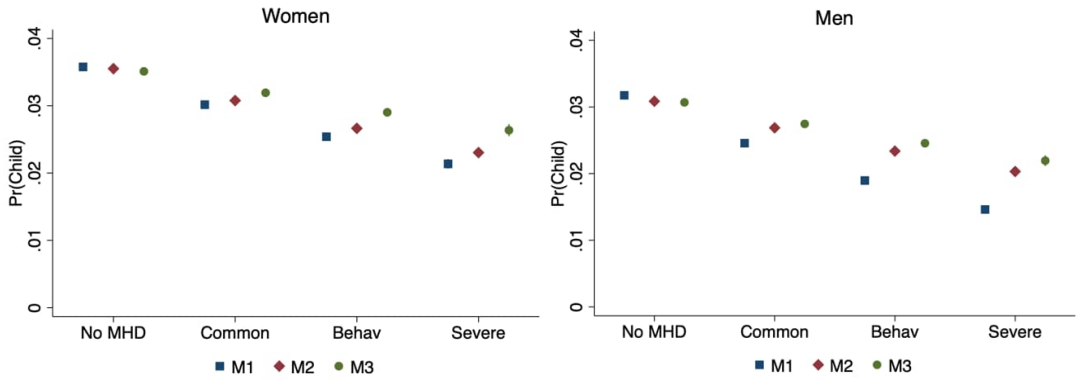

Figure 2. The association between different mental health disorders and likelihood of having a child. Separate models for men and women. Discrete-time event history model presented as predicted probabilities with 95% CIs. Note: M1: age, M2: M1 + current partnership status, number of partners, M3: M2 + highest education and student status. MHD = any mental health disorder.

Accumulation of mental health disorders within couples

In this section we further examined the role of accumulation of mental health disorders within couples.

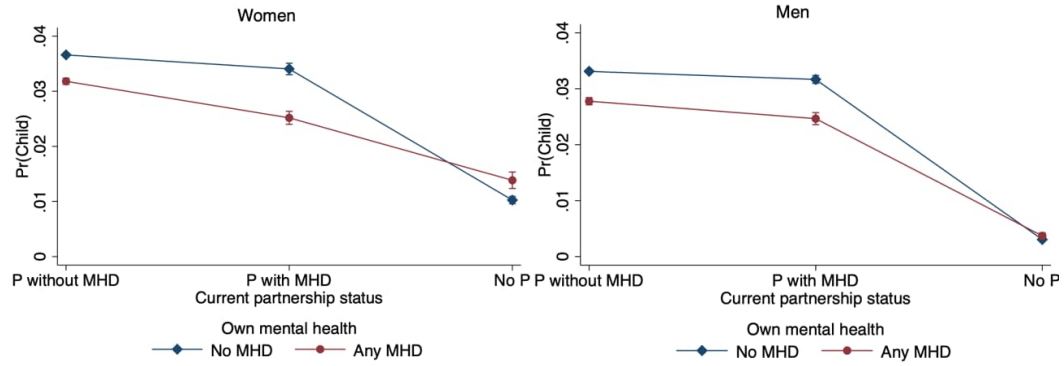

Figure 3. The association between any mental health disorder and likelihood of having a child by current partnership status. Discrete time event history models presented as predicted

probabilities with 95% CIs. Note: model controls for age, highest education, student status and number of partners. MHD = any mental health disorder, P = partner.

In the interaction between (*any*) own mental health disorder and current partnership status with potential partner's mental health status (Figure 3), it is notable that the patterns for men and women were largely similar. If a partner had a mental health disorder, the likelihood of having a child was lower than if only the index person had a disorder, especially in women. Among women whose partner had a disorder, also own mental health diagnosis seems to matter more than was the case for men. These results suggests that accumulation of poor mental health within couples increases the risk of remaining childless. In addition, for women, having a mental health disorder was linked with a slightly higher likelihood of having a child outside the context of co-residential partnerships.

Next, these interaction analyses were carried out for *different mental health disorders* separately. All mental health conditions showed that if both partners have a mental health disorder, the likelihood of having a child is lower than if only one of the partners had a disorder, with modest variation between different diagnoses (Figure 4). Interestingly, for women both common (Common) and behavioural and addiction-related disorders (Behav) were linked with slightly higher likelihood of having a child outside a partnership compared to women without mental health disorder. A similar pattern is visible for men only for behavioural and addiction-related disorders.

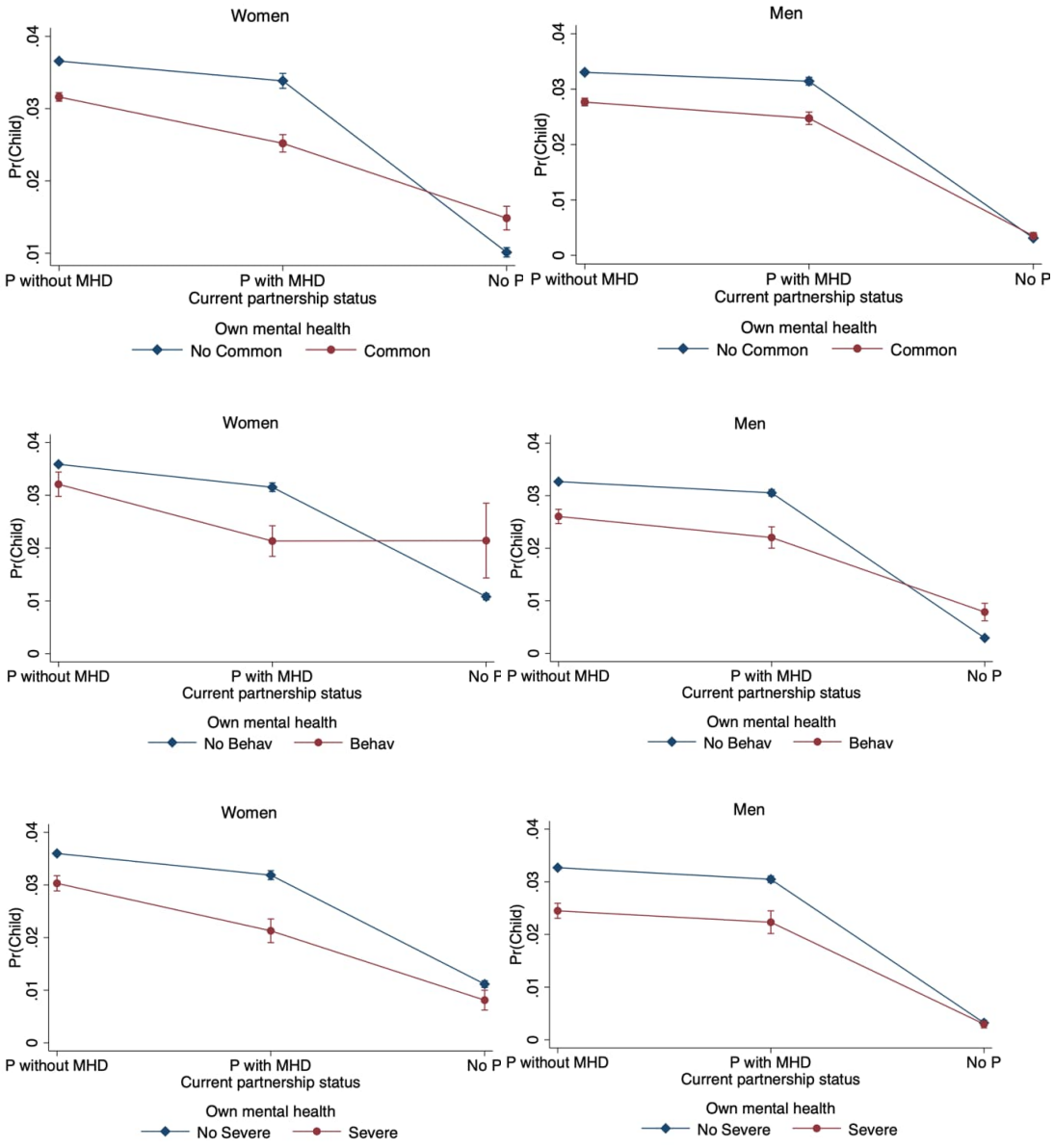

Figure 4. The association between different mental health disorders and likelihood of having a child by current partnership status. Discrete-time event history models presented as predicted probabilities with 95% CIs. Note: model controls for age, highest education, student status and number of partners. MHD = any mental health disorder, P = partner

Support for hypotheses

We found support for *H1*, according to which partnerships mediate partly the association between mental health disorders and the likelihood of having a first child, especially for men (Figures 1 and 2). We also found support for *H2*, according to which childlessness is more prevalent among couples where both partners have a mental health disorder compared to those couples where only one or especially neither of the partners have a mental health disorder (Figures 3 and 4). Furthermore, we find support for *H3*, which states that severe mental disorders such as schizophrenia are more strongly associated with childlessness than common disorders such as mood and anxiety disorders (Figures 2 and 4). We additionally found that the explanatory power of partnerships status was strongest for severe mental health disorders, which contributes to their stronger associations with childlessness. In fully controlled models, the differences between different mental health disorders were small. Lastly, support is found for *H4*, which states that substance use disorders are associated with an increased risk of having a child outside the context of co-residential partnerships. However, the risk of having a child outside the context of a coresidential partnership was larger also for women, but not men, with common mental disorders (Figure 4).

Robustness analyses

As robustness analysis we conducted the models otherwise similarly, but we distinguished the partners' different mental health disorders. The results remained similar but the differences by partner's different mental health disorders where small which indicates that the type of the partner's mental health disorder seems to matter only to a limited extend (Descriptives, Table A2, interaction models Figure A1).

Discussion and conclusion

Discussion

We investigated the relationship between various mental health disorders and childlessness to better understand the links between rising rates of both childlessness and mental health disorders at reproductive ages. The underlying mechanisms driving this temporal relationship remain largely unexamined. To our knowledge, we are among the first to compare different mental health disorders while accounting for the partnerships and current partner's mental health (except Kailaheimo-Lönnqvist et al., 2024 for depression). We use Finnish total population registers covering cohorts spanning from 1977 to 1980 and include individuals' history of co-residential partnerships and the mental health of the current partner when examining the links between different mental health disorders and childlessness.

Our findings can be summarised as follows. First, while all measured mental health disorders are positively related to childlessness, there is variation by the severity of the disorder. This variation aligns with previous studies (Power et al., 2013; Golovina et al., 2023; Liu et al., 2024). However, these have typically not compared different mental health disorders while accounting for partnership status. In age-controlled models, the annual likelihood of having a child was 0.8–1.3 %-points lower for women with a mental disorder as compared to those without. The respective difference was 1.0–1.8 %-points for men. We found strongest associations for severe mental health disorders (1.3 %-points for women and 1.8 %-points for men) and the weakest association for common mental health disorders (0.8 %-points for women and 1.0 %-points for men) both for men and women.

To better understand the magnitude of the estimated associations, we used the regression results to estimate how strongly different mental health disorders predict childlessness over the life course. For these calculations, we assumed that the onset is at age 25, and until that age, those who eventually develop a mental health disorder have the same risk of becoming a parent as

those who do not develop a mental health disorder. Starting from age 25, and until age 40, those with mental health disorder have a proportionally reduced risk of becoming a parent; this proportional risk reduction is the estimated regression coefficient for mental health disorder (Figure 2, Model 3). With this set-up, we estimated that among women, severe mental health disorders that start at age 25 increase the risk of remaining childless by age 40 by 7.9 %-points, and common mental health disorders by 5.3 %-points. Among men, the increase in risk of childlessness is 11.0 %-points for severe and 6.9 %-points for common mental health disorders.

Second, partnerships are important mechanisms in explaining the links between mental health disorders and childlessness. In general, accounting for partnership status reduced the estimates of any mental health disorder by 13% for women and 36% for men compared age-controlled models when predicting childlessness. This shows that partnerships play a more important role for the association of mental health disorders and childlessness for men than for women. Similar evidence of partnerships is found in previous studies from Finland and Sweden (e.g., Liu et al., 2024; Kailaheimo-Lönnqvist et al., 2024).

Third, the variation by different mental health disorders can be largely explained by partnership status, especially for men. Thus, differences in the links between different mental health disorders and the likelihood of having a first child are less pronounced when partnership status is accounted for. This shows that partnerships explain a larger amount of the stronger negative association observed for more severe disorders. This indicates that those with more severe mental health disorders are less likely in partnerships and the partnerships might be less stable too which lead to higher childlessness.

Fourth, among the partnered, the likelihood of having a first child is the lowest if both partners have a mental health disorder. Similar results were found in a previous study with a similar design on depression (c.f. Kailaheimo-Lönnqvist et al., 2024). It also seems that the strength of this association is similar for all mental health disorders, and its nature is additive, rather than multiplicative. Given the clustering of poor mental health within relationships (Torvik et al., 2023; Peyrot et al., 2016), and the fact that most children are born in the context of co-residential partnerships (96.6% of all children born to Finnish women who were born in 1969–1976, Andersson 2023), our finding highlights the importance of accounting for both partners' mental health.

Lastly, the likelihood of having a child was lowest among those without a partner, and this association was particularly strong for men. We also uncovered an interesting new finding: behavioural and addiction-related were associated with an increased risk of having a child outside the context of a co-residential partnership both for women and men. Similar was also found for women with common mental health disorders. A possible explanation for this finding is that many mental health disorders are associated with risky sexual behaviours that increase the risk of unplanned or early pregnancies (Golovina et al., 2024; Yang et al., 2022; Østergaard et al., 2017; Skogslund et al., 2019). These may then result in unplanned births among those who do not live together with a partner (e.g., mental health issues are linked with unplanned pregnancies (Wellings et al., 2013)). Our findings suggest that while some mental health disorders can increase the risk of childbearing outside partnerships, especially among women, mental health disorders generally decrease the risk of childbearing within partnerships.

Methodological considerations and future research

Future research should examine the role of different mental health disorders in relation to the timing and the eventual likelihood of a first birth and number of children. This could provide a more comprehensive understanding of the relationship between mental health and fertility. Additionally, identifying protective and compensatory factors in the relationship between mental health disorders and fertility outcomes should be examined. Our study is limited in that it could not distinguish between the timing and likelihood of a first birth, and thus more research is needed here.

A key strength of our study lies in its use of Finnish total population registers, which enable analyses with minimal selection bias, loss to follow-up, or reporting bias. Finnish register data are uniquely comprehensive, covering co-residential partnerships nationwide over nearly 40 years. Even most other Nordic countries do not offer such extensive coverage. Moreover, we combine diagnostic information from specialized health care with medication data, allowing us to more effectively capture individuals with mental health disorders.

Nonetheless, certain limitations should be acknowledged, such as the lack of information on the quality of partnerships and dating behaviour. For instance, we do not have information on the ways in which mental health disorders prevent men in particular from forming stable partnerships – this is important as we showed that partnerships play a strong role in men's childlessness. Such information would help to explain why mental health disorders are associated with a lower likelihood of having a partner and becoming a parent.

Conclusion

All mental health disorders are associated with an increased risk of childlessness, and this association is stronger for severe disorders. However, taking partnership status into account

largely explains the differences in the strength of the association between different mental health disorders. This indicates that for some mental health disorders the reduced risk of having a child is strongly mediated by the difficulty in finding and maintaining partnerships. Lastly, when both partners in a couple have a mental health disorder, the likelihood of childlessness is higher than in couples where neither or only one of the partners has a disorder.

Our research offers valuable insights on the relationship between mental health and childlessness. Additionally, it aims to provide guidance for decision-makers and stakeholders in supporting individuals and couples in achieving their desired number of children. We encourage these actors to recognise mental health problems in individuals and couples of childbearing ages as a potential barrier to parenthood.

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Appendix

Table A1. The percentages of own mental health disorder and partnership status by the age of 39.

	Women		Men	
	No own MHD	Own MHD	No own MHD	Own MHD
Partner, No MHD	65	35	75	25
Partner with MHD	51	49	66	35
No partner	56	44	60	40

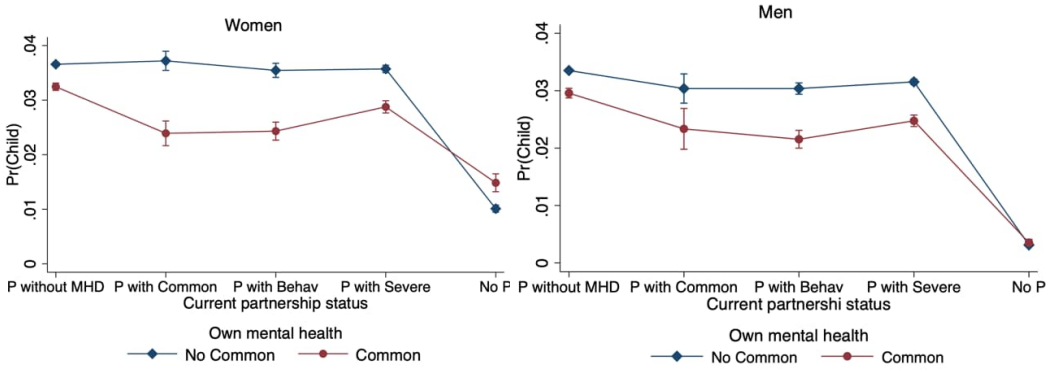
Note: MHD= any mental health disorder

Table A2. Descriptive statistics by mental health disorder status at the age of 39.

		Women (%)		Men (%)	
		All	Any MHD	All	Any MHD
Partnership					
	Partner, no MHD	79.2	69.9	69.4	54.6
	Partner with Behav	1.3	1.8	0.4	0.7
	Partner with Severe	1.5	2.3	1.5	2.4
	Partner with Common	9.7	15.0	14.2	18.5
	No partner	7.1	9.1	12.8	19.6
Highest education					
	Primary	5.1	8.8	9.1	21.1

	Secondary	40.0	45.8	52.2	55.0
	Tertiary	54.9	45.4	38.7	23.9
Child		78.0	72.6	67.8	56.8
Student status		2.6	3.6	1.2	1.95
		Mean (SD)		Mean (SD)	
Number of partners		1.14 (0.99)	1.09 (1.13)	1.05 (0.98)	0.86 (1.11)

Note: MHD= any mental health disorder. Categories of mental health disorders presented at Table 1. Min/Max for number of partners is 0 and 9 in all categories. Age is treated as a categorical variable in the models.



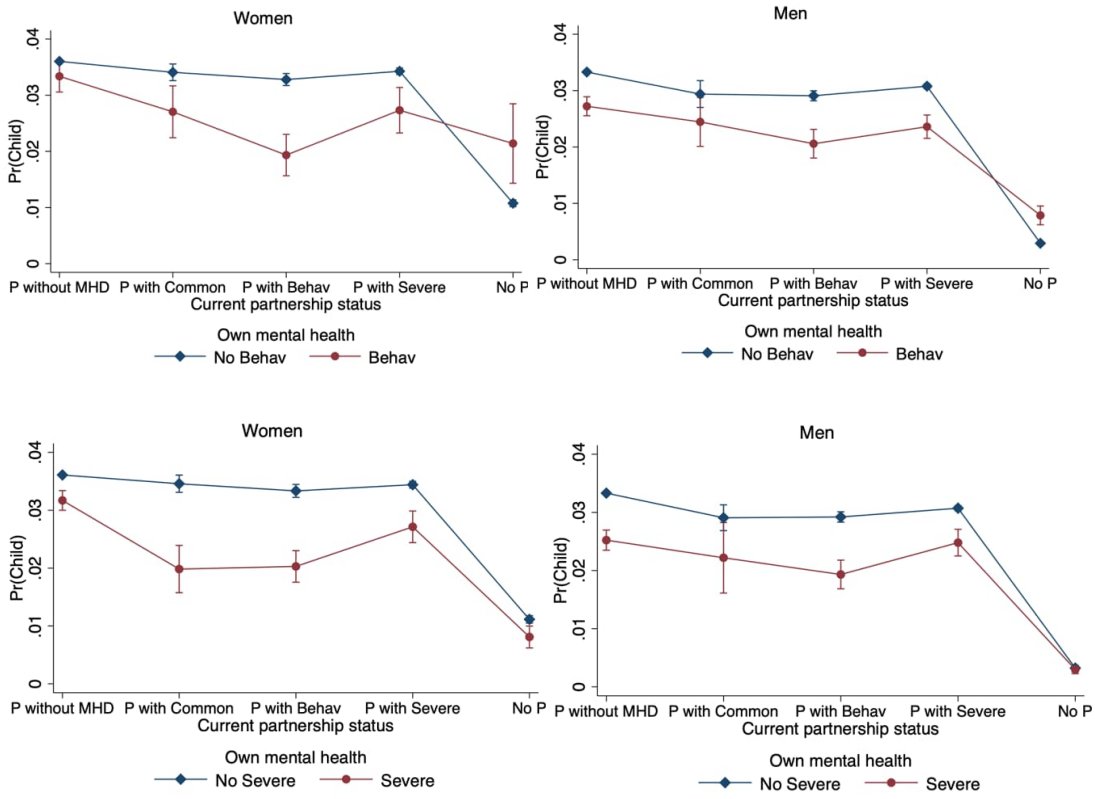


Figure A1. The interaction between different mental health disorders and current partnership status with potential partner's mental health status on the likelihood of having a child. Discrete-time event history model presented as predicted probabilities with 95% CI's. Note: models control for age, highest education, student status, current partnership status, and number of partners. MHD = any mental health disorder, P = partner.