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Availability and accessibility of primary mental health services for adolescents: an overview of national recommendations and services in EU

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Background: Mental health problems in adolescence can profoundly jeopardize adolescent current and future health and functioning. We aimed to describe existing recommendations and services regarding the delivery of primary mental health care for adolescents in 31 European countries. **Methods:** Data on the availability and accessibility of primary mental health services were collected, as part of the Horizon 2020-funded project Models of Child Health Appraised. One expert from each country answered a closed items questionnaire during years 2017–18. **Results:** All 31 participating countries had some policy or recommendations regarding the availability and accessibility of primary mental health services for adolescents, but their focus and implementation varied largely between and within countries. Only half of the participating countries had recommendations on screening adolescents for mental health issues and burdens. Merely a quarter of the countries had ambulatory facilities targeting specifically adolescents throughout the whole country. Just over half had some kind of suicide prevention programs. Same-day access to primary care in case of -health emergencies was possible in 21 countries, but often not throughout the whole country. Nineteen countries had strategies securing accessible mental health care for vulnerable adolescents. **Conclusions:** Overall, around half of European countries had strategies securing access to various primary mental health care for adolescents. They frequently did not guarantee care over the whole country and often tackled a limited number of situations. EU countries should widen the range of policies and recommendations governing the delivery of mental health care to adolescents and monitor their implementation.

Introduction

As part of a shift towards the so-called new morbidity,[1] the issue of adolescent (10–19 years) mental health currently represents an important public health challenge.[2–6] The estimated prevalence of some form of mental health problems among adolescents in Europe is about 20% and cumulative prevalence is estimated to be almost 50% by age 18 years.[7–9] Adolescent mental health problems and disorders have both short and long-term impact on health and represent a major burden of disease in the world and in Europe[10] and often persist throughout adolescence into adult life.[9] Depression, conduct disorders and substance use for instance, which are fairly common during adolescence, impact heavily on education and psychosocial development; furthermore, they can lead to suicide, the second cause of death among 15–29 years old.[3,11] Over 125 000 suicides are committed each year across the WHO European Region, with low- and middle-income countries in the region having the highest suicide rates in the world.[4,12,13]

There are many avenues to address this challenge, including environmental approaches such as, for instance, supporting the parents and the community in educating adolescents,[14] improving the school climate[15] or issuing policies in the area of substance use.[16] Still, identifying adolescents who need support and treatment in the area of mental health, for instance substance use disorder, is a crucial aspect of primary care.[6,17] Primary care practitioners (PCPs) (family doctors, primary care physicians, paediatricians, nurses) have a particular responsibility in this respect, as adolescents often do not decide by themselves to consult, often exhibit physical symptoms that mask underlying psychological burden and hardly access directly to mental health specialists. Moreover, given the high prevalence of mental health symptoms or disorders during this period of life, it is hardly imaginable that all will be taken care by mental health specialists only.

Although the availability of PCPs seems linked with better mental health outcomes,[18] current available date suggest that mental health care remains still unavailable to this group.[2,3] Improving the quality of primary care services to adolescents using recommendations, developing policies that facilitate access to mental health care, and addressing the needs of vulnerable adolescents, such as those having migrated recently or having dropped out of the school system, all are strategies that respond to the challenge of adolescent mental health problems and disorders.[19–23] The current study aimed to describe the policies, recommendations and type of services regarding primary health care services for adolescents with mental health problems in 31 European countries.

Methods

The present survey was part of a large 3.6 years EU funded research program Models of Child Health Appraised (MOCHA) initiated by lead experts from Imperial College in London.[24] Several groups of researchers worked on various aspects of primary care delivered to children and adolescents in all 28 EU countries plus Iceland and Norway, such as quality assessment, economic factors, structure of health care delivery, training of health care professionals, the workforce and ethics. The information was collected through several rounds of inquiries and surveys. A network of country respondents ('experts') acted as informants for obtaining data requested by the scientists in charge, using local indigenous sources. These respondents, one for each country, were selected for their expertise in child health services. They were met on several occasions and trained by the MOCHA project's lead researchers. A detailed description of the methodology of the MOCHA project can be found in the main comprehensive scientific publication from the project.[24] For the topic of this paper, the first author has added material on the situation in Switzerland, to yield a total of 31 countries (figure 1). All country experts have provided the answer sheet filled in, so that the global response rate is 100%. As it did not involve human subjects but rather dealt with procedures and policies, the study protocol has not been submitted to an Institutional Review Board, but was performed in accordance with the Helsinki declaration.

A questionnaire tackling adolescent primary care was developed by one group working specifically on school and adolescent primary care, consisting of 20 questions covering various aspects of adolescent health care needs, and based on hypothetical scenarios (table 1). These scenarios were developed to assist the country experts in understanding the kind of specific—often practical—information that they were asked to gather. For the current study, a subset of 11 questions focusing on adolescent primary mental health care was used to obtain information on the availability and accessibility of primary mental health services for adolescents. The scenarios and questions (table 1) addressed both emotional and behavioural

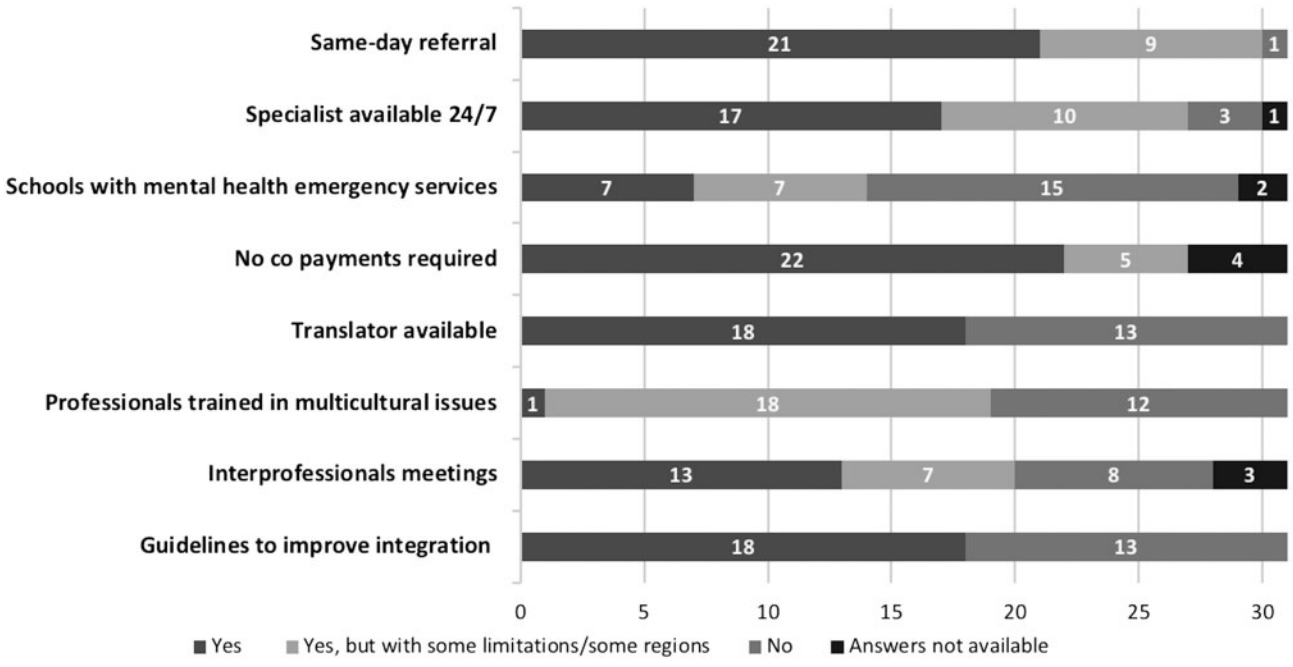

Figure 1 Policies and recommendations on accessibility and equity in access to primary mental health services

Table 1 Some examples of scenarios and questions used to exemplify the kind of information expected from the country experts

Samuel is an intelligent 15-year-old boy whose family migrated to your country years ago. His parents are poor and struggle with temporary jobs. They do not speak the country's language well. Samuel suffers from mild arthritis that is not well controlled, but above all, he has been increasingly skipping school and recently his grades have worsened. His friends know that on many occasions in the past 6 months he has been binge drinking; also, on various occasions, he has been aggressive with some of his classmates. During a party, he is found by a close friend in the garden, lying unconscious with an empty bottle of vodka beside him. The friend calls the emergency services, and Samuel spends a period of time in hospital before being discharged home, and looked after by a primary care doctor.

In your country are there ambulatory facilities especially dedicated to adolescents which can handle situations such as the one Samuel (risk taking) finds himself in?

- No facilities (please go to Question 7).
- yes, in a few regions.
- yes, in most parts of the country.

If ambulatory facilities exist, do they work in an inter-professional way (a mixture of workforce e.g. **primary care physicians, psychologists, psychologists, and so on)?**

- No facilities (please go to Question 7).
- yes, in a few regions.
- yes, in most parts of the country.

What interventions would be available in the school?

- The intervention of a school psychologist or similar professional.
- A link with local social services to assist the parents.
- A link with community based educators.
- A link with the family doctor.

On a Wednesday afternoon, Yann, aged 16, arrives at the doctor, accompanied by his mother. He is upset and withdrawn, and his mother is very concerned. She has found several boxes of paracetamol in her son's room. Yann admits he feels depressed because of the breakdown of a love affair, and can't see any point in living any more. A few days later, Yann is at school, where he starts to exhibit unusual behaviour, indicating severe distress.

In this kind of situation (risk of suicide) is it possible to obtain specialist support during nights and week-end (e.g. **emergency adolescent mental health care)?**

- Yes always.
- Not everywhere in the country.
- No, as *mental health care* is available during business hours only.

Are schools in your country equipped to deal with mental health emergencies, or other mental health assessments?

- There is onsite help in schools, with immediate referral from the school nurse.
- There is specialist help available onsite at school, via the school nurse.
- Help is available within a few hours.
- Schools are not equipped for mental health emergencies.

problems and concentrated on the availability of and access to adolescent friendly primary care professionals and services[19,20] both for the general population of young people and for vulnerable adolescents. Another set of questions explored the existence of policies supporting PCPs in identifying adolescents with mental health problems and how to respond. A series of questions explored the existence of policies in the area of emergency mental health care, including the area of suicide. All questions (except one) were closed-ended questions (e.g. 'yes', 'no', 'sometimes' or 'in some regions only'). Some questions offered the option to add free text, for example, to include options other than those mentioned or to clarify the answer.

The answers received from the country experts were gathered in a large table which was sent back to them to make sure that they did not include any error or misinterpretation. They were then analyzed manually and summarized in table 2. Only summary statistics were calculated. The focus was on differences observed across and within the participating countries. As the majority of the MOCHA surveys did not involve human subjects but rather addressed policies and organizational issues, they have not been reviewed by an IRB.

Results

Availability of and access to primary mental health services for the adolescent population

Even though all 31 participating countries had some policy or recommendations regarding the availability and accessibility of primary mental health services for adolescents, in only 17 country agents indicate the existence of ambulatory facilities specifically dedicated to adolescents health care, including mental health care, and in only 8 of these countries, were the services available countrywide. In the other nine countries, availability was mostly limited to larger cities. According to 13 country agents, their countries did not have this kind of ambulatory centres.

Slightly less than half of the participating countries ($n = 15$) had recommendations for primary care physicians (PCP) on screening young people for mental health issues; 13. In 13 of these countries, the identification of mental health problems was in the hand of PCPs, while in five countries, it could also be run by the school nurse or school doctor.

In about two-third of the participating countries ($n = 22$) the experts reported that a stable payment or co-payment insurance system existed, covering the healthcare expenditures of children and adolescents in such a way that they did not have to copay for the use of primary mental health services. In four countries, co-payment existed up to the age of 18 years (it was then unavailable). In five countries adolescents or their parents did have to copay in specific situations or circumstances, such as long-term outpatient psychotherapy (Austria), receiving additional services during hospital treatment (Bulgaria; e.g. hotel-style accommodation) or being referred to a psychologist (Iceland and Latvia). Some experts (like in Finland) mentioned that co-payments was required if private services were used.

Policies regarding migrants and other vulnerable adolescents (dropouts, young people involved in disrupting behaviour and truancy)

As shown on figure 1, 18 countries had a policy to improve integration of adolescents in schools (preventing truancy/dropping out) and to encourage education of vulnerable pupils, but in 13 countries no such policy existed. Thirteen country agents indicated that their country had policies encouraging inter-professional meetings to discuss adolescents' disruptive behaviour, truancy and violence as well as dropping out of school. These often took the form of meetings between the teacher, the family doctor or a social worker.

Table 2 Availability of policies, recommendations or procedures on mental health services for adolescents in the surveyed countries

Country	Recommendation	Availability		Access in case of emergency			Affordability	Informational continuity	Equity in access migrant children		Equity in access school dropouts	
	Recommendations PCP screening mental health	Availability ambulatory services	Availability self-harm and suicide prevention programs	Same day referral child and adolescent psychiatrist	Specialist available during nights/weekends	Schools equipped mental health emergencies	Co-payments for mental health	Formal policy to keep PCP involved in case of suicidality	Translators available	Professionals trained in multi-cultural issues	Inter-profes-sional meetings to discuss dropout	Recommendations to improve integration
Austria	No	Partly	Yes	Partly[a]	Partly	Partly[b]	Partly[c]	No	No	No	No	Yes
Belgium-Flanders	Partly	Yes	No	Partly[a]	Yes	No	Yes	No	Yes	Partly	No	No
Bulgaria	Yes	No	Individual	Yes	Yes	Yes	Partly[c]	Partly[d]	Yes	Partly	Partly	Yes
Croatia	Yes	Partly	Yes	Yes	Partly	No	Yes	No	Yes	No	Yes	No
Cyprus	No	No	No	Yes	Yes	Partly[b]	Yes	No	Yes	No	No	Yes
Czech	Yes	Yes	Yes	Yes	Yes	Partly[b]	Yes	Yes	No	Partly	Yes	Yes
Denmark	No	Yes	Yes	Yes	Yes	Na	Yes	Yes	Yes	Partly	Yes	Yes
Estonia	Yes	No	Yes	Partly[a]	Yes	Yes	Yes	Yes	No	No	Partly	Yes
Finland	Yes	Partly	Individual	Yes	Partly	Yes	Partly[c]	Yes	Yes	Partly	Yes	Yes
France	Partly	Yes	No	Partly[a]	Partly	No	–	No	Yes	Partly	Partly	No
Germany	Yes	No	Yes	Yes	Yes	No	Yes	No	No	No	Partly	No
Greece	Yes	Partly	Individual	Yes	Partly	Partly[b]	Yes	No	No	No	Yes	Yes
Hungary	No	No	No	Yes	Partly	No	Yes	No	No	No	Yes	No
Iceland	No	No	Individual	Yes	Partly	No	Partly[c]	Yes	Yes	No	No	No
Ireland	Yes	No	Yes	Yes	Partly	No	Yes	No	Yes	Partly	Yes	Yes
Italy	Yes	Partly	Yes	Yes	Partly	Partly[b]	Na	Yes	Yes	Partly	No	No
Latvia	No	No	Yes	No	No	No	Partly[c]	No	Yes	No	No	Yes
Lithuania	Partly	No	Yes	Yes	Na	No	Yes	No	No	No	Yes	Yes
Luxembourg	No	Yes	Individual	Yes	Yes	Yes	Na	Partly[d]	Yes	Partly	Partly	No
Malta	No	No	Individual	Partly[a]	Yes	No	Yes	Yes	No	Partly	Yes	Yes
Netherlands	Yes	Yes	Yes	Partly[a]	Yes	No	Yes	Yes	No	Partly	Yes	Yes
Norway	No	No	Individual	Partly[a]	Yes	No	Yes <18	No	Yes	Partly	–	No
Poland	No	No	Yes	Partly[a]	No	No	Yes	No	No	No	Yes	Yes
Portugal	Yes	No	Yes	Yes	Yes	Yes	Yes <18	Partly[d]	No		Yes	Yes
Romania	No	No	Yes	No	Yes	◎	Yes <18	No	No	No	No	No
Slovakia	No	No	No	Yes	Yes	No	Na	No	No	Partly	No	No
Slovenia	Yes	Yes	Individual	Yes	Yes	Partly[b]	Yes	No	Yes	◎	Yes	Na
Spain	Yes	Partly		Yes	Yes	Partly[b]	Yes	Yes	Yes	Partly	Partly	Yes
Sweden	No	Partly	Yes	Yes	Yes	Na	Yes	No	Yes	Partly	Partly	No
Switzerland	Yes	Partly	Yes	Yes	Yes	Yes	Yes <18	◎[d]	◎[d]	◎[d]	◎[d]	◎[d]
UK	Yes	Yes	Yes	Yes	Partly	No	Yes	Partly[d]	Yes	Partly	Yes	Yes

Yes, policy available everywhere or in most part of the country; No, no policy available; Partly, policy exists in some regions only; individual, there are no programs, but recommendations and tools for prevention at the individual level; NA, information not available.
a: Same day referral is possible to other health care providers.
b: Help is available within a few hour (not immediately).
c: Copayment is needed in specific situations or circumstances.
d: Yes, but inconsistent.

Adolescents having migrated recently, with or without being accompanied by their parents, often need special approaches and services. We were interested to know whether expert professionals trained in inter-cultural issues could assist the PCPs in discussions with migrant adolescents and their parents. As displayed on figure 1, this was the case in only one country (Slovenia), but in another 18 countries, the experts reported that it was the case in some parts of the country (large cities). In other words in 12 countries there were no such professionals available. One simple way to assist PCPs in such situations is to provide translation: in only 18 countries were such translators available when needed.

Response of the primary care system to self-harm and suicide

Suicide and self-harm requires both preventive interventions and a prompt response from the network of PCPs or other health professionals. In 18 countries self-harm and suicide prevention programs were available. In 10 countries these programs were offered in multiple settings while in other countries, they were available only in primary care settings ($n = 1$), in the school ($n = 4$) or in the community ($n = 3$). Six country agents mentioned that their country had no self-harm and suicide prevention programs run by health care professionals but had other kinds of activities and services, such as media campaigns or websites for suicide prevention. Six country agents indicated that their country had no self-harm and suicide prevention programs or related activities.

In the majority of countries ($n = 21$), PCPs had the possibility to refer adolescents who experienced a mental health crisis such as self-harm and suicidal thoughts or conducts on the same day to a child and adolescent psychiatrist. In another seven countries, such adolescents could be referred to other professionals, such as a social worker, a mental health nurse or to a hospital or emergency unit. In one country same day referral was not possible (Latvia).

In around half of the countries ($n = 17$), specific support for adolescents experiencing a mental health crisis was available during nights and weekends; in six other countries, this support was either offered in a hospital (like for instance in Belgium, Portugal or Spain) or was not specifically tailored to adolescents (Germany, Greece and Malta). In 10 countries this support was available but not throughout the whole country, and in three countries (Estonia, Latvia and Poland) this kind of support was not available at all. In 15 countries, adolescents who experienced this kind of situation could consult a PCP without parental consent. In nine countries, the experts indicated that a formal policy existed, which supported or guaranteed the involvement of the PCP in the care provided by mental health specialists. In another five countries, such policy existed but was applied inconsistently.

In a limited number of countries ($n = 7$), schools had a role to play in such circumstances, with specialists available—on-site or within a few hours—for dealing with mental health crises. In another seven countries, health care was available within a few hours in linking the school health services with other locations such as mental health clinics, prevention centres or pedagogical institutions. In the other countries, schools were not equipped to respond to mental health emergencies.

Discussion

All 31 countries had some policies and recommendations on primary mental health services for adolescents, but these were heterogeneous and often not applied consistently or in only selected regions of the countries. In only half of the countries mental services were available in primary care settings that allowed early detection of mental problems and were easily accessible to adolescents. Just about half of the countries had strategies to facilitate access to mental health care for vulnerable adolescents, such as migrants and school dropouts. There were large variations across and within countries; for instance, some countries indicated that they had national policies on most of the presented primary mental health care problems (Czech Republic, Denmark, Portugal, Slovenia and Switzerland) while other countries indicated that they had no or much less of this kind of policies (Hungary, Latvia, Poland, Slovakia).

The relatively low number of countries that appeared to have recommendations for screening of mental health issues in primary care raises concerns about early diagnosis and treatment of mental health problems in adolescents. This is particularly worrying as far as vulnerable groups are concerned, such as socially disadvantaged adolescents (refugees and migrants), thus contributing to inequity in access to mental health care.[25,26] Indeed, adolescents with mental health problems are more likely to drop out of school than their peers and vice versa dropping out of school increases the chance of mental health and other problems such as substance use[27]: it is thus troublesome that just over half of the countries had developed policies to stimulate inter-professional meetings to discuss the case of pupils who exhibit disruptive behaviour and/or have dropped out of school and to promote their reintegration in the school community. Of concern finally is the fact that half of the countries only have services available on night and week-end for suicidal adolescents or those who suffer from severe mental health crisis, a problem also raised in other parts of the world as in the USA.[28]

How do our results compare with the available literature? A number of publications raise different challenges as our article does: Aleman-Diaz et al.[7] underlines that many European countries have services that provide early intervention for children and adolescents with a first episode of mental health disorder by specialists, but the way they are identified and brought to mental health care within the primary care setting is not known. In addition, according to a survey run by the European Community, there are still many countries that rely on institutionalized care by specialists and do not involve primary PCPs in designing their mental health care framework.[2]

Strength and limitations

A strength of this survey is that all EU countries involved have responded with a very high response rate. In addition, we have received formal check and validation reports by all country experts. Furthermore, the thoughtful use of the scenarios was reflected in the answers and comments received from the country experts. Still, we recognize that the interpretation of our results is delicate, as is always the case when it comes to comparing data across countries with different cultures, habits and health care systems. First, the data presented are based on the report of country agents, who based their answers and information on national statistics, available official documents or in gathering their materials in asking various stakeholders that may not always provided totally accurate records. This may have introduced some bias, as country agents may have varied in the degree of scrutiny. Also, the experts mentioned that the distribution and organization of the delivery of health care differed from one region or one institution to another, so that it is difficult to gauge the extent of effectiveness of the health system in place at the level of the country. These limitations do not threaten in our view the main conclusion of our data, which is that most if not all European countries should improve their standards in the field of adolescent mental health care.

Implications

There are a number of avenues that European countries should consider to improve adolescents' access to adequate mental health care and quality of care delivered by PCPs, including vulnerable teenagers.[4,29] First, adolescents should have access as far as possible to friendly units[19,20] that can provide comprehensive care in a neutral empathetic climate and secure confidentiality when requested;

the example of the Moldavian network of adolescents friendly services shows that it greatly improves the accessibility to care.[30] Second, while many countries secure a free access to mental health care for vulnerable adolescents such as migrants and dropouts, who have special needs in this area,[21,31] many of them do not encourage multi-cultural approaches and should strive to identify and train experts in the field. Third, only eight experts reported that their countries' schools were equipped to respond to mental health crises, while schools are places where adolescents spend a large part of their time and where the possibilities of early detection of mental health and early response to is real.[32,33] Fourth, our survey shows that only half of the countries have policies that promote the training of PCPs in the area of adolescent mental health, a situation confirmed by recent MOCHA publication;[34] this situation could be improved in introducing a few specific training objectives in the training curricula of PCPs and students.[35]

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Key points

- The care of adolescents' mental health problems and disorders represents a crucial issue for the primary health care system in Europe and elsewhere in the world.
- All EU countries have some policies and recommendations on primary mental health services for adolescents, but these are heterogeneous and often not applied consistently in all regions.
- Slightly less than half of the participating European countries have recommendations for PCPs on screening adolescents for mental health problems or disorders, which raises concerns about early diagnosis and treatment.
- Two-third of the surveyed countries secure same day referral in case of mental health emergency, but this is usually not the case throughout the whole country.
- European countries should improve the capacity of their primary care system to address adolescents' mental health problems in developing policies, recommendations, support and PCPs training that secure equal access to mental health care, especially in case of emergency.

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The association between parity, CVD mortality and CVD risk factors among Norwegian women and men

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Background: Several studies have shown that women and men with two children have lower mortality than the childless, but there is less certainty about mortality, including CVD mortality, at higher parities and meagre knowledge about factors underlying the parity–mortality relationship. **Methods:** The association between parity and CVD mortality was analyzed by estimating discrete-time hazard models for women and men aged 40–80 in 1975–2015. Register data covering the entire Norwegian population were used, and the models included a larger number of relevant sociodemographic control variables than in many previous studies. To analyze the relationship between parity and seven CVD risk factors, logistic models including the same variables as the mortality models were estimated from the CONOR collection of health surveys, linked to the register data. **Results:** Men (but not women) who had four or more children had higher mortality from CVD than those with two, although this excess mortality was not observed for the heart disease sub-group. Overweight, possibly in part a result of less physical activity, seems to play a role in this. All CVD risk factors except smoking and alcohol may contribute to the relatively high CVD mortality among childless. **Conclusions:** Childbearing is related to a number of well-known CVD risk factors, and becoming a parent or having an additional child is, on the whole, associated with lower—or at least not higher—CVD mortality in Norway. However, for men family sizes beyond three children are associated with increased CVD mortality, with risks of overweight one possible pathway.

Introduction

Women's and men's mortality in mid and later life may be influenced by the number of children they have had. Among women, one reason is that pregnancy involves biological changes with implications for certain disease risks.[1,2] (Additional references for the whole paper can be found in the Supplementary Appendix). Furthermore, having children may affect parents' lifestyle and availability of support. The relationships between number of children and all-cause mortality shown in earlier studies probably reflect such biological and social pathways plus uncontrolled joint determinants of fertility and mortality. It has typically been concluded in these investigations that childless and, to lesser extent, one-child parents have higher mortality than two-child parents.[3,4] However, there is less certainty about the association between mortality and higher parities. Recent meta-analyses have shown increasing all-cause mortality as parity exceeds two,[5,6] but in some investigations based on large data sets this pattern has not appeared (see details below).

In this study, the focus is on mortality from cardiovascular diseases (CVD), which constitutes a large part of all-cause mortality. Earlier investigations have shown that CVD mortality is higher among childless than two-child parents, while the picture at higher parities is more blurred, although there is more support for a high-parity disadvantage with respect to CVD mortality than all-cause mortality. Using register data that cover the entire Norwegian population, we estimate models for CVD mortality for both sexes (and some similar models for all-cause mortality for comparison), and control better for sociodemographic determinants of fertility than in many previous studies. In particular, we take into account re-partnering, spousal education and place of residence. We also control for age at first birth, which has often not been done although early parenthood appears to be positively associated with mortality from most causes[3,4] and is linked to parity. Unlike earlier studies of parity and CVD mortality, we distinguish between four types of CVD: ischaemic heart diseases, other heart diseases, stroke and all others.