

Symptoms of depression and anxiety during the child rearing period

A longitudinal study of Norwegian mothers

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SUMMARY

Depression and anxiety are the most common mental health problems among women, with various negative impacts both for the women concerned and their families. Greater understanding of developmental trajectories of maternal symptoms of depression and anxiety during the child rearing period would have significant benefits for public health, informing prevention and treatment approaches.

The overall aim of this study was to explore symptoms of depression and anxiety among mothers in Norway over 13 years of the child rearing period (i.e. from toddlerhood to adolescence). With the use of a person-oriented approach, we wanted to explore the heterogeneity in symptoms and the characteristics and predictors of different subgroups of mothers.

Six trajectories based on maternal scores from six waves of data collection of symptoms of anxiety and depression were identified; a 'No symptoms' group with mothers without symptoms; a 'Low' group with mothers reporting low symptom levels; a 'Moderate-low' group with mothers reporting moderately low symptom levels; a 'Moderate' group with mothers with moderate symptoms; a 'High-chronic' group with mothers with overall high symptom levels; and a 'Low-rising' group with mothers starting with a low symptom level that increased over time. The mothers in the High-chronic symptom group differed from the other mothers in age, education, having paid work and living with a partner.

The overall stability of maternal temperament across six waves was examined, and its stability among the symptom groups identified through the latent profile analysis. The study confirmed that the stability of temperament, when based on the overall sample, was relatively high, but that this disguised important variations in temperament among different subgroups of individuals. Changes in temperament tended to parallel changes in symptoms. When we looked at predictors of group membership from time 1, temperamental distress, followed by child related stressors, were the strongest predictors of membership in a group with high symptoms over time compared to groups with low symptom levels. Stressors related to living conditions, and social support from partner and friends/family were also significant predictors. Extended knowledge of differences in developmental pathways of symptoms over

a large time span will improve our understanding of the complexity and variation in symptoms of depression and anxiety. Knowledge that can help improve preventive initiatives targeting mothers will have huge public health benefits as it concerns whole families.

Abbreviations:

TOPP	The Tracking opportunities and problems study
HSCCL	Hopkins symptom checklist
EAS	Emotionality, activity and sociability scale for adults
LPA	Latent profile analysis
OR	Odds ratios

LIST OF PAPERS

PAPER 1

Skipstein, A., Janson, H., Stoolmiller, M. & Mathiesen, K.S. (2010). Trajectories of maternal symptoms of anxiety and depression. A 13-year longitudinal study of a population-based sample. *BMC Public Health*, 10:589.

PAPER 2

Skipstein, A., Sanson, A., Nærde, A., Karevold, E. & Mathiesen, K.S. (2011). Longitudinal Stability of Maternal Temperament: Differentiation by Trajectories of Depression and Anxiety Symptoms. (*Submitted*).

PAPER 3

Skipstein, A., Janson, H., Kjeldsen, A., Nilsen, W. & Mathiesen, K.S. (2011). Trajectories of maternal symptoms of depression and anxiety over 13 years: The influence of stress, social support, and maternal temperament. (*Submitted*).

1. INTRODUCTION

1.1. Depression and anxiety among mothers

Depression and anxiety are the most common mental health problems among women (Angst et al., 1997; Gotlib & Hammen, 2009; World Health Organization, 2001). The burden of these symptoms may lead to several adverse implications for the individual, his/her family as well as the society as a whole. The personal costs are huge – including reduced life quality and functioning with regards to partner, children, friends, and work life (Burke, 2003; Davila et al., 2009).

There has been a debate in the research field with regards to the relationship between parenthood and mental health. Some have argued that the mental health is better in parents due to selection effects, suggesting that those who become parents have less mental health problems to start with. In addition, research shows that parents have more mental health problems due to increased stress and strains (Evenson & Simon, 2005; Rimehaug & Wallander, 2010). A large Norwegian community based study (Rimehaug & Wallander, 2010) found that when controlling for education, social class, age and gender, non-parents had higher levels of anxiety. However, they did not find a statistical difference in depression between parents and non-parents (Rimehaug & Wallander, 2010). Similarly, a large Australian study found that having children did not affect the risk of having a mental disorder in men or women (de Vaus, 2002).

A larger proportion of women are believed to experience chronic strains than men, such as harassment, poverty, lack of respect and constrained choices. Women often have paid jobs in addition to doing most of the child care and domestic work of the home. Women often care for sick and elderly family members in addition to young children (Nolen-Hoeksema, 2001). Having children can be one of the most rewarding life experiences, but at the same time the child rearing period can also be challenging and stressful. “Frequent stressful experiences and reactivity to stress are likely to have reciprocal effects on each other. Stressful experiences can sensitize both biological and psychological systems to future stress, making it more likely that individuals will react with depression. In turn, reactivity to stress is associated with impaired problem solving, and as a result with the generation of new stressors, which may

contribute to more depression” (Nolen-Hoeksema, 2001, p.173). Hence, the stressful life that a larger proportion of mothers experience is believed to be one of the reasons why women suffer depression and anxiety more often than men.

The majority of research on parental depression has focused on its effects on parenting and children’s emotional and behaviour problems. Fewer studies have examined the reverse pattern, that is, how the stressors related to having children may affect parental depression (Davila et al., 2009). Further, the focus has mainly been on postpartum depression (McLennan et al., 2001) both in the research literature and in the media. Some research suggests that rates of depression are no higher for women following childbirth than for women of similar demographic characteristics in general (Davila et al., 2009; van Bussel et al., 2006), and that the prevalence of depression is the same among pregnant, and postpartum women as for other women with children in general (Olson et al., 2006; van Bussel et al., 2006). However, others have found that postpartum women had an increased risk of depression (Eberhard-Gran et al., 2003; Munk-Olsen et al., 2006). It has been suggested that postnatal depression is a reflection of the burden of child rearing rather than childbearing, which could lead to the expectation that the increased risk of postpartum mental disorders extends well beyond 6 weeks after becoming a parent (Munk-Olsen et al., 2006). However, little is known about the persistence of elevated depressive symptoms in mothers from their children were toddlers and throughout the teenage period (Horwitz et al., 2007; Mayberry et al., 2007).

It has been argued that the relationship between parents’ and children’s symptoms of depression and anxiety vary with the child’s age or developmental stage (Ge et al., 1995). Thus, there may be several vulnerable phases for both mothers and their offspring. However, the few existing longitudinal studies on maternal depression and anxiety have usually covered only limited periods of child development, i.e. early childhood or adolescence but seldom both (Chang et al., 2007). It is of special importance to focus on maternal mental health due to the negative effects on both themselves and the children. Studies of both clinical and community samples of children of depressed parents indicate that they display two to three times the rate of depression or other mental disorders compared to children of parents without depression. Maternal depression is also found to have a stronger negative impact on the offspring than paternal depression (Hammen, 2009). Hence exploring maternal symptoms of depression and anxiety over the child rearing period is important, and the public health significance of knowledge to inform prevention and adequate treatment is high.

The majority of studies of maternal depression or symptoms of depression and anxiety are from industrialised countries like United Kingdom and United States where provision of welfare is minimal and social benefits are modest (Eikemo & Bambra, 2008). Being a mother in these countries might be very different from raising a family in countries like Norway, Sweden, and Denmark. In the Nordic countries the state promotes social equality through a social security system with long maternity leave and generous social benefits (Eikemo & Bambra, 2008). The Nordic countries are also considered to be among the most gender equal countries in the world; hence exploring the mental health of women in such countries might give an interesting addition to the current knowledge in the field.

1.2. Gender differences in depression and anxiety

The overall lifetime risk of mental illness is equal among men and women, but women have a greater propensity to develop depression and anxiety, as well as a documented higher frequency of comorbid depression and anxiety disorders (Halbreich & Kahn, 2007). The female:male ratio for affective disorders is found to be approximately 2:1, and this gender gap is noticeable between boys and girls from puberty and thereafter (Murphy, 1995; Nolen-Hoeksema & Keita, 2003). The gender differences in depression is said to be one of the most robust findings within epidemiology (Sandanger et al., 2007).

In a review from 2001 (Nolen-Hoeksema, 2001), it was found that most studies indicated that the causes of depression in women and men are similar, but that women are more exposed to the risk factors than men. It has been suggested that women are more exposed to important risk factors like physical and sexual abuse, overload, and constrained choices. Other explanations have been grounded in biology in that women were believed to be more depressed than men because of hormones (Nolen-Hoeksema, 2001). However, systematic reviews have failed to explain the gender difference in the rates of depression based on differences in hormone levels (Kessler, 2003). Furthermore, research from the USA have showed that the gender difference in depression is not constant across all ethnic groups, suggesting that there is more at work than pure hormonal effects (Kessler, 2003). It has also been argued that the difference in depression between men and women in general can be explained by demographic factors like being married and/or having children. Although married men and women are reported to have the same risk of having a mental disorder (de

Vaus, 2002), a large Australian study (de Vaus, 2002) found that regardless of whether women were married or not, they were at more risk than men of having mood and anxiety disorders, while men were more likely than women to suffer from drug and alcohol disorders. A large Norwegian study (Kringlen et al., 2001) found that all mental disorders were more prevalent among women, except alcohol and drug abuse.

1.3. Symptoms of depression and anxiety

The term depression refers to a mental disorder characterised by symptoms such as feelings of sadness, dejection and hopelessness or despair coupled with extremely pessimistic thoughts about one's self, current life situation and future projects (Stoppard, 2000). A lack of interest or pleasure in activities one usually is engaged in, along with social withdrawal is also common. Depression can also involve various bodily complaints including aches and pains, sleeping difficulties, fatigue, loss of appetite (or sometimes overeating); and in some cases suicidal thoughts or actions (Stoppard, 2000). Nearly everyone experiences some aspects of depression at some time in their life. For some it might be brief and have little impact on daily functioning, while for others it may be long-lasting and impairing (Gotlib & Hammen, 1992).

When the word depression is used as a diagnostic label, it refers to a type or category of disorder defined in one of the diagnostic systems like ICD-10 and DSM-IV. Depression can also be seen as a dimension where a person is considered more or less depressed based on symptom scores on a continuum. In this case, relatively greater emphasis is placed on a person's subjective experiences, particularly depressed mood or feelings of sadness, although attention is given to other depressive symptoms as well (Stoppard, 2000). Depression ranges from mild and transitory mood distress to persistent and severe depressed mood that impairs normal functioning (Brennan et al., 2000).

Symptoms measured in self report questionnaires are said to measure "dysphoria" which is a subjective experience characterized by a sense of psychological distress or discomfort. Although a predominant character of psychological distress may be depressed mood, it is believed by researchers in the depression field that dysphoria is not a unique feature of depression, but a set of feelings which overlaps with other negative mood states like anxiety (Stoppard, 2000). A feeling of anxiety is a normal reaction to stress, but when the anxiety gets

excessive and irrational it can become a disabling disorder and qualify as a diagnoses defined according to one of the diagnostic systems. Anxiety is highly prevalent, often has an early age-of-onset and tends to be persistent throughout the life course (Kessler et al., 2009).

1.3.1. Prevalence

Psychological distress and mental health problems range from mild conditions like phobia and anxiety to more severe conditions like schizophrenia. The reported prevalence of the disorders is usually based on the use of diagnostic criteria from two overlapping diagnostic systems (the ICD-10 and the DSM-IV). Estimating the prevalence rate of different disorders is difficult, time consuming and expensive, thus there are few such studies in Norway and internationally (Sandanger et al., 1999b). Prevalence of depression is, in addition, difficult to compare between studies due to different diagnostic classifications (Sandanger et al., 1999b), and overlap with other disorders. Community surveys that assess depression with symptom screening scales find that up to 20% of adults report depressive symptoms during recall periods between 1 week and 6 months (Kessler & Wang, 2009). Other studies report rates between 8 and 15% among women of child-bearing age in community samples (Beeghly et al., 2002). A meta-analysis of non-psychotic postpartum depression reported an average rate of 13% (O'hara & Swain, 1996).

Statistics Norway's Health Interview Survey (HIS) is a stable and regular source of data about different aspects of the population's health. Using the HSCL-25 scale to measure symptoms of depression and anxiety at four time points between 1998 and 2008, between 10 and 12 percent of women were reported to score above the cut-off of 1.75 over this period of ten years. The prevalence rate for men was, as expected lower, with 7 to 8 percent above the cut-off in 1998, 2002, 2005, and 2008 (StatBank Norway, 2009). Another Norwegian study using the HSCL-25 scale in a population-based sample found 19.8% cases of women and 9.3% cases of men above the clinical cut-off (Sandanger et al., 1999b). Regarding mental disorders, a large epidemiological study from Norway (Kringlen et al., 2001) found that the 12-month prevalence of major depression was 9.7% among women, and 4.1% among men. The lifetime prevalence of major depression was reported to be 24% among women, and 9.9% among men. These numbers were compared to prevalence from the U.S. National Comorbidity Survey and the authors concluded that the numbers corresponded well between Norway and the USA (Kringlen et al., 2001).

1.3.2. Comorbidity

Depression, especially in women, is frequently found to be comorbid with anxiety (Elgar et al., 2004; Goodman, 2007; Kessler & Wang, 2009; Merikangas et al., 2003). Depending on whether depression and anxiety are classified as symptoms, syndromes or diagnosis, the degree of relatedness varies markedly (Hranov, 2007). When depression and anxiety are measured at the symptom level, the comorbidity is the strongest. Anxiety symptoms are common and found in most mental disorders. Studies have found that around 43% of subjects diagnosed with depression qualify for an anxiety disorder at the same time. The prevalence of comorbid anxiety and depression could be as high as 10-20% in community based samples (Hranov, 2007). Symptoms of depression and anxiety are also common in most other mental disorders, and many clinicians and researchers argue that this will be better captured if studies use dimensional measures, in addition to categorical classification, both in research and clinical practice (Hranov, 2007).

Some evidence has supported the hypothesis that depression and anxiety result from the same genetic factors (Kendler et al., 1996), but the nature of the association between depression and anxiety is still under debate. While some researchers argue that some of the symptoms of depression and anxiety cluster together on a continuum, others claim that the two disorders represent different dimensions, that they are expressions of a common underlying disorder, and/or that a combination of depression and anxiety constitute a disorder that are qualitatively different from each of them (Clark & Watson, 1991; Ingram & Siegle, 2009).

1.3.3. ‘Distress’ or ‘symptoms of depression and anxiety’

In the current study symptoms of depression and anxiety were measured with the Hopkins Symptom Check List-25 (HSCL-25 scale) (Derogatis et al., 1974; Hesbacher et al., 1980). The scale consists of two highly correlated symptom subscales of depression and anxiety, and consequently the HSCL-25 scale is mostly used as a measure of ‘emotional distress’ or ‘dysphoria’. Results from studies using this measure is often compared with results from both studies using more clear cut measures of depression, and studies using a broader mixture of symptoms of affective disorders, but seldom with results from studies focusing on anxiety only.

A Norwegian validation study found that of several psychiatric disorders, depression was the diagnosis best predicted by the HSCL-25 scale, followed by panic/generalized anxiety disorder and phobia (Sandanger et al., 1998). Several terms are used within the research field of mood disorders, e.g. emotional distress, psychological distress, depression, depressive symptoms, and symptoms of depression and anxiety. In the current study we have chosen to use the term ‘symptoms of depression and anxiety’ in order to avoid confusion and overlap with temperamental traits like emotionality and temperamental distress. The research field of depression and anxiety is huge so in this study we have chosen to focus particularly on the literature on maternal depression, depressive symptoms or, where available, studies of symptoms of both depression and anxiety.

1.3.4. Course and stability of depression

Little longitudinal research has studied the course of depression in general population samples (Kessler & Wang, 2009), and few studies have examined the stability of both depression and anxiety (Merikangas et al., 2003). Further, there is limited information about the persistence of maternal depression, which is critical given that long-term maternal depression is found to have a greater negative impact on children than less chronic forms (McLennan et al., 2001).

A study on persistence of maternal depressive symptoms throughout the early years of childhood (11-42 months) found that the symptoms were to a great extent persistent. Such findings emphasize the importance of identifying symptoms among mothers to implement early interventions (Horwitz et al., 2009). In a large population-based study from England (the ALSPAC study), mothers were followed from pregnancy (Heron et al., 2004). They looked at stability in symptoms of depression and anxiety in mothers across the transition from pregnancy to eight months postpartum and found considerable stability in both depressive and anxiety symptoms over the study period (Heron et al., 2004). Clinical studies have also shown that depressive states in general endure over some period of time, but the milder nature of the symptoms, the less stable these states are found to be (Ingram & Siegle, 2009). Patients with recurrent or chronic depression have worse outcomes than other depressed patients. This is true even when the symptoms of depression are not severe (Boland & Keller, 2009).

1.3.5. Risk factors

There are many known risk factors for symptoms of depression and anxiety, varying in their predictive strength and extensiveness. There is a certain genetic risk related to depression. Large family studies in Norway have looked at heritability of symptoms of anxiety and depression and found an upper limit for the heritability of around 0.22 (Tambs & Mowm, 1993) and 0.25 (Czajkowski et al., 2010). Hence, there is evidence that depression and anxiety is moderately heritable. It has been speculated that heritable traits such as temperament, expression of negative emotions, shyness and inhibition, and lack of emotional regulation are among many characteristics that constitute risk factors for the disorders (Hammen, 2009). Early experiences in life might influence the risk of developing symptoms. For example, childhood adversities, such as loss of a parent, parental psychopathology, parental aggression, physical or sexual abuse, or life-threatening accidents, are associated with later anxiety and depression (Stewart et al., 2004).

Poor physical health and low levels of social support are other important risk factors (Beard et al., 2008; Dalgard et al., 1995; Horwitz et al., 2007). Stressful life events and strains from, for example, parenting an ill child or a child with different forms of behavioural problems may also contribute to the development of depression and/or anxiety among mothers (Horwitz et al., 2007; Naerde et al., 2002). In addition to individual characteristics, there are also some psychosocial risk factors at play. Socio-economic status is found to be related to depression and anxiety. Studies from countries with varying degrees of social benefits show that low levels of education, low income, and being unemployed are all risk factors of depression and anxiety (Horwitz et al., 2007; Lorant et al., 2003; Lorant et al., 2007). Poor relationship quality and marital dissolution are also found to predict depression and anxiety (Amato, 2000; Kiecolt-Glaser & Newton, 2001).

A challenge within this research field is that the knowledge about risk factors for depression may be misleading, as many individuals with low levels of known risk factors will suffer from depression during their life, at the same time as individuals with high levels of risk factors will not develop symptoms (Gillham et al., 2000). Possible subgroups with different characteristics and predictors can best be detected exploring depression and anxiety in population-based samples. Population-based studies are valuable sources for informing preventive work because the majority of people suffering from mental disorders never seek professional help (Beard et al., 2008; Nandi et al., 2009). For example, when studying the

effects of maternal depression on children, it is important to consider depression with different developmental trajectories because the impact on children may vary with the persistence of maternal symptoms. Children of chronically ill mothers have been found to have more social and behavioural difficulties than children of mothers with less chronic problems (Hammen, 2009).

1.3.6. Previous trajectory studies

One way of exploring the variation in depression and anxiety is to use a person-centred approach. Person-centred approaches can help elucidate why the symptom trajectories of some individuals differ from those of others. This approach is appropriate when developmental trajectories are assumed to systematically differ across individuals or when developmental changes are assumed to carry different implications for long-term individual outcomes (Laurson & Hoff, 2006; Stoolmiller et al., 2005). This is often the case within the field of depression and anxiety.

A recent review of population-based studies of trajectories of depression and anxiety disorders concluded that this research is in its infancy (Nandi et al., 2009). In the review the researchers presented 29 studies of trajectories, of which only eight concerned adults; only two of these concerned mothers. They further reported that only two studies used indices based on the combination of symptoms of depression and anxiety; none of these studied mothers. Merikangas and colleagues (2003) studied stability and comorbidity in diagnosed depression and anxiety of both men and women, but did not focus on other characteristics of the trajectories (Merikangas et al., 2003). Colman and colleagues (2007) examined trajectories of symptoms of depression and anxiety over the life course in both men and women from the age of 13 to 53. Colman and colleagues identified six trajectories of symptoms of depression and anxiety; 1) absence of symptoms, 2) repeated moderate symptoms, 3) adult-onset moderate symptoms, 4) adolescent symptoms with good adult outcome, 5) adult-onset severe symptoms, and 6) repeated severe symptoms. The trajectory groups with higher symptom levels, especially in adulthood, were more likely to comprise women (Colman et al., 2007).

The first of the two person-centred studies of mothers was a study by Ashman and colleagues (2008), focusing on depression in a clinical sample of 133 mothers with children from infancy

through 6.5 years (Ashman et al., 2008). They studied maternal depression in relation to child behaviour using clinical interviews. As a result, the mothers were classified into the following three trajectory groups based on their symptom scores; 1) decreasing, 2) chronic depressed, and 3) stable mild depressed. They did not find significant differences between the mothers on any demographic variables like mother's ethnicity, partner status, education, occupation level, or hours spent working outside the home. One reason for the lack of differences between the groups in their study might be that their sample consisted of depressed mothers only.

In the second trajectory study of mothers, Campbell and colleagues (2007) classified 1,261 mothers from a population-based sample into six trajectory groups based on seven waves of symptom scores collected when the children were from 1 month to 7 years. They found groups they called; 1) a high-chronic, 2) a moderate-increasing, 3) a high-decreasing, 4) an intermittent, 5) a moderate-stable and 6) a low-stable group. Campbell and colleagues reported that differences in educational level, financial resources, and the presence of, and support from a spouse may partly account for these different symptom trajectories. Mothers in the low-stable depression trajectory group were older, better educated, had higher incomes, and were more likely to be stably married than the mothers in the other five trajectory groups. Women in the moderate-stable depression group were also somewhat better-off financially and had higher educational levels than women in the groups characterized by chronic and high-decreasing symptom trajectories. Women reporting higher levels of symptoms were more often under severe financial stress, had less education, and were not as stably married as women with lower levels of depression (Campbell et al., 2007). This study was consistent with other studies suggesting that maternal depressive symptoms often occur in the context of poverty and other social stressors, such as single parenthood and limited support from a spouse or partner. Campbell and colleagues found that children whose mothers were in the steadily increasing moderate symptom group, fared worst. In contrast, children whose mothers had either moderate-stable or intermittent symptoms over the time period generally did not seem to fare more poorly than children whose mothers never reported elevated symptoms. Their findings suggested that both timing and the level of symptoms mattered (Campbell et al., 2007).

Campbell and colleagues (2009) have more recently published results from another study of the same sample. Here they used early socio-demographic risk variables and chronicity and severity of maternal depressive symptoms from infancy to age 12 years as predictors of

offspring adjustment at 15 years of age. The mothers were classified into the following five trajectories of depressive symptoms; 1) non-depressed, 2) early and decreasing, 3) stable subclinical, 4) moderately elevated, and 5) chronic. Corresponding to results in their study from 2007 they found that mothers with few symptoms were more likely to be married, better educated, and in better physical health than women with more elevated symptoms. They also found that chronic symptoms in mothers at varying levels of severity predicted poorer offspring adjustment. They argue that the ongoing maternal symptoms may be a marker of genetic risk in addition to family stress and less supporting parenting (Campbell et al., 2009).

These studies provide important knowledge about the relationship between risk factors and different maternal symptom trajectories. However, they are based on data from the United States only. Challenges mothers meet in the United States may differ somewhat from those of mothers in other parts of the world. The Scandinavian countries are characterised by a relatively high degree of gender equality, reasonable social benefits for lone mothers, long term paid parental leave, and good access to childcare (Eikemo & Bambra, 2008; Naerde et al., 2000; Naerde et al., 2002), which are all important factors for parents. Comparing symptom trajectories between countries with different child rearing conditions may inform discussions of relationships between the effects of basic and cultural-dependent challenges on depression. Knowledge from population-based studies of mothers from other countries than the United States is needed for such comparisons.

1.4. Theoretical perspectives

Theories proposed to explain depression and anxiety have covered a wide spectrum, and include social, biological and psychological models (Stoppard, 2000). Broadly speaking, social models are often used within a sociological perspective, where depression is explained based on factors in the person's social environment (Stoppard, 2000). Important factors are for example socio-economic status, work, and social support. Biological models emphasize genes and biochemistry as causal factors in explaining depression. There is consensus among researchers that genetic factors alone cannot explain depression. Psychological models explain depression based on the individual's cognition, emotions, behaviour, and personality characteristics (Stoppard, 2000).

However, it is now common to use a multifactorial approach where depression is explained as arising from a combination of individual biological factors like genes and biochemistry, psychological characteristics like temperament and personality traits, and social conditions like circumstances of everyday life (Stoppard, 2000). Underlying these explanations is the idea of a vulnerability to a disorder. Hence understanding vulnerability for depression may be one of the most important aspects of contemporary depression research (Ingram & Siegle, 2009). In vulnerability models inherent or acquired deficits or dysfunctions are seen as increasing the risk of developing depression (Goodman & Brand, 2009). The diathesis-stress and transactional models are based on the vulnerability model, and have been developed to elaborate on the role of vulnerabilities in explaining associations between early adverse experiences and the risk of developing depression (Goodman & Brand, 2009).

The basic assumption of the diathesis-stress approaches in explaining depression is that individuals with certain personality characteristics are particularly vulnerable to becoming depressed when negative events occur in their lives (Stoppard, 2000). In the efforts of trying to explain depression in women the diathesis-stress approach has been criticised for blaming the woman and her personality characteristics for the problems rather than the social context (Stoppard, 2000). In recent years, researchers have moved towards more integrated models, taking a transactional, developmental approach. The transactional model acknowledges that the different factors can have bidirectional effects (Hammen, 2009). Depression impairs social and occupational functioning, and thus can have major impact on an individual's environment (Nolen-Hoeksema, 2001). It is important to acknowledge the dynamic role of stress over the course of recurrent episodes of depression (Hammen & Gotlib, 2009), and consider if the depressed person reports more stress as a result of the person's own characteristics, behaviours, and life context (i.e. stress generation), or whether they are depressed as a result of experiencing more stress (Hammen, 2006).

The social circumstances change throughout life, and development extends throughout the entire course of life, influenced by adaptive and maladaptive processes (Cicchetti, 2006). For women, the child rearing phase might involve several transitional points in accordance with the development of the child. Studies of trajectories are especially useful for the investigation of transitional points in development across the life phases. We know that maternal symptoms of depression and anxiety may have negative effects on their children, and that pregnancy and postpartum may be vulnerable times for some mothers. The role of motherhood as children

grow from infancy to adolescence involves markedly changing challenges. However, we know little about maternal symptom development throughout the child rearing phase. There is also little knowledge about the variation in risk factors, that is, whether there are specific risk factors for different groups of mothers with different symptom trajectories. The main approach of this thesis is therefore a person-oriented perspective. “As a theoretical concept, the person approach means making the individual – as an integrated psychological, biological, and social organism – the organizing principle for scientific inquiry” (Bergman et al., 2006, p. 851).

To our knowledge, few, if any studies have identified trajectories based on maternal symptom scores of depression and anxiety gathered from when their children were toddlers until they were well into adolescence. And none, to our knowledge, have explored factors like child related stressors, maternal temperament, and social support in relation to maternal symptom trajectories.

2. AIMS OF THE STUDY

The overall aim of this study was to explore symptoms of depression and anxiety among mothers in Norway over 13 years of the child rearing period. With the use of a person-oriented approach, we wanted to explore symptom development and characteristics of different subgroups of mothers.

More specifically, we aimed to focus on the following:

2.1. Paper 1

The first study aimed to identify symptom trajectories of depression and anxiety describing a population-based sample of Norwegian mothers from when their children were 18 months until they were 14.5 years old. A second aim was to investigate the relationships between socio-demographic variables characterizing the mothers classified into the different symptom trajectory groups.

2.2. Paper 2

The second study aimed to examine the overall stability of maternal temperament in the total sample, and among the groups with differing trajectories of symptoms of depression and anxiety. Using trajectories based on the results from Paper 1, this study sought to shed light on the role of temperament in psychopathology by determining whether changes in temperament scores preceded, co-occurred with, or followed changes in symptoms of depression and anxiety. Generally, based on earlier research, we expected temperament scores to precede maternal psychopathology, and specifically; we expected emotionality to precede symptoms of depression and anxiety.

2.3. Paper 3

The aim of the third study was to identify predictors present early in the child rearing period that could discriminate between groups of mothers with different trajectories of depression and anxiety symptoms over a time span of 13 years. The study examined the extent to which stressors related to child rearing and living conditions, social support and maternal

temperament when the child was 18 months old could predict maternal symptom trajectories over the subsequent 13 years.

3. MATERIALS AND METHODS

3.1. The TOPP study

This study used data from the Tracking Opportunities and Problems (TOPP) study, a population-based prospective longitudinal study focusing on developmental trajectories to well-being and mental problems in children, and their families in Norway. More than 95% of all families in Norway with small children regularly attend a child health clinic during the early childhood years. All families from 19 geographical health care areas in eastern Norway who visited a child health clinic in 1993 for their scheduled 18 months visit were invited to complete a questionnaire for the TOPP study (t1). The 19 health care areas were overall representative of the diversity of social environments in Norway; 28% of the families lived in large cities, 55% in densely populated areas and 17% in rural areas. At t1 49% of the families had one child. More than 95% of the sample were non-immigrant (Norwegian-born). This was largely representative of ethnicity in Norway in general, as only 2.3% of the population in 1993 came from non-Western societies (Statistics Norway, 2006).

Altogether 913 mothers of 1081 eligible children participated at time 1, 777 mothers (85% of t1) participated at time 2 (t2) when the child was 2.5 years old, 727 (80%) at t3 (4.5 years), 505 (55%) at t4 (8.5 years), 587 (64%) at t5 (12.5 years), and 474 mothers (52%) participated at t6 (14.5 years). The questionnaires were administered at the child health clinics at the first three time points and by post from t4.

Background information on the mothers who did not respond at t1 was available at the child health clinic. The nonrespondents did not differ significantly from the respondents with respect to maternal age, education, employment status, number of children, or marital status (Mathiesen & Sanson, 2000). A study specifically focusing on the attrition in the TOPP sample found that the only predictors of drop-out from t1 to 15-year follow-up were the two socioeconomic variables measuring educational level and working status. A somewhat larger proportion of mothers with either low education or without paid work had left the study. When controlling for social support, child and maternal temperament, and symptoms of depression and anxiety, only educational level remained significant after Bonferroni correction. Analyses also showed that associations between core variables at t1 did not differ

between those who later stayed in the study and those who dropped out (Gustavson et al., 2012).

3.1.1. Ethical considerations

The longitudinal data collection has been approved by The Data Inspectorate and the Regional Committee for Medical Research Ethics. The TOPP study is subject to the ethical guidelines and rules of confidentiality that apply in the National Committee for Research Ethics in the Social Sciences and the Humanities. The participants were informed about the study, and have given their written consent. All participants in the study have been informed about their right to withdraw from the study at any time without giving a reason.

3.2. Measures

3.2.1. Symptoms of depression and anxiety

Maternal symptoms of depression and anxiety were measured by a Norwegian version of the Hopkins Symptom Check List (HSCL-25) (Derogatis, 1974; Hesbacher et al., 1980). The full scale consists of 25 items assessing anxiety (10 items) and depression (15 items) (see Table 1). The respondents are asked about symptom severity during the last week, and items are rated on a four-point scale ranging from 1 (not at all) to 4 (extremely). A pilot study led to two items (“thoughts of ending your life”; “loss of sexual interest or pleasure”) being excluded at t1 and t2 because some mothers perceived them to be offensive. From t3, the first of these items was reintroduced. At t5 a shortened questionnaire was used, hence the HSCL scale was reduced to 10 items. The average item score was computed to make an index of maternal symptoms of depression and anxiety. The HSCL version used in the current study comprised 23 items at t1 and t2, 24 items at t3, t4 and t6, and 10 items at t5.

Table 1. Hopkins Symptom Checklist (HSCL-25)

1. Suddenly scared for no reason	14. Loss of sexual interest or pleasure
2. Feeling fearful	15. Poor appetite
3. Faintness or dizziness	16. Trouble falling asleep
4. Nervousness or shakiness inside	17. Feeling hopeless about the future
5. Heart pounding or racing	18. Feeling blue
6. Trembling	19. Feeling lonely
7. Feeling tense or keyed up	20. Thoughts of ending your life
8. Headaches	21. Feeling of being trapped or caught
9. Spells of terror or panic	22. Worrying too much about things
10. Feeling so restless you can't sit still	23. Feeling no interest in things
11. Feeling low in energy or slowed down	24. Feeling everything is an effort
12. Blaming yourself for things	25. Feelings of worthlessness
13. Crying easily	

A study comparing various short versions of the HSCL found all versions to show almost equally high internal consistency, sensitivity, and specificity (Müller et al., 2010). The scale can be used as a continuous score or to define a case when the score is above 1.75 (Sandanger et al., 1998), and with a cut-off score of 1.85 for the HSCL-10 (Strand et al., 2003). In the current study the HSCL scale has been used as a continuous variable in the analyses.

Cronbach's alpha for the HSCL scale at the six time points ranged from .87 to .91. The mean symptom score ranged from 1.28 to 1.41 (see Table 2).

Table 2: Characteristics of maternal symptoms of depression and anxiety (HSCL) scores at six time points.

Time point	Index child's age	Number of items	Mean (SD)	Cronbach's Alpha	Percentage above clinical cut-off (1.75) (T5=1.85)
T1	1.5 years	23	1.35 (.34)	.90	12
T2	2.5 years	23	1.30 (.29)	.89	7
T3	4.5 years	24	1.28 (.29)	.90	8
T4	8.5 years	24	1.30 (.32)	.91	9
T5	12.5 years	10	1.41 (.41)	.87	14
T6	14.5 years	24	1.36 (.32)	.90	13

Inspection of the raw data showed that higher symptom levels were reported at t5 compared to the other time points. To test if this was due to the different amount of items at each time point we selected the corresponding 10 items at all six time points and compared the mean values on the new summative indexes. The mean was still highest at t5; indicating that the mothers did report higher symptom levels at time 5 when the index child was 12.5 years old.

The time-to-time temporal stability of HSCL scores ranged from .52 between t4 and t5 to .67 between t1 and t2, indicating a substantial stability of symptom levels. As could be expected, the highest time-to-time stability was when the interval between data waves was the shortest (see Table 3).

Table 3. Correlations between mean levels of depression and anxiety.

Time points/ year	T1 (1993)	T2 (1994)	T3 (1996)	T4 (2000)	T5 (2004)	T6 (2006)
T1		.67	.61	.57	.44	.36
T2			.66	.57	.45	.42
T3				.57	.50	.45
T4					.52	.59
T5						.61

3.2.2. Socio-demographic measures

Maternal age was measured at time 1 when the index child was 18 months with a mean of 30 years, and a range from 19 to 46 years of age.

Maternal education at t1 was measured on a scale from 1 (7-9 year/primary school, 10% of the sample) to 5 (more than 4 years at university or university college, 16%). The sample mean was 3 (high school) at time 1 when the index child was 18 months. The correlations between maternal education were .93 from t1 to t2, .95 from t2 to t3, .90 from t3 to t4, .94 from t4 to t5, and .94 from t5 to t6. From t1-t6 the correlation was .80.

Workforce participation: was coded as whether the mothers were working full time, part time or not participating in paid work. For the present analyses working full time and part time were combined into one category of having paid work. At t1 when the index child was 18 months 63% of the mothers worked outside the home. At time 6, when the index child was 14.5, the proportion of working mothers was 87%.

Cohabitation status/ living with a partner: Cohabitation status at all waves was coded as whether the mothers were living with or without a partner regardless of whether they were married or not. This was based on the understanding that in the Scandinavian countries cohabitation is regarded similar to marriage (Heuveline & Timberlake, 2004; Reneflot & Mamelund, 2011). A large study in Norway found no difference in symptoms of anxiety and depression among cohabitants compared to married people (Lau et al., 2002).

Older or younger siblings: At all time points we asked the mothers whether they had older, younger or other children the same age (e.g. twins) as the index child.

Gender: At t1 51% of the children in the sample were girls.

Temperament: Maternal temperament was measured with a Norwegian translation of the Emotionality, Activity and Sociability scale (EAS) for adults (Buss & Plomin, 1984). This is a 20-item self report instrument measuring five temperamental traits: activity, sociability, distress, fearfulness and anger, with the last three traits together measuring the broader construct of emotionality. Each item is rated from 1 (not characteristic or typical of yourself) to 5 (very characteristic or typical of yourself). The factor structure and psychometric

properties of this scale have previously been assessed in this sample and shown to be satisfactory. A better fit was found for the five factor model compared to a three factor model of the EAS scale (Naerde et al., 2004). Cronbach's alpha at t1 for the five temperament subscales were .73 (Distress), .57 (Fearfulness), .58 (Anger), .55 (Sociability), and .66 (Activity).

Child related strains: At t1, mothers were asked 'During the last 12 months have you had long-term problems related to the following areas?' The areas listed were: problems with arrangements for looking after the child (e.g. regarding day care, babysitter, when the child is ill); problems combining work and family responsibilities; problems concerning the child's health (e.g. disability or illness); and problems with upbringing, supervision, school, and discipline. The response options were 1 (none), to 4 (very large problems). The questions were to be answered in relation to all their children, not only the target child aged 18 months. An average item score was computed for the child-related stressors scale. Cronbach's alpha was .57.

Stressors related to living conditions: The same introduction as for child-related stressors was used to assess three stressors related to living conditions at t1: housing problems (maintenance, rental agreement etc); work (unemployment, uncertain work situation, difficult work relations); and partners' health problems (physical or mental). The response options were 1 (none), to 4 (very large problems). An average item score was computed for the living condition stressors index. The Cronbach's alpha was .39. The low alpha of this particular index is due to the low amount of items. In addition the index consists of items that cover a wide area of stressors and are not necessarily correlated. These two aspects affect the size of Cronbach's alpha (John & Benet-Martinez, 2000).

Social support from partner: Four questions about emotional and practical support from romantic partner were included in the study. One question taps practical support from partner, and three questions tap emotional support and feelings of belonging (Mathiesen et al., 1999). An average item score was computed for a social support from partner scale. The Cronbach's Alpha was .59.

Social support from friends and family: Eight questions about emotional and practical support from friends and family were also included in the study. One question taps practical support

from friends and one from family, and three questions tap emotional support and feelings of belonging from friends and family respectively (Mathiesen et al., 1999). An average item score was computed for the social support from friends and family. The Cronbach's Alpha was .75.

3.3. Statistical analyses

3.3.1. Variable- and person-centred approaches

There are various methods for studying human development (Laursen & Hoff, 2006). A variable-centred approach is well suited for questions that concern the relative importance of predictor variables in explaining variance in outcome variables. These analyses identify processes found to a similar degree in all members of a group, i.e. there is an assumption that the population is homogenous with respect to how the predictors operate on the outcomes. On the other hand person-centred approaches assume individual differences in patterns of change over time. They are appropriate when developmental trajectories are assumed to systematically differ across individuals or when developmental changes are assumed to carry different implications for long-term individual outcomes. Variable-centred approaches help us to understand general principles that connect variables over time, while person-centred approaches help us to understand how the life trajectories of some individuals differ from those of others (Laursen & Hoff, 2006). "There are several different forms of person-centred approaches, but they all have in common an assumption that the population is heterogeneous with respect to how variables influence each other (..). Person-centred analyses of longitudinal data can be used to identify categories of individuals based on the basic set of variables of interest and then these groups can be contrasted with variable-centred analyses of associations among predictors and outcomes over time" (Laursen & Hoff, 2006, p.379-380).

The current study has applied such a combination of the two approaches. A person-oriented approach was applied to identify groups based on maternal scores of symptoms of depression and anxiety over the child rearing period. In a longitudinal data set these groups can determine stability and change in the mean levels (Laursen & Hoff, 2006). These groups were then used to identify antecedent and co-occurring factors of group membership.

3.3.2. Latent profile analysis

In Paper 1, the current study used latent profile analysis (LPA) to identify distinct trajectories of symptoms of maternal depression and anxiety. LPA is a variant of latent class analysis for continuous variables. LPA is a person-centred approach which is designed to divide the population under study into a set of latent subpopulations with similar profiles - in the case of developmental (longitudinal) data equalling to developmental pathways (Lincoln et al., 2007; Muthén, 2004). It is possible to test the fit of these models and to analyze their goodness of fit. Classes are latent because they are not observable directly but rather are identified based on a function of a set of manifest indicators. The latent classes explain the relationships among the observed dependent variables similar to factor analysis. In contrast to factor analysis, however, LPA provides classification of individuals.

LPA does not make any assumptions about the nature of the repeated measures, whether they are different variables measured at the same time or the same variable measured at repeated times. Our rationale for choosing this method is that it does not assume the shape or form of the trajectories beforehand. It is not necessary to presume how the individuals develop over time as would be the case with growth mixture models. In the current study we wanted a descriptive analysis to explore different trajectories or pathways of symptoms over time.

The correlation among the repeated measures over time is taken into account in the LPA analysis. The analysis assumes that conditional on latent class membership, the correlations between measures are zero. In other words, the class structure accounts for the correlation. Hence, the only reason for the correlations is because the sample is composed of individuals who belong to six different classes and the similarity of individuals within classes is what creates the correlation when all six groups are mixed together to compute the correlation.

The HSCL scale measuring symptoms of depression and anxiety did not have the same amount of items at each time point. To test the possible effects of this we performed two sets of LPA analyses; one on raw scores and one on Rasch transformed scores. A rating-scale Rasch analysis was performed jointly in order to derive a linear measure of symptoms regardless of which items had been completed (Bond & Fox, 2001).

Both procedures (e.g. raw scores and Rasch transformed scores) gave largely similar results and we decided to use the raw HSCL symptom scores in the LPA. Trying several analyses

with different constraints, i.e. equal variance within class over time, one variance parameter estimated and one with free variance produced very similar results with regards to the trajectory patterns. When we allowed for more than six trajectories, the low symptom trajectories were divided into more low groups. We thus got corresponding overall results with all the different analytic approaches.

Mplus, version 5 was used to compute different trajectories of maternal symptoms of depression and anxiety. The LPA analyses were applied using subjects with partial data with the assumption that the missing data was missing at random (MAR). MAR is a technical term indicating that missing data does not depend on unobserved variables that have not been included in the model. We estimated models with 2 to 7 groups and focused on the model that minimized the Bayesian Information Criteria (BIC) index as the "best" model (Nylund et al., 2007). To avoid problems with local solutions each model was estimated using 500 different sets of starting values, where each set was randomly perturbed from Mplus default starting values (Hipp & Bauer, 2006). To minimize problems with singularities, within class time specific residual variance was constrained to be equal across time but classes were allowed to have different levels of time specific residual variance (Hipp & Bauer, 2006). Observed pseudo-class trajectories were plotted against the model fitted class trajectories as a check on the adequacy of any solution.

It is possible to include predictors in the model and thus take into account the uncertainty of latent class membership and the uncertainty associated with fitting all parts of the model. To include several predictors in a LPA model with data from six time points involves a complicated statistical model. However, in the current study we instead chose to use estimated posterior class membership probabilities to assign individuals to pseudo-class according to the maximum probability rule where individuals are assigned to the class for which they have the highest probability of membership. Hence, in the approach used in the current study the uncertainty of latent class membership is not taken into consideration. However, the average posterior class probabilities for trajectory membership for our six group solution ranged from .80 to .91 hence the ambiguities regarding the class memberships are not large and the effect of not including the uncertainty of latent class membership in the analyses is not likely to produce substantial bias to the current results.

3.3.3. Analysis of variance (ANOVA)

To test for group differences in Papers 1 and 2 we performed one-way ANOVA's in SPSS version 14.0. We used the pseudo-class variable, i.e. the mothers were assigned to the class to which they have the highest probability of membership, as the factor. When testing for differences between the group means, Games-Howell tests were chosen as post hoc test because it does not assume equal sample size or equal population variance. Tukey contrasts produced almost identical results.

3.3.4. Chi-square tests

In the first paper we conducted Chi-square tests in cross-tabulations of trajectories on the dichotomous socio-demographic variables. In addition we conducted exact analyses of single cells in the cross-tabulations based on the Fisher four-field hypergeometric distribution test with the Exacon module in Sleipner version 2.1 (Bergman et al., 2003). In Exacon, the procedure is fitting a model of independence and then looking at cells that depart significantly from independence. The Exacon module was used to analyse if mothers in the different symptom groups scored significantly more or less than expected on dichotomous socio-demographic variables. This analysis produces an exact test of single cells in a contingency table. Scores observed significantly more often than expected are referred to as types (observed > expected) and those observed less frequently than expected are referred to as antitypes (observed < expected). A stringent p level of .01 was chosen for the analysis of statistical types and antitypes as correction for the number of comparisons in each cross-table was not applied.

3.3.5. Multinomial Logistic Regression

Multinomial Logistic Regression analyses with SPSS version 17 were used in Paper 3 because this kind of analysis is useful for situations in which you want to be able to classify subjects based on values of a set of predictor variables. The continuous variables were standardised before entered in the multinomial logistic regression.

The outcome variable in Paper 3 was group membership in one of the symptoms groups. Our main analysis used the Low group as reference category. In addition we conducted an analysis with the High group as reference category in order to compare the Low-rising with the High

group. The results were presented as adjusted odds ratios (adjusted by all variables). The odds ratio with continuous predictors is a parameter that indicates how much larger or smaller the odds for an outcome is when the independent variable increases with one unit. That is, the ratio of the odds of an event occurring in one group compared to another. If the value is greater than 1, then it indicates that the odds of the outcome occurring increase as the predictor increases. Conversely, a value less than 1 indicates that the odds of the outcome occurring decreases as the predictor increases. An odds ratio of 1 would indicate that the odds for a particular outcome does not depend on the value of the predictor (Field, 2005).

3.3.6. Statistical power

An important question is whether we had enough statistical power to detect any effects in our sample, especially considering that there was a large variation in sample size in the symptom groups. According to Field (2005) one should aim to achieve a power of .8, which is an 80% chance of detecting an effect if it genuinely exists. Field (2005) exemplifies with a guideline from Cohen (1992) as an example of statistical power: “If we take the standard p-level of .05 and require the recommended power of .8 then we need 783 participants to detect a small effect size ($r=.1$), 85 participants to detect a medium effect size ($r=.3$) and 28 participants to detect a large effect size ($r=.5$)” (Field, 2005, p. 34). Hence, compared to this example the sample size in the current study is overall large enough to detect even small effect sizes, however when divided into symptom groups some groups in our study are small and we can expect only to detect large effect sizes with regards to the smallest group.

4. RESULTS

4.1. Summary of Paper 1

Trajectories of maternal symptoms of anxiety and depression. A 13-year longitudinal study of a population-based sample

Six trajectories based on maternal scores from six waves of data collection of symptoms of anxiety and depression were identified; 1) a 'No symptoms' group with mothers without symptoms; 2) a 'Low' group with mothers reporting low symptom levels; 3) a 'Moderate-low' group with mothers reporting moderately low symptom levels; 4) a 'Moderate' group with mothers with moderate symptoms; 5) a 'High-chronic' group with mothers with overall high symptom levels; and 6) a 'Low-rising' group with mothers starting with a low symptom level that increased over time. The mothers in the High-chronic symptom group differed from the other mothers on several socio-demographic variables. They were significantly younger than the mothers in the Low group comprising the oldest mothers. The mothers in the High-chronic group had significantly lower education, were less likely to have paid work and were less likely to be living with a partner than the mothers in the other groups.

4.2. Summary of Paper 2

Longitudinal Stability of Maternal Temperament: Differentiation by Trajectories of Depression and Anxiety Symptoms

The study investigated the stability of maternal temperament and its relationship to maternal symptoms of depression and anxiety across 13 years. The overall stability of maternal temperament across six waves of data collection and its stability among groups which had previously been identified through latent profile analysis to have differing symptom trajectories was examined. The study confirmed that the stability of temperament, when based on the overall sample, was relatively high, but that this disguised variations in temperament among different subgroups of individuals. Changes in temperament seemed to parallel changes in symptomatology. In particular, in a group characterized by a sharp increase in symptoms of depression and anxiety at about child age 8.5, a parallel increase in

temperamental Distress and Fearfulness was found. This group also had a significant higher mean level of temperamental Distress than those with equivalent symptomatology at Time 1.

4.3. Summary of Paper 3

Trajectories of maternal symptoms of depression and anxiety over 13 years: The influence of stress, social support, and maternal temperament

The study investigated whether different types of stressors (related to the child and to living conditions), social support and maternal temperament at time 1 predicted membership in trajectory groups based on maternal symptoms of depression and anxiety over the subsequent 13 years. Temperamental distress, followed by child related stressors, were the strongest predictors of membership in a group with high symptoms during 13 years of the child rearing period compared to groups of mothers with low symptom levels. Stressors related to living conditions, as well as social support from partner and friends/family were also significant predictors. No interaction effects among predictors were found. This study indicated that factors present early in the child rearing phase may predict membership in symptom groups over the following 13 years.

5. DISCUSSION

5.1. Interpretation of the main findings

The overall aim of the current study was to explore symptoms of depression and anxiety among mothers in Norway over 13 years of the child rearing period. With the use of a person-oriented approach, we wanted to explore the heterogeneity in symptom trajectories, and the characteristics and predictors of the different symptom groups. Six trajectories based on maternal scores from six waves of data collection of symptoms of anxiety and depression were identified; a 'No symptoms' group with mothers without symptoms; a 'Low' group with mothers reporting low symptom levels; a 'Moderate-low' group with mothers reporting moderately low symptom levels; a 'Moderate' group with mothers with moderate symptoms; a 'High-chronic' group with mothers with overall high symptom levels; and a 'Low-rising' group with mothers starting with a low symptom level that increased over time.

Temperamental distress and child related stressors were the strongest predictors of membership in a group with high symptoms compared to the low group. Stressors related to living conditions, as well as social support from partner and friends/family were also significant predictors.

5.1.1. Trajectories of symptoms of depression and anxiety

There are few population-based studies of trajectories of symptoms of depression and anxiety, and few with a focus on mothers. Existing studies have been on maternal depression only, and mainly with a focus on how maternal symptoms affect the children. The current study focused on the different maternal symptom trajectories per se, and their various characteristics and predictors. Mostly, the groups in the current study had patterns that could be expected based on findings from previous studies of depression. That is, groups with low, moderate and high symptom levels. Other studies of mothers (e.g. Ashman et al., 2008; Campbell et al., 2007; Campbell et al., 2009) have, however, also found a group that decrease in symptoms over time; the current study did not identify such a group. If the post-partum period is a vulnerable time with a possible higher prevalence of symptoms as some studies report (see for example Eberhard-Gran et al., 2003; Munk-Olsen et al., 2006), we would perhaps have found a decreasing group if we had data of maternal symptoms from the time of the birth throughout the child's first year. However, instead of a decreasing group we found a group that increased

in symptoms over time. This group, named Low-rising, was a small but interesting group with a low mean symptom level at the first three time points, which then increased to a high group mean symptom level from t4 when the study child was 8.5 years old.

5.1.2. Mean level stability in symptoms

Depression alone, or together with anxiety, has been found to be stable over time (Merikangas et al., 2003). Such symptom stability was also found for the sample as a whole in the current study. However, the means of the six symptom trajectory groups differed in their mean level stability over the 13 years of follow up. Absolute stability, or mean level stability emphasizes the extent to which score levels are stable or change over time, whereas relative, or rank-order stability, emphasizes the degree to which the relative differences among individuals remain the same over time (Roberts & DelVecchio, 2000; Santor et al., 1997). All trajectory groups appeared to have stable mean levels of symptoms across the six measurement times apart from the Low-rising group. The mean level in this group was low at the first four measurement times but increased to a high mean level at the last two time points. In order to explore these symptom groups further we looked at both different characteristics of the groups over time, and at early predictors of group membership.

5.1.3. Socio-demographic characteristics

Lower socio-demographic status is consistently found to be associated with the risk of developing depression (Akhtar-Danesh & Landeen, 2007; Lorant et al., 2003; Lorant et al., 2007). However, when we look at findings from population-based studies of trajectories of maternal depression and anxiety, the research is scarce. Maternal trajectory studies by for example Campbell and colleagues (2007; 2009) found that mothers in groups with low-stable symptom levels were older, better educated, had better physical health, had higher incomes, and were more likely to have a stable marriage. In contrast, mothers reporting higher levels of symptoms were more often under severe financial stress, had less education, and had less stable marriages (Campbell et al., 2007; Campbell et al., 2009). These findings are similar to our findings on group differences on socio-demographic characteristics. In accordance with the established literature, our study confirmed that education level and employment status are important predictors of symptoms of depression and anxiety (Bjerkset et al., 2008). In Paper 1 we found that the mothers in the High group (the youngest mothers) were significantly

younger than the mothers in the Low group (the oldest mothers). However, in Paper 3, age was not a significant predictor of group membership. This might be because we merged the three lowest groups in this study, which again decreased the mean age in the new, larger Low group to the extent that age was no longer significant. Paper 1 also showed that the High-chronic group had a significantly lower level of education and paid work than all the other groups (Skipstein et al., 2010). These are known risk factors in the literature (Zimmerman & Katon, 2005; Bjelland et al., 2008). Education level and work participation were also significant predictors of membership in the group with a high mean symptom level, found in Paper 3. However, it is interesting that none of the socio-demographic variables could predict the group of mothers that developed symptoms of depression and anxiety later in the child rearing period. The group mean level of education was high in the Low-rising group, in addition to a high proportion of mothers with paid work. Hence on some established socio-demographic risk variables this group of mothers differs from the typical mothers at risk. Without such knowledge, some mothers, like the mothers in the Low-rising group, might be missed in preventive efforts where mothers of lower socio-demographic status often are targeted.

5.1.4. Temperament factors

Temperament factors have been found to influence depression and anxiety (Klein et al., 2009). In a study from Finland the researchers found, for example, that low socio-demographic status predicted symptoms of depression particularly in participants with certain personality characteristics, especially neuroticism and harm avoidance (Jokela & Keltikangas-Jarvinen, 2011). In Paper 2 of the current study we explored maternal temperament in relation to the symptom groups and some interesting findings emerged. Results showed that the five temperament factors of the EAS scale were relatively stable in the full sample of mothers over a period of 13 years. However, when we applied the person-oriented approach with mothers classified into groups based on symptoms of depression and anxiety, substantial differences in stability of temperament were revealed. The lowest temperamental mean level stability was found in the Low-Rising symptom group, where the changes in temperament paralleled the increase in symptom levels from time 4. In addition to the variations in mean level stability we found in emotionality in Paper 2, we also found that some temperament factors were strong predictors of symptoms of depression and anxiety. In Paper 3, temperamental distress

was the strongest predictor for membership in the Low-rising group compared to the Low group. Hence when the data collection started at the child age of 18 months, the mothers in the Low and the Low-rising groups were similar with regards to socio-demographic characteristics and symptom level. The two groups differed in the levels of temperamental distress and support from friends and family. A high level of temperamental distress was found to be the strongest predictor of membership in the group that developed symptoms later in the child rearing phase. Our findings support the notion that a central research area for better understanding depression is through studies of personality and temperament traits in association with depression (e.g. Yuh et al., 2009).

5.1.5. Stressors and social support

In addition to temperament, stressors and social support are also important factors for developing symptoms of depression and anxiety. Child related stressors at child age 18 months was one of the strongest predictors for mothers to be classified into the trajectory group with high symptom scores compared to the mothers with lower symptom levels over the 13 years period. Hence problems regarding child care arrangements, combining work and family responsibilities, the child's health and upbringing are important, and these factors may be indicators of long-term high levels of symptoms of depression and anxiety. The effects of the predictors appear to be additive. The mothers in the group with chronic high levels of depression and anxiety symptoms throughout the child rearing phase report higher levels of stressors, have less social support, have higher levels of temperamental emotionality, and have lower levels of education and work participation.

A large proportion of mothers often experience lack of time, work overload, worries about childcare, and constant tiredness that affect their physical and mental well-being (Baistow, 2007). Our findings support other studies regarding work-family conflicts and well-being among mothers, which find that work family conflicts, because of problems in areas like combining work and child care arrangements, predict psychological distress (Noor, 2002; Oomens et al., 2007). A Dutch study found, for example, that having a job protected against developing symptoms of depression and anxiety for women without children, but not for women with children (Plaisier et al., 2008). Hence, working women might experience several strains, and it seems that these strains are harder to cope with when women have children. This was also shown in a recent Swedish report regarding sickness absence where they found

that men and women had the same rate of sickness absence until their first child was born, after which the rate of sickness absence among the women increased to approximately the double of that of men. This gender difference was found to last until the child was around 15 years of age, and was controlled for pregnancy related sickness (Angelov et al., 2011).

Some studies have found interaction effects between stressors and social support on the symptom level. Stressors are found to have a stronger negative effect on mental health if one at the same time experiences low levels of social support (Dalgard et al., 1995; Olstad et al., 2001). Our hypothesis was that there could be an interaction effect between maternal temperament and stressors, or between stressors and social support. This was based on the idea that experiencing child related stressors or stressors from living conditions could lead to symptoms of depression and anxiety for mothers with a certain temperament. Another hypothesis was that mothers who experienced low levels of social support would develop symptoms of depression and anxiety when faced with stressors early in the child rearing phase. However, no interaction effects were found in the current study. Even though we did not find any interaction effects, there were, however, clear direct effects of stressors, maternal temperament, and social support on maternal symptoms of depression and anxiety. These findings are in accordance with findings from many other studies (e.g Klein et al., 2009; Lakey & Orehek, 2011; Naerde et al., 2000; Tennant, 2002). In general, it is difficult to document interaction effects (McClelland & Judd, 1993). One reason may be that the sample does not have sufficient size, which causes a lack of statistical power.

Summing up, we can say that in the current study the sample could be classified into groups with different levels of symptoms of depression and anxiety, and there were differences between the groups with regards to socio-demographic factors, temperament, stressors early in the child rearing phase, and the amount of social support. We have seen that the prevalence of symptoms of depression and anxiety among mothers in Norway is similar to that of other western countries, regardless of degree of social benefits and welfare in the countries. The risk factors are also found to be the same. Depression has often been explained by a diathesis-stress model in which stressors play a triggering role in depression, affecting the timing, and possibly the severity and duration of symptoms through various cognitive, neurobiological,

and social vulnerability mechanisms (Hammen, 2009; Monroe et al., 2009). Our findings do not seem to support the diathesis-stress model as we did not find any interaction effects between temperament and stressors. This might be due to a lack of statistical power, and because interaction effects in general are difficult to detect in field studies (McClelland & Judd, 1993). However, we did find that certain temperament characteristics seemed to act as vulnerability factors. We found that mothers with high levels of temperamental emotionality also had high levels of symptoms of depression and anxiety throughout the child rearing period. In addition we found that the group of mothers who developed symptoms later in the child rearing period also had higher levels of temperamental distress compared to mothers who did not report symptoms.

5.2. Methodological considerations

The way we choose to define and measure our construct, for example symptoms of depression and anxiety, shapes the phenomenon being studied and we only assume it to be adequately represented by the way it is measured (Stoppard, 2000). If, for example, the definition of depression or psychological distress is too wide, there is a possibility of overpathologising healthy individuals (Matthey, 2010). In some life phases one experiences more stressors and strains than in other periods. It is important to have this in mind when conducting research on mothers, especially in the time following the birth of a child. Many of the items in depression scales are items that would be endorsed by many mothers in this phase, for example sleep disturbance or lack of energy, without them necessarily being reflections of depression. Hence there is a possibility of inflating the prevalence rates among mothers (Matthey, 2010). However, longitudinal data following parents over time may reduce this bias.

In addition, it is important to study symptoms of depression and anxiety in the general population because a substantial amount of people never seek help for their problems. These milder forms of depression and anxiety are more prevalent, and thus potentially more damaging to the society, and may have different predictors from clinical depression. Importantly, as shown in the current study, a person-oriented approach made it possible to identify predictors for groups of mothers with different symptom trajectories.

5.2.1. Measurement reliability and validity

Our main interest in this study - symptoms of depression and anxiety - was measured with the HSCL-25 scale. This is a widely used self-administered screening instrument for detecting psychological problems in non-psychiatric settings. The scale was specifically designed to measure symptoms of depression and anxiety. Internal consistency, test-retest reliability, and validity of the questionnaire have been proven satisfactory to good in many studies (Muller et al., 2009). The internal consistency of the HSCL scale in the current study ranged from .87 to .91, which indicates substantial internal consistency. The temporal stability of HSCL scores ranged from Pearson's $r = .52$ between t4 and t5 to Pearson's $r = .67$ between t1 and t2, indicating a substantial stability of symptom levels. The alphas of the predictors ranged from .39 (stressors related to the living conditions) to .75 (social support from friends and family). Alpha is a function of two parameters: the interrelatedness of the items in a test or scale and the length of the test (John & Benet-Martinez, 2000). The low internal consistency of some of the scales is related to the fact that we have some scales with as few items as three. Another explanation for low alpha in scales in our study can be that they are formative indexes that measure diverse phenomena. The items covering stressors related to living conditions were housing problems, employment problems, and problems regarding a partner's health had the lowest alpha of only .39. In addition to few items, such indexes are not expected to have high internal consistence because they cover a wide area, and thus the items are not necessarily correlated.

Validity may be defined as the extent to which the operational definition of a variable actually reflects the true theoretical meaning of the variable (Cozby, 1993). Construct validity refers to the measurement procedure as a whole and reflects various psychometric properties of a construct. Different types of validation may be seen as different sources of evidence of construct validity, but the main question is whether we measure what we intend to measure (Cozby, 1993). In the current study we have not used the symptom scale with a clinical cut-off, but we assume that what we define as a high symptom level might have a significance in relation to having a potential negative effect of the mother, her children and their family. Several studies have compared different versions of the HSCL scale with diagnostic screening instruments, and the validity of the scale has been found to be good (Müller et al., 2010). A Norwegian study found that there was good agreement between scores on the HSCL-25 and physicians' ratings of emotional distress (Sandanger et al., 1998; Sandanger et al., 1999a). HSCL-25 is short and economical, but could easily be subject to mood of the day effects as

well as other effects such as “yea saying” and “nay saying” (Sandanger et al., 1999a). In our study we use symptom groups derived from latent variables. That is, measurement errors are taken into account. In addition, the longitudinal data from six time points will diminish the effect of error from mood of the day effects. Hence if we then assume that our data are reliable and valid, the next question is whether the findings can be generalized. External validity concerns whether the cause-effect relationship holds over variation in persons, settings, treatment variables, and measurement variables. All causal relationships are context dependent, which brings into question the potential for generalizations.

5.2.2. Generalizability

The main question is whether findings from the sample in question can be generalized to a broader population (Shadish et al., 2002). The sample in the current study was based on all families from 19 geographical health care areas in six municipalities in eastern Norway who visited a child health clinic for the scheduled 18 months vaccination visit. This is part of a mandatory, free public health program and includes more than 95% of Norwegian families. The various health care areas were assumed to be representative of the diversity of social environments in Norway (Mathiesen et al., 1999). Based on this we assume that there is no major selection bias in the sample.

A response rate of 60% is typical for population-based studies (Sundet et al., 1992). In the present study, the response rate for the different waves ranged from 85% to 52%. Compared to other population-based and long-term longitudinal studies, especially considering the time span of 13 years, these numbers may be considered satisfactory. As mentioned earlier the information on non-respondents at t1 indicated that the sample was representative of the general population, and that maternal level of education was the only significant predictor of drop out over time (Gustavson et al., 2012; Karevold et al., 2009). Regarding the prevalence of symptoms of depression and anxiety, the sample seemed to be representative of the level of depressive symptoms that is reported in other population-based studies in Norway and other Western countries (Beeghly et al., 2002; Strand et al., 2003).

One concern is generalization to the target-population, and another concern is the generalisation across populations (Shadish et al., 2002). Even though most of the findings from the TOPP study are consistent with international (Western) research within the field of

developmental psychopathology, some of the relationships may be specific to a selected Norwegian population. As mentioned earlier the Norwegian context can also be seen as a strength of the study because it is important to add knowledge from different countries with different living conditions in order to gain a better understanding of depression and anxiety among mothers. What we find is that the finding from the current study corresponds well with findings from other studies in other countries. This suggests that the factors that affect depression and anxiety among mothers are similar across Western countries. However, the sample mainly includes families with ethnic majority background. Further research is thus needed to see whether our findings transcend local conditions and ethnic variation.

5.2.3. Causation versus selection

A challenge within the field of depression research has been whether the results stem from a selection or a causation effect. There has been some quasi-experimental research (Dohrenwend, 2000) that has looked at explanations for the association between socio-economic status and psychopathology by attempting to determine whether adversity related to lower socio-economic status leads to depression (i.e. social causation), or whether depression leads to lower socio-economic status over time (social selection) (Monroe et al., 2009). Research findings support a social causation explanation of depression for women (Dohrenwend, 2000). In the current study we included socio-demographic variables in the analyses as possible predictors of symptoms of depression and anxiety. In the case of mothers classified in the high symptom group it is not possible to confirm or reject the social causation theory because these mothers had somewhat lower socio-economic status simultaneously with higher symptom levels when they entered the study. However, the group of mothers who increased in symptoms during the child rearing phase did not have lower socio-economic status.

5.2.4. Causality

Problems in demonstrating causality afflict many methodological designs, even longitudinal research (Ingram & Siegle, 2009). Showing that a variable predicts the occurrence of depression is an important step, but in and of itself it does not establish a cause and effect. “For example, even if a longitudinal design shows that certain responses predict subsequent depression, other processes that are correlated with the variables in question may serve as the

actual causative factors for depression. As such, third-variable causality is extremely difficult to rule out” (Ingram & Siegle, 2009, p. 87). Even though the current study found early predictors of symptom development, we must acknowledge that there might be other important risk and protective factors at play that are not included in our study. The focus of the current study has been on what predicts and covaries with symptoms of depression and anxiety. However, we must also acknowledge the possible reciprocal effects that exist in the relationships between the predictor variables and symptoms of depression and anxiety. Mothers that suffer from depression and anxiety may see the world in a negative light which could influence the way they perceive their surroundings (i.e. how much support they receive and how much strain and stress they experience).

5.2.5. Information bias and measurement overlap

An additional methodological issue is the use of self-reports as the single source of information. This makes informant bias and distortions in self-image due to mood disturbance possible. It might be that mothers who experience symptoms of depression and anxiety see the world more negatively and that they therefore report more stressors and less social support, i.e. a depression-distortion effect. However, contrary to the beliefs that psychopathology will distort ones ability to accurately describe oneself, research suggests that for most people this effect might be rather small (Ready & Clark, 2002). Based on this and the lack of viable alternatives for assessing these constructs in large-scale survey research, the potential for such bias should still be taken into account when considering the results.

Another potential source of bias in the current study is measurement overlap. In Paper 2 we investigated the relationship between temperament and psychopathology, which can be methodologically complicated. The challenge is to what extent temperamental emotionality and symptoms of depression and anxiety are overlapping domains. Looking at the single temperament items such as 'I frequently get distressed' and 'I get emotionally upset easily' we find that they are similar to HSCL items such as 'feeling tense or keyed up' and 'feeling blue'. The largest correlation was as expected between temperamental distress and HSCL scores, a Pearson correlation of .58 at t1. The overlap was somewhat lower between temperamental fearfulness and HSCL (.44), with low to moderate item correlations. The correlation between temperamental anger and HSCL was .20. It was -.18 between sociability and HSCL, and -.01 between activity and HSCL. The highest item correlation was .44

between the items 'I often feel insecure' and 'worrying to much about things'. The correlation between temperamental anger and HSCL was only .15. All in all, the correlations between items on the EAS and HSCL scales were low to moderate. Only five of the 460 correlation coefficients at t1 were higher than .40, the highest being .44. Hence confounding might account for some of the reported associations, but it does not appear to provide a complete explanation of the associations found between temperament and symptoms of depression and anxiety in our sample. This assumption was further enhanced by the findings in our second paper.

In Paper 2 we explored stability in maternal symptoms of depression and anxiety and made an interesting finding that emphasised the value of a person-centred approach. The study confirmed that the mean level stability of temperament, when based on the overall sample, was relatively high, but that this disguised important variations in temperament among different subgroups of individuals. The mean level stability estimates of several of the temperament subscales differed between groups with different symptom trajectories and changes in temperament tended to parallel changes in symptomatology. We found that mothers with high levels of symptoms of depression and anxiety also had the highest scores on the three emotionality traits. Isolated, this finding could have been used as a sign or confirmation of measurement overlap. However, this does not hold when we look at the group of mothers that started out with low levels of symptoms of depression and anxiety with a later increase. If the assumption of measurement overlap was true we could expect mothers with low levels of symptoms of depression and anxiety to have low levels of temperamental emotionality. This was true for the group that are low in symptoms throughout the 13 years of follow-up, but not for the mothers with a later increase in symptoms. The mothers in the Low-rising symptom group were significantly different from the mothers in the Low symptom group on temperamental distress at all time points. Hence a high level of temperamental distress was the factor that separated the mothers in the Low-rising group from the mothers in the Low group who stayed low in symptoms of depression and anxiety throughout the child rearing period of this study. This suggests that temperamental distress is a vulnerability factor that precedes later symptom development, and that it does not appear to overlap to large degree with symptoms of depression and anxiety. This finding underlines the benefits of applying a person-centred approach.

6. CONCLUDING REMARKS

6.1. Implications and future directions

The current study aimed at exploring symptoms of depression and anxiety in mothers throughout 13 years of the child rearing period. With a person-centred approach, we found that the sample could be classified into groups with different levels of symptoms of depression and anxiety, and that there were differences between the groups with regards to socio-demographic factors, temperament, stressors early in the child rearing phase, and the level of social support.

An increasing awareness of the impact of mental illness on mothers and their families has led to an agreement that maternal mental health should be thought of as a public health issue, and not just a cause for private concern or psychiatric treatment (Baistow, 2007). The current study has demonstrated that some mothers report substantial levels of symptoms of depression and anxiety throughout 13 years of the child rearing phase. We have showed that there can be groups with distinct developmental trajectories that have different characteristics and predictors. The persistence of symptoms over 13 years in the High symptom group suggests that it is important to be especially aware of mothers with an accumulation of risk factors. It emphasises the importance of early identification, and treatment where needed because chronic symptoms in mothers are known to have the largest negative effect on children. The identification of a group of mothers that developed symptoms later in the child rearing period was an important finding since the mothers in this group differed from the typical high risk groups in that, for example, a large proportion had high levels of education as well as paid work. Our results point to the importance of providing social support, both in form of social networks, material goods, and a framework that facilitates the combination of work and children.

Awareness of and initiatives towards families at risk in child health clinics and in child visits is useful because of the non-stigmatizing context, and the wide impact they might have (Olson et al., 2006). Studies have found that many depressed mothers feel isolated, guilty, and less competent as parents. Hence screening for depression and follow-up of mothers must be

supportive and not judgmental (Olson et al., 2006). This is possible within the context of public health centres.

There is a need to continue to follow mothers longitudinally to gain more knowledge about stability and change in symptoms of depression and anxiety. Further, we need more knowledge about how mothers cope with stress and adversity without developing symptoms, about the effect of different sources of stressors throughout the life phase, and about how mothers cope with combining children and demanding careers. There is for example, an ongoing discussion about women and work burnout, but little knowledge about longitudinal mechanisms in this relation. Extended knowledge of differences in developmental pathways of symptoms over a large time span will improve our understanding of the complexity and variation in symptoms of depression and anxiety. Knowledge that can help improve preventive initiatives targeting mothers will have huge public health benefits as it concerns whole families.

7. References

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RESEARCH ARTICLE

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Trajectories of maternal symptoms of anxiety and depression. A 13-year longitudinal study of a population-based sample

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Abstract

Background: There is a lack of population-based studies of developmental trajectories following mothers throughout the whole child-rearing phase and there are few longitudinal studies focusing on both symptoms of depression and anxiety. The aim of the current study is to identify latent trajectory groups based on counts of symptoms of anxiety and depression among mothers throughout the child-rearing phase and the relations of the latent groups to maternal socio-demographic variables.

Methods: Data is from a prospective, longitudinal study of nearly 1000 families in Norway followed from when the index children were 18 months until they were 14.5 years old (the TOPP study). The study used latent profile analysis (LPA) to identify latent groups of mothers with distinct trajectories across time of symptom counts. Latent group differences on socio-demographic variables were tested with one-way ANOVAs, chi-square tests and exact tests.

Results: Six trajectories based on maternal scores from six waves of data collection of symptoms of anxiety and depression were identified; a 'No symptoms' group with mothers without symptoms; a 'Low' group with mothers reporting low symptom levels; a 'Moderate-low' group with mothers reporting moderately low symptom levels; a 'Moderate' group with mothers with moderate symptoms; a 'High-chronic' group with mothers with overall high symptom levels; and a 'Low-rising' group with mothers starting with a low symptom level that increased over time. The mothers in the High-chronic symptom group differed from the other mothers on several socio-demographic variables. They were significantly younger than the mothers in the Low group comprising the oldest mothers. The mothers in the High-chronic group had significantly lower education, were less likely to have paid work and were less likely to be living with a partner than the mothers in the other groups.

Conclusions: The study shows socio-demographic differences between mothers classified into six trajectory groups based on symptoms of anxiety and depression covering 13 years of the child-rearing period. Specific socio-demographic risk factors characterised mothers in the High-chronic symptom group. Identifying subgroups with enduring problems might inform more targeted preventive efforts.

Background

Depression and anxiety disorders are the most common mental health problems among women. The whole family is often affected and the significance of prevention and adequate treatment is high. Exploring developmental trajectories of maternal symptoms over the

child-rearing period is important to improve our understanding of the variation in symptoms.

Such analytic designs require data from relatively large, population-based longitudinal studies like the current study. To our knowledge, this is the first study reporting results from examining the relationships between socio-demographic characteristics of mothers classified into trajectory groups based on symptom scores covering the child-rearing period from infancy to mid adolescence.

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Depression, especially in women, is frequently found to be comorbid with anxiety [1-3]. For example, 43% of subjects in a community sample diagnosed with depression qualified for an anxiety disorder at the same time [4]. The two diagnoses might share a common genetic predisposition [4]. Nevertheless, depression and anxiety disorders are usually found to be heterogeneous conditions that vary among individuals with respect to their clinical presentations, longitudinal course, and risks of recurrence [5-7]. In this study symptoms of anxiety and depression are measured by the Hopkins Symptom Check List-25 (HSCL-25 scale) [8,9]. The scale consists of two highly correlated symptom subscales of anxiety and depression and consequently the HSCL-25 scale is mostly used as a measure of 'emotional disorder' or 'emotional distress' comparable with studies of depression and/or anxiety.

Depression is usually found to be particularly prevalent in the life phase when women give birth and raise children [10-12], but there are conflicting results as to the developmental pathways. Some studies conclude that the prevalence of symptoms of depression amongst mothers are quite stable from childbirth and onwards [6,13,14]. Others have found the risk for depression to increase in the post partum period [15] and even to increase further as the child grows older [16]. In contrast, others claim that the birth of a child might lead to a period with improved mental health for the mother [16]. However, there is still a lack of population-based studies of developmental trajectories following mothers throughout the whole child-rearing phase and there are few longitudinal studies focusing on both symptoms of depression and anxiety [17]. Studies of trajectories of psychopathology are especially useful for the investigation of transitional points in development across the life phases. Development extends throughout the entire course of life influenced by adaptive and maladaptive processes [18]. Person-centred approaches can help elucidate why the trajectories of some individuals differ from those of others. This approach is appropriate when developmental trajectories are assumed to systematically differ across individuals or when developmental changes are assumed to carry different implications for long-term individual outcomes [19,20]. This is often the case within the field of depression and anxiety disorders.

A recent review of population-based studies of trajectories of depression and anxiety disorders conclude that this research is in its infancy [7]. Nandi and colleagues found 29 studies of trajectories of which only eight were on adults, including two on mothers. They further reported that only two studies used indices based on the combination of symptoms of anxiety and depression. Colman and colleagues (2007) studied trajectories of symptoms of anxiety and depression over the life course

in both men and women from the age of 13 to 53 [21], whereas Merikangas and colleagues (2003) studied clinically diagnosed anxiety and depression of both men and women [22].

The trajectory studies of mothers focused only on symptoms of depression. Campbell and colleagues classified 1,261 mothers from a population-based sample into the following six trajectory groups based on seven waves of symptom scores collected when the children were from 1 month to 7 years; High-chronic, Moderate-increasing, High-decreasing, Intermittent, Moderate-stable and Low-stable [23].

Campbell and colleagues have more recently published results from another study of the same sample using early socio-demographic risk variables and chronicity and severity of maternal depressive symptoms from infancy to age 12 years as predictors of offspring adjustment at 15 years of age. The mothers were then classified into the following five trajectories of depressive symptoms; Non-depressed, Early and decreasing, Stable subclinical, Moderately elevated, and Chronic [24]. They have not yet, however, identified trajectories based on maternal symptom scores gathered from when their children were infants until they are well into adolescence.

Another person-centred study of maternal depression in a clinical sample was conducted by Ashman and colleagues following mothers of children from infancy through 6,5 years [25]. They studied maternal depression in relation to child behaviour over seven years in a sample of 133 mother-child dyads using clinical interviews. As a result, the mothers were classified into the following three trajectory groups based on their symptom scores; Decreasing, Chronic depressed, and Stable mild depressed.

These studies provide important knowledge about different maternal symptom trajectories. However, they are based on data from child-rearing periods in the US only. Challenges mothers meet in the US might differ somewhat from those of mothers in other parts of the world. The Scandinavian countries are characterised by more gender equality, reasonable social benefits for lone mothers, long term paid parental leave, and good access to childcare [26,27], which are all important factors for parents' wellbeing. Comparisons of symptom trajectories between countries with different child-rearing conditions enlightens discussions of relationships between the effects of basic and cultural-dependent challenges on depression and anxiety disorders. Knowledge from population based studies of mothers from other countries is needed for such comparisons. Clinical studies of small groups of mothers are not able to capture the stability and change in symptoms over the child-rearing period. Population-based studies are valuable sources for

informing preventive work because the majority of people suffering from mental disorders never seek professional help [7,28].

Depressive symptoms are usually found to be associated with socio-demographic variables like gender, age, employment, education, partner status and income [10,14,29,30]. However, to our knowledge no study has reported results from examining the relationships between socio-demographic characteristics of mothers classified into trajectory groups based on symptoms covering most of the child-rearing period. The relationship between socio-demographic variables and trajectories of symptoms of depression and anxiety needs to be explored further [31] because subgroups may be exposed to specific risk factors. It is also important to know more about symptom development throughout the child-rearing period to reveal potential vulnerable phases in order to make more targeted efforts.

The aim of the study is to identify symptom trajectories of anxiety and depression describing a population-based sample of Norwegian mothers from when their children were 18 months until they were 14.5 years old. The study will also look at the relationship between socio-demographic variables characterizing the mothers classified into the different symptom trajectory groups.

Methods

Sample

The current study used data from the Tracking opportunities and problems - from childhood through adolescence (TOPP) study. A prospective, longitudinal study of nearly 1000 families in Norway designed to investigate the influences of environmental risk and protective factors on symptoms of mental health problems and competence among children and their parents.

The study is approved by The National Committee for Medical and Health Research Ethics (NEM) in Norway. All families from 19 geographical health care areas in eastern Norway who visited a child health clinic in 1993 for a scheduled 18 month visit were invited to complete a questionnaire (t1). More than 95% of all families in Norway with children attend the public health program eight to twelve times during the first four years of the child's life.

Of the 1081 eligible families, 913 mothers filled out questionnaires at time 1. 777 mothers (85% of t1) participated at t2 when the child was 2.5 years old, 727 (80%) at t3 (4.5 years), 505 (55%) at t4 (8.5 years), 587 (64%) at t5 (12.5 years), and 474 mothers (52%) at t6 (14.5 years). 38 mothers entered the study after time 1. Hence 951 different mothers were included at one wave or more.

Attrition

More than 95% of the families were ethnic Norwegians, i.e. non-immigrants. Background information on the mothers who declined to respond at t1 was recorded at the child health clinic. Non-respondents did not differ significantly from respondents with respect to maternal age, education, employment status, number of children and marital status. The attrition rate is increasing with time as in most longitudinal studies. This study followed mothers from when the index child was 18 months (t1) until they were 14.5 years old (t6). The questionnaires were administered at the health care clinics for the first three time points and by post from time four; this partly explains the substantial decline from 80% to 55% in participation from t3 to t4. In our study we found that there were only small and non-significant differences between the mothers who filled in questionnaires at all waves and the mothers who only participated in the first wave with respect to age, education, number of children, financial status, social support, chronic stress, negative life events and maternal mental health symptoms scores. The only significant ($p < .05$) predictors of drop out were maternal education and workforce participation. Mothers who participated throughout the whole period had higher education and were more likely to have paid work.

Measures

HSCL: Maternal symptoms of anxiety and depression were measured by a version of the Hopkins Symptom Check List (HSCL-25) [8,9]. An index of maternal symptoms of anxiety and depression was computed by dividing the sum of all items by the number of items. The HSCL version we used had 23 items at t1 and t2, 24 items at t3, t4 and t6, and 10 items at t5. Two of the 25 items in the HSCL scale were excluded after a pilot study in the beginning of the TOPP study because some mothers perceived the items: "thoughts of killing yourself" and "loss of sexual interest or pleasure" as offensive. From t3 the item "thoughts of killing yourself" was included in the questionnaire and the scale has been administered with 24 items in the TOPP study since then, with the exception of the fifth wave when it was reduced to 10 items. A study of comparisons of short versions of the Symptom Checklist found that all short versions showed almost equally high internal consistency, sensitivity and specificity [32]. Table 1 gives descriptive and reliability scores of the HSCL scores at all waves.

The HSCL-25 scale is widely used for detecting psychological problems in non-psychiatric settings. The reliability and validity of the scale has been well established [32]. HSCL-25 consists of 25 items separated into

Table 1 Characteristics of maternal symptoms of anxiety and depression (HSCL) scores at six time points

Time point	Index child's age	Number of items	Mean (SD)	Cronbach's Alpha	Percentage above clinical cut-off (1.75)
T1	18 months	23	1.35 (.34)	.90	12
T2	2.5 years	23	1.30 (.29)	.89	7
T3	4.5 years	24	1.28 (.29)	.90	8
T4	8.5 years	24	1.30 (.32)	.91	9
T5	12.5 years	10	1.41 (.41)	.87	14
T6	14.5 years	24	1.36 (.32)	.90	13

two highly correlated scales for anxiety (10 items) and depression (15 items) rated on a four-point scale ranging from 1 "not at all" to 4 "extremely" affected. The HSCL-25 scale measures symptoms and does not diagnose but it is common to use a cut-off score of 1.75 as an indication of symptoms equivalent with an anxiety or depressive disorder. A Norwegian study found that using HSCL-25 with this cut-off gave the same prevalence estimates of an anxiety and depressive disorder as a diagnostic, clinical interview (CIDI) [33,34].

The correlation between HSCL scores was significant at the .01 level from one time to the next (.67 from t1 to t2, .66 from t2 to t3, .57 from t3 to t4, .52 from t4 to t5, and .62 from t5 to t6) and over the whole period (.36 from t1-t6).

Socio-demographic measures

Maternal age: was measured at time 1 when the index child was 18 months with a mean of 30 years ranging from 19 to 46 years of age.

Maternal education: at t1 was measured on a scale from 1 (7 year/primary school, 10% of the sample) to 5 (more than 4 years at university or university college, 16%). The sample mean was 3 (high school) at time 1 when the index child was 18 months. Maternal education was only included at t1 because it is relatively stable in this sample. The correlations between maternal education were .93 from t1 to t2, .95 from t2 to t3, .90 from t3 to t4, .94 from t4 to t5, and .94 from t5 to t6. From t1-t6 the correlation was .80. All were significant at the .01 level.

Workforce participation: we coded workforce participation from the questionnaires at all six time points as whether the mothers were working full time, part time or not participating in paid work. We made a dichotomous variable where we combined working full time and part time into one category of having paid work. At t1 when the index child was 18 months 63% of the mothers worked outside the home. At time 6, when the index child was 14.5, this proportion had increased to 87%.

Childs gender: we recorded the index child's gender and used it in the analysis. At t1 51% were girls.

Cohabitation status/living with a partner: cohabitation status was measured at all six time points and was coded as whether the mothers were living with or without a partner regardless of whether they were married or not. In the Scandinavian countries cohabitation is largely indistinguishable from marriage [35]. A large study in Norway found no difference in symptoms of anxiety and depression among cohabitants than among the married [36] and this was replicated in the current study. Mothers were classified as living without a partner if they either were living alone with the child/children or together with parents or friends and the child/children.

Statistical analyses

This study used latent profile analysis (LPA) to identify distinct trajectories of symptoms of maternal anxiety and depression. LPA is a person-centered approach which is designed to divide the population under study into a set of latent subpopulations with similar developmental pathways [37]. We used Mplus, version 5, to compute different trajectories of maternal symptoms of anxiety and depression using HSCL sum scores. We estimated models with 2 to 7 classes (later referred to as groups) and focused on the model that minimized the Bayesian Information Criteria (BIC) index as the "best" model [38]. To avoid problems with local solutions each model was estimated using 500 different sets of starting values, where each set was randomly perturbed from Mplus default starting values [39]. To minimize problems with singularities, within class time specific residual variance was constrained to be equal across time but classes were allowed to have different levels of time specific residual variance [39]. After model estimation, we used estimated posterior class membership probabilities to assign individuals to pseudo-class according to the maximum probability rule where individuals are assigned to the class for which they have the highest probability of membership. Observed pseudo-class trajectories were plotted against the model fitted class trajectories as a check on the adequacy of any solution. Due to the skewness of the HSCL scores we performed two sets of analyses; one on raw scores and one on

Rasch transformed scores. Both procedures gave largely similar results.

When comparing mothers in the different symptom groups we used pseudo-classes as observed groups in further analysis instead of the latent group variable. This means that individuals are assigned to the class for which they have the highest probability of membership; hence the uncertainty of latent class membership is not taken into consideration. Even though the average posterior class probabilities for trajectory membership for our six group solution ranged from .80 to .91 there are always some ambiguities regarding group membership of some individuals. In complicated statistical procedures it is possible to include predictors in the model and hence take into account the uncertainty of latent class membership and the uncertainty associated with fitting all parts of the model, the standard errors will then be more realistic. In this study we chose a simpler approach and used pseudo-class membership and tested the groups on other variables with conventional statistical methods. To protect against the potential inflation of significance we chose a more stringent p-level than .05.

The LPA analyses were done using subjects with partial data with the assumption that the missing data was missing at random (MAR). MAR is a technical term that is often misunderstood. It means that 'missingness' does not depend on unobserved variables that have not been included in the model. The MAR assumption is not testable unless the missing data can somehow be recovered and it is not invalidated if observed variables included in the model are predictive of missingness. (See Graham, 2009, for more information on modern missing data methodology [40]).

To test for group differences we performed one-way ANOVA's in SPSS version 14.0 and used the pseudo-class variable, i.e. the mothers are assigned to the class to which they have the highest probability of membership, as the factor. Because the sample size varied in the six groups, Games-Howell tests were used as post hoc test because it does not assume equal sample size or equal population variance (we also tested with Tukey and it produced almost identical results). We conducted Chi-square tests in cross-tabulations of trajectories and the dichotomous socio-demographic variables. In addition we conducted exact analyses of single cells in the cross-tabulations based on the Fisher four-field hypergeometric distribution test with the Exacon module in Sleipner version 2.1 [41]. In Exacon, the procedure is fitting a model of independence and then looking at cells that depart significantly from independence.

The Exacon module was used to analyse if mothers in the different symptom groups scored significantly more often than expected on dichotomous socio-demographic variables. This analysis produces an exact test of single

cells in a contingency table. Scores observed significantly more often than expected are referred to as types (observed > expected) and those observed less frequently than expected are referred to as antitypes (observed < expected). A stringent p level of .01 was chosen for the analysis of statistical types and antitypes as correction for the number of comparisons in each cross-table was not applied.

Results

Trying several LPA analyses with different constraints produced very similar results. When we allowed for more than six trajectories, the low symptom trajectories were divided into more low groups. We thus got corresponding overall patterns with all the different analytic approaches. We used the raw HSCL symptom scores in the LPA and chose a solution of six trajectories based on model fit estimations (BIC). Model fit indexes (BIC (Entropy)) from two to seven classes were; 49.94 (.832), -662.40 (.793), -982.65 (.803), -1125.37 (.777), -1138.34 (.769), -1133.16 (.743), respectively.

Figure 1 shows fitted mean trajectories from the 6 class model. It shows one trajectory without any symptoms (No symptoms, 5% of mothers at t1), one trajectory with mothers reporting few symptoms (Low, 19% of the mothers at t1), one with moderately low symptoms (Moderate-low, 30% of t1), one trajectory characterising mothers with moderate symptoms over the time span (Moderate, 32% of t1), one trajectory classifying mothers with overall high scores (High-chronic, 10% of t1) and one trajectory classifying mothers starting with low scores that increased over time (Low-rising, 4% of t1). Around half (54%) of the mothers are included in the three low symptom groups (No symptoms, Low, and Moderate-low) with stable low symptom scores over all six time points. The largest single group is the group reporting moderate symptoms with 32% of t1. 10% of the mothers are classified into the High-chronic group. This group also had the largest variation in scores, i.e. they fluctuate around the group mean level. The only group that did not have a stable symptom level over time was the Low-rising group (4%). Mothers classified into this group started with few symptoms at the first three time points (when the child was 1.5 to 4.5 years), had a moderate symptom level at t4 (8.5 years), and were above the established clinical cut-off score at t5 and t6 (when the child was 12.5 and 14.5).

Socio-demographic variables

We further explored whether there are significant differences between the mothers in the six groups on the following socio-demographic variables: maternal age, education level, and participation in paid work, partner status and index child's gender. Table 2 and 3 present

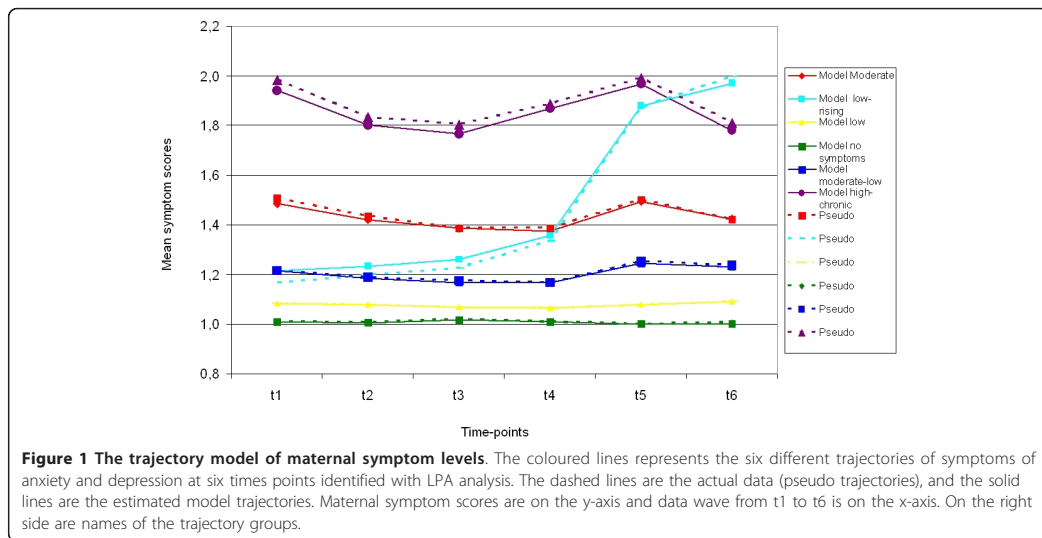


Figure 1 The trajectory model of maternal symptom levels. The coloured lines represents the six different trajectories of symptoms of anxiety and depression at six times points identified with LPA analysis. The coloured lines represents the six different trajectories of symptoms of anxiety and depression at six times points identified with LPA analysis. The dashed lines are the actual data (pseudo trajectories), and the solid lines are the estimated model trajectories. Maternal symptom scores are on the y-axis and data wave from t1 to t6 is on the x-axis. On the right side are names of the trajectory groups.

descriptive data of the continuous and dichotomous variables, respectively, and whether there are overall significant differences between the mean levels of scores among mothers classified into each of the trajectory groups.

Age

ANOVA analysis showed an overall group difference between the mean ages of the mothers. A Games-Howell post hoc test showed that the mothers in the Low group were significantly older than the mothers in the High-chronic group. Despite the attrition this difference was significant at all time points.

Maternal education

ANOVA analysis of maternal education level at t1 showed that there were overall significant differences in education level between the mothers in the six symptom trajectories. A post-hoc test showed that the mothers in the High-chronic group had a significantly lower level of education than all the other mothers. Maternal education level was relatively stable in our sample from t1 to t6 and therefore only t1 was included.

Workforce participation

Chi-Square tests showed that there were significant differences between the groups at t1 regarding workforce participation. The mothers in the High-chronic group were less likely to have paid work. More than half of the mothers in the High-chronic group at t1 (56%) reported not having paid work versus 31-38% of the mothers in the other groups. Analyses of single cells in the cross-tabulations showed that the proportion of mothers in the High-chronic group having paid work at t1, t4 and t5 was lower than statistically expected.

Cohabitation status/living together with a partner

The mothers in the High-chronic group were less likely to report living with a partner. Chi-Square tests showed that there were overall significant differences between the groups in relation to partner status at t1 when the index child was 18 months. 82% of the mothers in the High-chronic group were living with a partner at t1, compared to between 91-97% in the other groups (sample mean was 92%). This trend was stable throughout the study and we found overall significant differences in

Table 2 One way ANOVA analyses of maternal age and education at t1. Games Howell Post Hoc Tests of continuous variables

	Sample mean (S.D.) n = 913	No symptoms (S.D.) n = 44	Low (S.D.) n = 175	Moderate-Low (S.D.) n = 274	Moderate (S.D.) n = 290	Low-rising (S.D.) n = 35	High-Chronic (S.D.) n = 95	F(df)	p
Maternal Age t1	30.05 (4.73)	30.85 (4.42)	30.92 ^a (4.75)	29.92 (4.82)	29.84 (4.44)	30.74 (5.02)	28.76 ^a (5.00)	3.343 (5)	.005
Education at t1	3.08 (1.23)	3.38 (1.11)	3.20 (1.22)	3.19 (1.20)	2.98 (1.20)	3.41 (1.26)	2.54 ^b (1.31)	5.948 (5)	.000

^a = significant difference between the Low and High-Chronic group (p = .007).
^b = the High-Chronic group is significantly different from all the other classes.

Table 3 Relationships between trajectory groups and workforce participation, cohabitation status and child gender at 6 time points (dichotomous variables).

	Wave	Sample mean n = 913	No symptoms n = 44	Low n = 175	Moderate-Low n = 274	Moderate n = 290	Low-rising n = 35	High-chronic n = 95	χ^2 (df)	p
Paid work	t1	63	69	67	67	62	65	44 ^d	19.3 (5)	.002
	t2	63	63	58	67	63	67	58	4.3 (5)	.504
	t3	67	69	62	72	69	63	54	10.6 (5)	.060
	t4	81	90	81	83	83	91	68 ^c	9.3 (5)	.099
	t5	86	87	86	90	89	87	73 ^c	11.5 (5)	.043
	t6	87	94	90	91	85	86	76	9.1 (5)	.106
Living with a partner	t1	92	91	94	95	91	97	82 ^d	19.3 (5)	.002
	t2	91	92	91	94	91	93	78 ^d	17.4 (5)	.004
	t3	89	91	91	89	90	96	74 ^d	18.0 (5)	.003
	t4	87	84	95 ^e	89	87	82	71 ^d	18.7 (5)	.002
	t5	84	91	90	89	81	87	65 ^d	27.0 (5)	.000
	t6	83	88	91 ^e	84	82	77	65 ^d	15.2 (5)	.010
Index child: boys	t1	49	46	46	55 ^e	48	44	41	8.7 (5)	.122

Exact analyses of single cells based on the Fisher four-field hypergeometric distribution test with the Exacon procedure:

Antitypes (observed < expected)

^c = observed values lower than expected, $p < .01$.

^d = observed values lower than expected, $p < .001$.

Types (observed > expected)

^e = observed values higher than expected, $p < .01$.

^f = observed values higher than expected, $p < .001$.

partner status between the groups at all six time points. Analyses of single cells in the cross-tabulations confirmed that a lower proportion of the mothers in the High-chronic group are living with a partner than statistically expected at all six time points. In the Low group there are more mothers reporting to live with a partner than expected at t4 and t6. The percentages in the category not living together with a partner was steadily increasing from t1 to t6 both in the sample as a whole (sample mean from 8% to 17%) and for all the groups separately. Analyses of single cells in the cross-tabulations showed that a larger proportion of mothers in the High-chronic group were living without a partner than expected at all time points. In the Low group fewer than expected were living without a partner at t4 and t6.

Gender of the index child

The proportion of boys and girls in the sample was similar to the general population; 51% girls and 49% boys. The range in the groups is 41-55%. Analyses of single cells in the cross-tabulations showed that the proportion of boys is higher than expected in the Moderate-low group.

Discussion

Six trajectories of symptoms of anxiety and depression were identified in a longitudinal population-based sample of mothers in Norway with latent profile analysis (LPA). We found a No symptom group, a Low, a Moderate-low, a Moderate, a High-chronic, and a Low-rising symptom group. Although 95% of the mothers have some symptoms at one time point or another,

only 10% had increased symptom levels throughout the whole child-rearing period and 32% were classified into the trajectory group with a moderate symptom level. The largest differences in socio-demographic characteristics were found between mothers in the High-chronic group and the other mothers. The mothers in the High-chronic group were significantly younger than the mothers in the Low group and they had significantly lower education than all the other mothers. The mothers in the High-chronic group were also less likely to be living with a partner and less likely to have paid work than the mothers in the other groups. In the following section we will discuss our main findings.

Trajectories

The best fitting model gave six trajectories including proportions of mothers varying from 4% to 32%. One trajectory classifying mothers without symptoms (No symptoms, 5% of t1), one including mothers reporting few symptoms (Low, 19% of t1), one pertaining to mothers with moderately low symptoms (Moderate-low, 30% of t1), one characterising mothers with moderate symptoms (Moderate, 32% of t1), one classifying mothers with overall high scores (High-chronic, 10% of t1) and, one trajectory classifying mothers starting with low scores that increased over time to a level comparable to a clinical level (Low-rising, 4% of t1). Inspection of the raw data showed more symptoms to be reported at t5 than on other time points. To test if this was due to the different amount of items at each time point we selected the

corresponding 10 items at all six time points and compared the mean values on the new summative indexes. The mean was still highest at t5; hence the mothers did report the most symptoms at time 5 when the index child was 12.5 years old. All in all, the result indicates that the majority of the mothers do endorse some of the items of the scale during the study. Only 5% of the mothers' do not report any symptoms at all six time points. Around half of the mothers are in the three trajectory groups characterized by low symptom scores. Considering that this is a longitudinal population-based sample we expected most of the mothers to be low in symptoms. In this regard it is interesting that the Moderate group is the largest single group with 32% of the mothers. This indicates that in a population-based sample there is a substantial proportion of mothers reporting mild symptoms. The High-chronic symptom group consists of 10% of the mothers which is equivalent to findings from other population-based samples.

There are few other population-based and person-oriented studies on maternal mental health. Campbell and colleagues [23,24] have published results from two interesting person-centred studies using data from the NICHD study identifying maternal depressive symptom trajectories. They have not, however, identified trajectories using data describing the whole child-rearing period, from the early preschool years to well into adolescence. Other studies of trajectories of symptoms of depression and/or anxiety have focused on clinically depressed mothers only [25], special samples like adolescent mothers [42], or on adults in general, not mothers [21].

There are also interesting similarities between these studies and the current study despite differences in sample and design. Compared to our trajectory groups, the decreasing group Ashman and colleagues identified in their data is of specific interest [25]. They found a three-group solution with one decreasing group, one chronic depressed group and one stable mild depressed group. Their decreasing group had high level of symptoms during the child's first year of life, decreasing to a moderate level during the child's preschool years and increased again during the child's school years. This group corresponds to our Low-rising group in that we see an increase in symptoms from around the time the index child starts school. We do not have information about the symptom level of the mothers in the TOPP study during pregnancy and the first 18 months of the index child's life so we do not know whether the mothers in the Low-rising group were high or low in symptoms during their pregnancy and post partum.

One reason for the discrepancy between our findings and findings from the two other studies of maternal trajectories might be due to differences in measurement instruments and samples. Unlike the other maternal trajectory

studies we used a measure combining symptoms of anxiety and depression. Our data covered a time span of 13 years. Colman and colleagues (2007) studied trajectories of symptoms of anxiety and depression over the life course in both men and women from the age of 13 to 53 [21]. They identified six trajectories of symptoms of anxiety and depression; absence of symptoms, repeated moderate symptoms, adult-onset moderate symptoms, adolescent symptoms with good adult outcome, adult-onset severe symptoms, and repeated severe symptoms. Those with symptoms, especially in adulthood, were more likely to be women. Taking into consideration the trajectories in adulthood the trajectory pattern is quite similar to ours and for example the adult-onset severe symptoms group might be the equivalent to our low rising group.

Campbell and colleagues identified six trajectories of maternal depressive symptoms in their study from 2007 [23]. The number of trajectories was similar to ours, but the group pattern was somewhat different. Like us, they report a chronic high group, a low symptom group and a moderate symptom group. In addition, they identified an intermittent group, a moderate increasing group, and a high decreasing. We identified two low groups and a low increasing group. The maternal trajectories they identified were based on data collected when the index child was from 1 month until 7 years. We continued collecting data until the child was 14.5 years old. This covers a time span more similar to a later study from Campbell and colleagues where they followed the mothers from when the child was 1 month until they turned 12 years of age [23,24]. They identified the following five trajectory groups: non-depressed, early and decreasing, stable subclinical, moderately elevated, and chronic. Again the trajectory pattern is partly different from ours in that we did not identify the early and decreasing group. This might be because our study covers a different time period. The differences are not great - we started when the children were one year older and continued until they were 2 1/2 years older - but both infancy and early adolescence are likely to have substantial impact on the mothers' symptom level. The early and decreasing group identified by Campbell and colleagues had a high symptom level during the first 15 months of the index child's life, a time when we do not have data. The other groups from Campbell and colleagues' study in 2009 corresponded well with ours except for the Low-rising group that we identified [23,24]. Campbell and colleagues identified a moderate increasing group which might be the closest to our Low-rising group. The difference is that the mothers in our Low-rising group reported a lower symptom level before the children were at the age of 4, and a steeper increase after the children reached that age.

Socio-demographic variables

It was mainly the mothers from the High-chronic group that differed from the rest. The mean age of the mothers in our High-chronic group was lower than in all the other groups. They were significantly younger than the mothers in the Low group comprising the oldest mothers. The mothers in the High-chronic group were also less likely to be living with a partner than the mothers in the other groups. A smaller proportion of them were living with a partner than statistically expected at all six time points. The mothers in the High-chronic group also had significantly lower education than all the other mothers. It is worth noticing that the mothers in the Low-rising group had the highest education. In addition, the High-chronic mothers were less likely to have paid work. The amount of mothers having paid work increased steadily in the sample as a whole. When the index child was 18 months 64% of the mothers had paid work compared to near 88% when the child was 14.5 years old. It is more common for mothers to join the workforce as the child grows older. Contrary to this we found a decrease in workforce participation among the mothers in the Low-rising group (with high education) parallel with the increase in symptoms of anxiety and depression. This decrease seems to be parallel and to follow after the increase in symptoms. It seems that the direction was from increase in symptoms to drop out of workforce and not from being unemployed leading to increase in symptoms. It is, however, necessary to examine this further in a full model controlling for relevant mediators.

Our findings on socio-demographic variables are in line with results reported from both studies by Susan Campbell and colleagues. In their study published in 2009 they found that women with few symptoms were more likely to be married, better educated, and in better physical health than women with more elevated symptoms. In their study from 2007, Campbell and colleagues found that women in the different trajectory groups varied widely in co-occurring socio-demographic risk. Mothers in the low-stable depression trajectory group were older, better educated, and had higher incomes than the mothers in the other five trajectory groups. Women in the moderate-stable depression group were also somewhat better-off financially and had higher educational levels than women in the chronic and high-decreasing trajectories. Women in the low-stable depression group were also more likely to be in a stable marriage [23].

On the contrary, Ashman and colleagues did not find significant differences between the mothers in their study on any socio-demographic variables like mother's ethnicity, partner status, education, occupation level, or hours spent working outside the home. The lack of

differences between their groups and ours might partly be because the sample consisted of depressed mothers only in contrast to our study comprising a population-based sample [25].

In our study we found the level of symptoms measured at the six time points to be quite stable over time among mothers classified into all trajectory groups except for the Low-rising group. The Low-rising group was a small group, only 4% of our sample. However, the group had low attrition; the analysis required the mothers to be part of most data waves to be included in this particular group. It is interesting to note that this is a group with a high proportion of highly educated mothers. In the Low-rising group 24% of the mothers had more than four years of university or university college education. This was only the case for 13% of the mothers in the High-chronic group. The range was from 14-17% for the mothers in the other groups. All in all, this study found that although some variables like workforce participation and partner status changed for the mothers in the Low-rising group, this group of mothers did not differ significantly from the others on most variables included. The substantial increase in reported symptom level for this particular group of mothers can not be explained by variables included in the current study.

Our study shows that for some mothers the symptoms of anxiety and depression can be a stable problem over a substantial period of time. The results in Tables 2 and 3 imply that t1 demographics significantly discriminate the groups. The high symptom mothers were associated with specific risk factors like young age, low education, living without a partner and not having paid work. The results for maternal education specifically indicate that the high chronic group is significantly different from the other groups but the other groups do not differ among themselves. Hence it is important to pay attention to specific risk factors among mothers in order to establish effective intervention and prevention programs. Perhaps even more important, education and work force participation are malleable risk factors that can be changed through effective intervention.

Strengths and weaknesses

There are several statistical approaches that can be used when studying person oriented trajectories. In this study a latent profile analysis (LPA) was used to identify trajectories of symptoms of anxiety and depression. The six groups based on maternal symptom scores gave a meaningful result, but there are also some limitations. For simplicity, we used pseudo-classes as observed groups in analysis of socio-demographic variables instead of predicting latent classes directly in the LPA model. This means that the uncertainty of latent class membership was not taken into consideration. To

protect against the potential inflation of significance that comes when pseudo-class is treated as observed class a more stringent p level than .05 was applied.

The data in this study stems from a population-based sample which reduces the selection bias associated with studies of maternal depression and/or anxiety using clinical samples. Few studies of mental health have followed mother-child dyads over such a long time span as we have in this study. Despite the attrition that ordinarily is connected to the length of the study we still find that the remaining sample shows few differences on our study variables compared to the drop outs. Attrition analysis of the current study found that the only significant predictors of drop out were maternal education and workforce participation. Mothers who participated throughout the whole study period had higher education and were more likely to have paid work. In addition, modern statistical methods that assume that data are missing at random conditional on predictors included in the model (MAR assumption) and thus include subjects with partial data that we used tend to minimize attrition bias. We did not, however, include the variables that predicted attrition in the LPA analyses so this remains a potential limitation of our results.

The results would be strengthened if we had collected data through clinical diagnostic interviews of mothers instead of self reported symptoms on a symptom checklist. However, when the purpose is to gain knowledge that can be generalised to the population, self-reported symptom measures are found to be a valid indicator in population-based studies [33,43].

This study showed that the onset of serious symptoms of depression and anxiety might appear later in the child-rearing phase, hence it is not only the post partum time that might be a vulnerable period for mothers. It is necessary to explore the symptom trajectories further to see whether classification into one of the groups is predicted by different factors, and whether risk and protective factors might affect groups of mothers differently at different times, i.e. to identify vulnerable periods and resilient outcomes.

Conclusions

Even though extensive research has been done on maternal depression and anxiety disorders, there are few longitudinal studies following the symptom level among mothers from the ordinary population over the whole child-rearing period. This is one of few studies that have examined the relationship between socio-demographic characteristics of mothers classified into trajectory groups based on symptom scores covering the period from when they had infants until the children were well into adolescence. It is interesting that the risk factors are consistent for the high symptom group throughout

the child-rearing phase, not only at one time point. This study shows that the course of symptoms of anxiety and depression is heterogeneous and that it is useful to apply person-centred analyses in order to develop preventive initiatives. In future studies it will be important to test hypotheses about early predictors that can identify high risk group membership. Such findings might have substantial implications for early intervention and prevention of mental health problems.

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Authors' contributions

HJ, MS and AS performed the LPA analyses. AS performed the other statistical analyses and drafted the manuscript. KSM designed the project and collected the data. All authors contributed to the interpretation of results and helped to draft or critically revise the manuscript. All authors read and approved the final manuscript.

Competing interests

The authors declare that they have no competing interests.

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**Trajectories of maternal symptoms of depression and anxiety over 13 years:
The influence of stress, social support, and maternal temperament.**

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Abstract

Background: Depression and anxiety are the most common mental health problems among women, with various negative impacts both for the women concerned and their families.

Greater understanding of developmental trajectories of maternal symptoms of depression and anxiety over the child rearing period would have significant benefits for public health, informing prevention and treatment approaches.

Methods: The data is from a prospective, longitudinal study of 913 mothers in Norway followed from when their children were 18 months old (time 1) until they were 14.5 years (time 6) (the TOPP study). Multinomial logistic regression analyses were used to test whether child related stressors, stressors related to the living conditions, social support and maternal temperament at time 1 predicted membership in groups based on maternal symptoms of depression and anxiety over the subsequent 13 years.

Results: Temperamental distress, followed by child related stressors, were the strongest predictors of membership in a group with high symptoms over time. Stressors related to living conditions, and social support from partner and friends/family were also significant predictors. No interaction effects among predictors were found.

Conclusions: This study indicates that factors present early in the child rearing phase may provide substantial prediction of the variance in maternal symptoms of depression and anxiety over the following 13 years. Temperamental distress and child related stressors were the strongest predictors of membership in different symptom trajectory groups.

Keywords: symptoms of depression and anxiety, trajectories, temperament, stressors, social support

Background

Depression and anxiety are the most common mental health problems among women. These problems can have adverse consequences for individual women, their families and society as a whole. The personal costs are huge – with reduced life quality and functioning with regards to relationships with partners and children, friends, and work life [1-3]. Maternal depression is an important risk factor for child psychopathology [4], and remission of maternal depression is related to improved child outcomes [5]. Hence exploring predictors of maternal depressive symptoms throughout the child rearing period is important, with significant public health benefits from better knowledge to inform prevention efforts.

Typically depression is explained by a diathesis-stress model in which stressors play a triggering role in depression, affecting the timing, and possibly the severity and duration, of symptoms through various cognitive, neurobiological, and social vulnerability mechanisms [6, 7]. There is considerable evidence of the importance of stress in the development of symptoms of depression and anxiety [6, 8]. The research on the relative effects of different sources of stress on symptoms of depression is, however, sparse. This is especially true for effects of chronic stress factors [7]. Some findings indicate that chronic stressors are associated with depression more strongly and over a longer period than acute stressors [9-11]. For example, the accumulation of stressors over two years is a stronger predictor of relapse than the presence of new stressors assessed over shorter time periods [8]. It is therefore important to assess the relative effects of chronic stress factors from different sources when examining the role of stressors on symptoms of depression and anxiety.

Child rearing period: For some women, entering motherhood can be accompanied by a variety of chronic stressors that may contribute directly or indirectly to depression [12].

Whereas several studies examine the effects of parental depression on parenting and on children's emotional and behaviour problems, few studies have examined the reverse pattern; i.e. how stressors related to having children and parenting may influence maternal depression trajectories [2].

Stressors related to other living conditions (such as housing problems, work difficulties, and partner's health problems) are associated with depression and anxiety [13-15]. Few studies have followed mothers and their offspring from infancy to adolescence to examine how stressors related to their children and living conditions might influence their levels of anxiety and depression across time.

One of the few studies well suited to examine the role of stressors related to children and living conditions on maternal mental health across time is the Norwegian TOPP study ('Tracking Opportunities and Problems Project'). The TOPP study, following a community based sample of 18-month old toddlers and their families, has shown direct effects of early child related stressors on maternal symptoms of depression and anxiety when the children were of preschool age [13-15]. The same dataset is utilized in the current study, focusing on early predictors of longer term symptom development amongst mothers.

Early stressors and symptom trajectories. Rearing young children requires considerable social, financial, and health care resources. Psychological distress is likely to result if resources are scarce; for example, symptoms of depression and anxiety are more prevalent among persons with lower compared to higher socioeconomic status [16, 17], and evidence indicates that both socioeconomic disadvantage and absence of social support are associated with maternal symptoms of depression and anxiety [18]. Lower maternal age, fewer years of

education and lack of work participation have been found to relate to maternal symptoms of depression and anxiety in the TOPP study [19]. Financial stress increases the risk of poor maternal health, and mothers who report multiple stressors are at particularly high risk [18].

It is also possible that stressors related to children and to living conditions interact, thereby increasing the negative effects of early stressors on long term symptom development. A Dutch study found that having a job protected against developing symptoms of anxiety and depression for women without children, but not for women with children [20]. Hence, women with young children might be more susceptible to the stresses of juggling the demands of multiple roles, such as being an employee and a parent. Problems with housing and the health of the partner might also be more problematic when there are children to take care of as well.

Social support. In addition to directly affecting mental health, social relationships can act as a buffer against negative effects of stress on mental health [21, 22]. Such effects were demonstrated in a cross-sectional study where mothers who reported high levels of support from their partner experienced less negative emotional impact from various stressors [23]. Other studies, however, report that several of the documented links between perceived support and mental health reflect main effects rather than buffering or moderating the effects of stress [8, 24]. The idea that specific types of stress may be buffered by specific types of support has evolved over recent years [22], indicating the importance of studying different sources of stress and support. Having toddlers can be demanding, and receiving good social support in this period may be important for the mother's sense of coping, and may affect symptom development later in the child rearing phase. Few projects have studied long term effects of child related stressors and whether social support from partners and/or family and friends might buffer the effect of early stressors. Knowledge about the relationship between

social support and different sources of stress on maternal long term symptom development can inform preventive strategies.

Temperament. Temperament is known to influence depression and anxiety [25].

Temperament refers to individual differences in basic styles of behaviour such as emotionality, activity level and sociability [26]. Research on adults has tended to examine personality rather than temperament, although these two terms are often used interchangeably [25] and are closely interrelated. For example, temperamental emotionality is empirically and theoretically linked to the personality construct of neuroticism/negative emotionality [27], high levels of which appear to precede the onset of depression [25, 27]. Some studies have found direct effects of personality on depression, whilst others have found interaction effects between life stress and personality [8]. In a review of stress and depression, Hammen found that in some studies neuroticism moderated the effect of stress on depression, and suggested that more research in this area is needed. She also noted that neuroticism might be a genetically transmitted predisposition for both stressful events and depression [28].

Personality or temperament factors may therefore be moderators of the association between stressors and symptoms of depression and anxiety.

The overall aim of the current study was to identify predictors assessed early in the child-rearing period (when children were 18 months of age) that discriminated between groups of mothers with different trajectories of depression and anxiety symptoms over the subsequent 13 years (up to when their children were 14.5 years of age). It built upon a previous study using the same dataset that identified six maternal symptom trajectories with six waves of data over this time period [19]. Specifically, we set out to examine whether stressors related to child rearing and living conditions, social support (from partners and/or from friends and

family), and maternal temperament, as assessed when women were caring for 18 month old children, predicted mothers' membership in groups with different trajectories of symptom development during the following 13 years and whether there were interaction effects between the various stressors. We hypothesized that child related stressors and stressors related to living conditions might have a stronger effect on symptoms of depression and anxiety among mothers with lower social support, and that temperament may be a moderator of the association between stressors and symptoms of depression and anxiety.

Methods

Sample and procedure

The current study used data from the TOPP study, a population-based prospective longitudinal study focusing on developmental trajectories to well-being and symptoms of mental health problems among children, adolescents and their parents in Norway. More than 95% of all families in Norway with small children regularly attend a child health clinic during the early childhood years. All families from 19 health care areas in eastern Norway who visited a child health clinic in 1993 for their child's scheduled 18 months visit were invited to complete a questionnaire and participate in the TOPP study.

913 mothers of 1081 eligible children participated at time 1 (t1), 777 mothers (85% of t1) participated at time 2 (t2) when the child was 2.5 years old, 727 (80%) at t3 (4.5 years), 505 (55%) at t4 (8.5 years), 587 (64%) at t5 (12.5 years), and 474 mothers (52%) participated at t6 (14.5 years). The questionnaires were administered at the child health clinics for the first three time points and by post from t4. More than 95% of the sample is Norwegian born.

Representativeness and attrition

Background information on the mothers who declined to respond at t1 was recorded at the child health clinic. Non-respondents did not differ significantly from respondents with respect to maternal age, education, employment status, number of children, and marital status.

Attrition analyses showed no significant differences between the mothers who filled in questionnaires at all waves and those who participated only in the first wave with respect to age, number of children, financial status, social support, chronic stress, temperament, negative life events, and maternal symptom level. The only significant predictor of attrition was maternal education, i.e. mothers who stayed in the study had higher education than the drop-outs (Gustavson, von Soest, Røysamb, & Karevold, unpublished data). This is commonly found in longitudinal studies.

Child related stressors. At t1, mothers were asked to indicate whether they had experienced ongoing problems during the last 12 months in the following areas: a) Problems with child care arrangements (e.g. day care, babysitter, or when the child is ill); b) Problems combining work and family responsibilities; c) Problems concerning the child's health (e.g. disability or illness); and d) Problems with upbringing, supervision, school, and discipline. These items were to be answered in relation to all their children, not only the target child aged 18 months, with response categories from 1 (None), to 4 (Very large problems). A scale of child related stressors was constructed by computing the average of these four items. Cronbach's alpha was .57 for this scale.

Stressors related to living conditions. The same introduction and response categories as for child related stressors above was used to assess three sources of stress related to living conditions at t1: a) Housing problems (maintenance, rental agreement etc); b) Employment

(unemployment, uncertain work, difficult work relations); and c) Partner's health problems (physical or mental). A living conditions stressors index was constructed by computing the average of these three items.

Social support from partner. To measure social support from partners, four items about emotional and practical support from the mothers' romantic partner were used [13]. One item tapped practical support from partner, and three items tapped emotional support and feeling of belonging, each rated on a Likert scale from 1 (completely disagree) to 5 (completely agree). These items were averaged to construct a scale of partner support, with a Cronbach's Alpha of .59.

Social support from friends and family. To measure social support from friends and family, one item tapping practical support, and three items tapping emotional support and feeling of belonging from friends and family, respectively, were used [13]. These eight items, each rated on a Likert scale from 1 (completely disagree) to 5 (completely agree), were averaged to construct a scale of social support from friends and family, with a Cronbach's Alpha of .75.

Temperament. Maternal temperament was measured with a Norwegian translation of the Emotionality, Activity and Sociability scale (EAS) for adults [29]. This is a 20-item self report instrument consisting of five subscales: Activity; Sociability; Distress; Fearfulness; and Anger. The latter three are used in the current study, and together measure the broader construct of the temperament trait emotionality. The items were scored on a Likert scale from 1 (not typical) to 5 (very typical). A score for each temperament subscale was constructed by computing the average of its four items. The factor structure and psychometric properties of this scale have previously been assessed in this sample and shown to be satisfactory [30].

Cronbach's alphas at t1 for the temperament subscales Distress, Fearfulness and Anger were .73, .57 and .58, respectively.

Socio demographic variables. Maternal age was computed from mothers' report of their year of birth. Maternal education was coded as number of years of completed education. Self-report of workforce participation was coded as either having or not having paid work.

Symptoms of depression and anxiety were measured by a Norwegian version of the Hopkins Symptom Check List (HSCL-25) [31]. The original checklist consists of 25 items creating two highly correlated scales for depression (15 items) and anxiety (10 items). Respondents indicate the degree of being burdened by each symptom on a four-point Likert scale ranging from 1 (not at all) to 4 (extremely). The average score across all items was used as the index of maternal symptoms of anxiety and depression. The HSCL version used here comprised 23 items at t1 and t2, 24 items at t3, t4 and t6, and 10 items at t5. A pilot study led to two of the original 25 items ("thoughts of ending you life"; "loss of sexual interest or pleasure") being excluded at t1 and t2 because some mothers perceived them to be offensive. From t3, the first of these items was reintroduced. At the fifth wave the HSCL scale was reduced to 10 items in order to have a shorter questionnaire in a quest for a higher response rate. A study comparing various short versions of the Symptom Checklist found all versions to show almost equally high internal consistency, sensitivity and specificity [32].

Internal consistency (Cronbach's alpha) for the HSCL scale at the six time points was high, ranging from .87 to .91. The mean symptom score ranged from 1.28 to 1.41, which is representative for unselected populations. The temporal stability of HSCL scores ranged from

Pearson's $r = .52$ between t4 and t5 to Pearson's $r = .67$ between t1 and t2, indicating a substantial stability of symptom levels.

Skipstein and colleagues (2010) identified six profiles, or trajectories, of maternal symptoms of depression and anxiety based on HSCL scores from t1 to t6 using latent profile analysis (LPA). LPA is a person-centred approach designed to divide the population under study into a set of latent subpopulations with similar developmental trajectories [33]. Mplus (version 5) was used to compute trajectories. Skipstein and colleagues (2010) used posterior class membership probabilities estimated after model estimation to assign individuals to pseudo-classes according to the maximum probability rule [19]. The current study also used symptom groups based on the pseudo class membership.

The analysis identified six trajectory groups: 1) a 'No symptoms' group with close to zero scores across all waves (5% of the sample); 2) a 'Low' group with consistently low symptom scores across time (19%); 3) a 'Moderate-low' group (30%); 4) a 'Moderate' group with moderate symptom scores at all waves (32%); 5) a 'High' group with overall high symptom levels (10%); and 6) a 'Low-Rising' group with initially low symptom levels that increased to a level similar to the High group by t6 (4%) (see Skipstein et al., 2010, for further details).

The three lowest trajectory groups ('No symptom', 'Low' and 'Moderate-low' groups) did not differ significantly on any socio-demographic variables. We decided to merge these three groups into one Low group as we felt this made sense conceptually and made the results easier to portray and interpret. Even though the LPA analysis found meaningful differences between the three lowest groups, we were interested in maternal symptom level and in this context separating between low symptom levels is not of interest. Figure 1 shows the means

and standard deviations for the HSCL scores of the resulting four symptom trajectory groups at each time point.

– Figure 1 about here –

Statistical analyses

Multinomial logistic analyses with SPSS version 17 were used to assess the association of predictor variables with trajectory groups. The continuous variables were standardised before they were entered into the analyses. Two sets of analyses were conducted, one with the Low symptom group as reference category and one with the High symptom group as reference category.

Results

Table 1 shows means and standard deviations of the predictors for the whole sample and for the four symptom groups. The mean levels of both stress indices (i.e. relating to children and to living conditions) were similar, both for the whole sample and across each symptom group.

-Table 1 about here-

Mothers in the Low symptom group reported the lowest stress scores and most social support, followed by the mothers in the Low Rising, Moderate and High groups. The sample as a whole reported on average more support from partners than from friends and family. This trend also applied for each of the symptom groups. Mothers with Low-rising symptoms

reported the highest levels of partner support, followed by mothers in the Low symptom group. The Low group reported the highest level of support from family and friends.

There was also variation in temperament between the groups. The Low group reported scores well below those of the other three groups. Mothers in the High group reported the highest level of temperamental distress followed by mothers in the Low-rising group. The sample mean for temperamental anger was the highest of the three temperament subscales. Here the Low-rising group reported the lowest level followed by the Low group. The High group had the highest level of temperamental anger.

Table 2 shows results of the multinomial logistic regression analysis with the Low group as reference category. The estimated odds ratios (with 95% confidence intervals) describe the odds of membership in a specific trajectory group relative to the Low group.

-Table 2 with low reference about here-

All variables except maternal age were significant predictors of membership in the High symptom group compared to the Low. Child related stressors was the second strongest predictor of membership in the High group compared to the Low, with an odds ratio of 2.22. The odds of being in the High group compared to the Low group also increased with higher levels of stressors related to the living conditions (OR 1.82). The odds of being in the High group versus the Low also increased with lower levels of support from both partner (OR: .73), friends and family (OR: .62). In addition the odds increased with higher levels of all of the

three sub-scales on temperamental emotionality; distress (OR: 3.64), fearfulness (OR: 1.79), and anger (OR: 1.42).

More years of education reduced the odds of being in the High group compared to the Low group. The odds ratio of being in the Low group versus the High when having paid work was 2.04. Two variables were significant predictors of membership in the Low-rising group compared to the Low group. The strongest predictor was higher levels of temperamental distress (OR: 3.01). The second significant predictor was lower levels of support from friends and family (OR: .62).

The odds of being in the Moderate group compared to the Low group increased with higher scores on temperamental fearfulness (OR: 1.52) and distress (OR: 2.24), in addition to having higher levels of both child related (OR: 1.85) and living related stressors (OR: 1.59) when the index child was 18 months old.

The analyses were repeated with the High group as reference category, with a specific focus on the comparison between mothers in the Low-rising versus the High group. Table 3 gives the estimated odds ratios and 95% confidence intervals for the odds of being classified into a trajectory group relative to being classified into the High group.

-Table 3 with high reference about here-

The strongest predictor of the Low-rising group compared to the High group was more support from partner (OR: 2.32), followed by higher levels of education (OR: 1.33). In

addition, lower levels of temperamental anger (OR: .49), and lower levels of child related stressors (OR: .49) at t1 significantly differentiated mothers in the Low-rising group from mothers in the High group. Compared to the High group, being classified into the Moderate group was predicted by lower levels of temperamental distress (OR: .61), temperamental anger (OR: .71), and higher levels of support from family and friends (OR: 1.34).

To identify any interaction effects, we entered all two-way multiplicative interaction terms of predictors (between temperament and social support, between temperament and stressors, and between social support and stressors). No interaction effects were statistically significant, and their inclusion resulted in no changes in significance of main effects.

Discussion

The aim of the current study was to expand knowledge of the role of stressors, social support and temperament measured early in child-rearing on developmental trajectories of maternal symptoms of depression and anxiety during the following 13 years of child rearing. To our knowledge, the current study is the first to examine the extent to which different types of stressors, social support and temperament early in the child rearing phase can predict membership in groups based on maternal symptoms of depression and anxiety.

Analyses showed that each of these variables contributed to the differentiation of distinct trajectories, but with varying importance. We found that both risk and protective factors measured early in the child rearing period contributed to differentiation between symptom groups. This suggests that interventions directed to stressful early periods of parenting may be

worthwhile in preventing symptoms of depression and anxiety among mothers. The main findings are further discussed below.

Early stressors

The mean level of stressors at t1 was in general low among the mothers. However, we found that child related stressors and living condition related stressors at child age 18 months each were significant predictors of membership in groups with moderate or high levels of symptoms of depression and anxiety during the child rearing period. Child related stressors early in the child rearing phase had a large effect. There was a two fold (OR: 2.22) increase in the odds of being in the High symptom group with an increase on the child related stress index. Hence problems regarding child care arrangements, combining work and family responsibilities, the child's health and upbringing are important and they can be an indicator of long term high levels of symptoms of depression and anxiety.

In accordance with findings from earlier mentioned studies [8, 18], also lower education and being unemployed predicted membership in the High symptom group. Notably, being unemployed predicted a two fold increase in the risk of being in the High versus the Low symptom group. This shows the importance of socioeconomic disadvantage, in addition to other stressors, in early childhood for trajectories of maternal symptoms of anxiety and depression from early childhood to adolescence.

As shown in table 1, many mothers had full-time paid jobs. Even in gender equal countries like Norway, women often do most of the child care and domestic work. In addition, women are often squeezed between the necessity of both caring for young children and caring for sick and elderly family members. This role overload is believed to contribute to a sense of "burn

out” and general distress, including depressive symptoms, in women [12]. Different stressors might interact, and having high levels in one area might increase the experience of stress in another area. We found no significant interaction effects between the two sources of stress in our study. A possibility is that the sample was not big enough to discover significant interaction effects. However, it is interesting that we find that there seem to be additive effects of the predictors instead of interaction effects.

Social support

Mothers reported that they received more support from their partners than from friends and family. Mothers in the Low-rising group reported the highest level of partner support when the target child was an infant, while the highest level of support from family and friends was reported among those in the Low symptom group. Mothers in the High symptom group reported the lowest level of support from both partners and from family/friends. Low level of support (of both types) was predictive of membership in the High symptom group in the multivariate analyses. Results from the analyses with the High symptom group as the reference group showed that partner support differentiated mothers in the Low-rising group from those in the High symptom group. Social support also differentiated mothers from the High and the Moderate symptom group, respectively, hence the less support the mothers reported when their children were infants, the more symptoms of depression and anxiety they experienced over time. Our findings support and expand upon the cross-sectional study by Mistry and colleagues [18], who found that lack of emotional and functional social support for parenting increased the risk of poor mental health in mothers of children aged 4 to 35 months. Our findings replicate the findings from the field and provide evidence that lack of support early in child-rearing role might have long-term implications.

In contrast to some studies that report that social support moderate the negative effects of stressors on symptoms of anxiety and depression [21, 23], no interaction effects were found for support from either partner or friends and family. Our findings accord with other studies reporting relationships between social support and distress, regardless of the level of stressors [8, 34]. The lack of interaction effects in our study could be explained by differences in effects of recent or short term stressors versus chronic stressors. Some findings suggest that social support only buffers the effects of recent stress, not long-term stress or adversities [21, 35, 36].

Early maternal temperament

Mothers with a high stable trajectory of depression and anxiety across 13 years were significantly differentiated from mothers with stable low scores by higher levels on all three aspects of temperamental emotionality, i.e. distress, fearfulness and anger. Further, those with moderate levels of depression across time were significantly differentiated from those with stable low scores by higher levels of temperamental distress and fearfulness. The Low-rising group had higher levels of distress than the Low symptom group, and lower levels of anger than the High symptom group. The findings indicate that women with higher or increasing levels of symptomatology have the most negative temperament characteristics. Hence maternal temperament seems to be an important early indicator for symptom development and severity among mothers over the child rearing phase. The absence of interaction effects between temperament and the stressors suggests that its effects are independent of specific contexts of women's lives.

There are several possible explanations for the importance of temperamental distress as a risk factor for high levels of symptoms of depression and anxiety. First, findings from other

studies suggest that the genetically transmitted factor of neuroticism (which is closely related to temperamental emotionality) may predispose to both stressful life events and depression, or may increase the probability that an individual will respond to stress with depression [28]. Irrespective of the mechanism, it appears that temperament/personality gives important indications of vulnerability for symptoms of depression and anxiety.

Strengths and limitations

Any investigation of the relationship of temperament and psychopathology is complicated by conceptual and methodological issues. Temperamental emotionality overlaps to some extent conceptually with symptoms of depression and anxiety, and associations can be artificially increased by overlapping item content. In this study, some of the items measuring distress (e.g. 'I get emotionally upset easily') and fearfulness (e.g. 'I often feel insecure') are somewhat similar to HSCL items such as 'feeling tense or keyed up' and 'worrying too much about things'. Sanson, Prior and Kyrios [37] first examined contamination between measures of child temperament and behaviour problems, showing that it was difficult to clearly distinguish between the two at a measurement level. Later work, however, suggested that such confounding or overlap does not account for a large portion of the linkage between the two constructs [38, 39]. This conclusion increases confidence that, while confounding may account for some of the associations in the current study, it does not provide a complete explanation of the associations found between temperament and symptom groups.

It could be argued that clinical diagnostic interviews of mothers would have been preferable to self reported symptoms. However, besides the non-feasibility of diagnostic interviews in large-scale studies, researchers have found self-reported symptom measures to be valid indicators when the purpose is to gain knowledge of high prevalent symptoms within a

population [40]. An additional methodological issue is the use of self-ratings as the single source of information, where informant bias and distortions in self-image due to mood disturbance are possible. It might be that mothers who are experiencing symptoms of depression and anxiety see the world more negatively and that they therefore report more stressors and less social support, i.e. a depression-distortion effect. Despite the lack of viable alternatives for assessing these constructs in large-scale survey research, the potential for such bias should be taken into account in considering the results.

The data in this study stem from a population-based sample which reduces the selection bias associated with studies of maternal symptomatology using clinical samples. Few studies of mental health have followed mother-child dyads over such a long time span as in this study. Despite attrition over time, the sample has remained reasonably representative of the Norwegian population, with relatively little bias. Nevertheless, the findings should be generalized to other populations only with care.

A strength of the current study was adopting a person-centred approach which made it possible to identify predictors for mothers with different symptom trajectories over time. The symptom trajectory groups used in the current study were derived by means of latent profile analysis (LPA) [19]. However, a limitation in the current multinomial logistic analyses was that, for simplicity, these groups (or pseudo-classes) were used instead of performing an analysis with the predictors in the LPA model. To include several predictors in a LPA model with data from six time points involves a complicated statistical model. In the approach used in the current study the uncertainty of latent class membership is not taken into consideration. However, the average posterior class probabilities for trajectory membership for our six group solution ranged from .80 to .91 hence the ambiguities regarding the class memberships are not

large and the effect of not including the uncertainty of latent class membership in the analyses is not likely to produce substantial bias to the current results.

Conclusions

This study showed that factors present early in the child rearing phase have substantial predictive power for explaining variance in maternal depressive symptoms over the following 13 years of child rearing. Temperamental distress and child related stressors were the strongest predictors of membership in different symptom trajectory groups. From a public health perspective, these early indicators could inform prevention efforts. Living with symptoms of depression and anxiety throughout the child rearing phase is detrimental not only for the affected mothers, but also for their partners and children. Hence efforts directed towards minimising child related stressors and other risk factors early in the child rearing phase so as to prevent maternal symptoms of depression and anxiety deserve further attention.

Competing interests

None declared.

Authors' contributions

AS performed the statistical analyses and drafted the manuscript. HJ has been involved in discussing the research questions, methods and analyses. KSM designed the project and collected the data. All authors were involved in discussing the idea and contributed to critically revise the manuscript. All authors read and approved the final manuscript.

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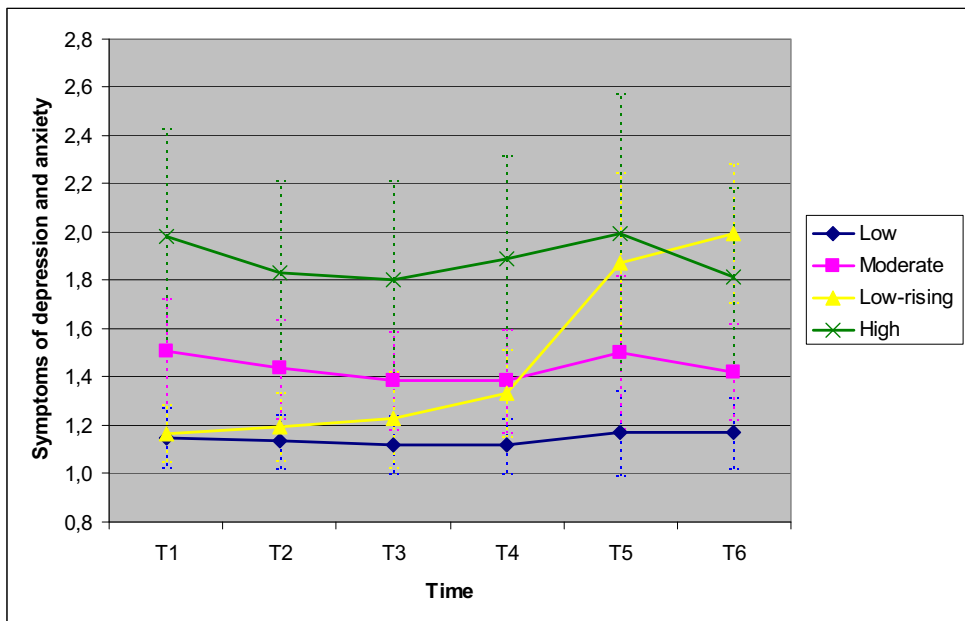
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Figures

Figure 1. Mean symptom scores and standard deviations (HSCL) in the 4 trajectory groups on each of the 6 waves of data collection.



Tables

Table 1. Mean values (SD) of predictors for the whole sample and the four trajectory groups.

T1	Sample n	<u>Total</u>		<u>Low</u>		<u>Low-Rising</u>		<u>Moderate</u>		<u>High</u>	
		Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)
Strain											
Child related	900	1.31	(0.42)	1.20	(0.31)	1.26	(0.32)	1.42	(0.47)	1.58	(0.59)
Living condition	901	1.32	(0.45)	1.19	(0.32)	1.26	(0.31)	1.43	(0.50)	1.63	(0.64)
Support											
Partner	805	4.43	(0.73)	4.59	(0.60)	4.68	(0.50)	4.29	(0.76)	3.83	(0.96)
Family/friends	874	4.19	(0.67)	4.35	(0.62)	4.10	(0.68)	4.07	(0.62)	3.72	(0.79)
Temperament											
Fearfulness	904	2.24	(0.64)	2.04	(0.53)	2.28	(0.51)	2.45	(0.64)	2.70	(0.77)
Distress	903	2.36	(0.74)	2.04	(0.61)	2.52	(0.74)	2.63	(0.64)	3.14	(0.69)
Anger	903	2.98	(0.70)	2.89	(0.66)	2.85	(0.72)	3.05	(0.72)	3.29	(0.75)
Years of education	909	12.70	(2.26)	13.00	(2.23)	12.50	(2.18)	13.30	(2.34)	11.70	(2.31)
Maternal age	913	30.00	(4.72)	30.40	(4.77)	29.80	(4.38)	30.80	(5.16)	28.60	(5.04)
Paid work (%)	908		63		67		62		65		43

Table 2. Multinomial regression results with group membership as the dependent variable and the Low symptom group as the reference group

	<u>Low versus low-rising</u>		<u>Low versus moderate</u>		<u>Low versus high</u>	
	OR	95% CI	OR	95% CI	OR	95% CI
Age	1.05	(0.69 - 1.60)	0.99	(0.81 - 1.21)	0.97	(0.69 - 1.36)
Stressors						
Child related	1.09	(0.63 - 1.88)	1.85 ***	(1.46 - 2.34)	2.22 ***	(1.62 - 3.03)
Living condition	1.17	(0.72 - 1.91)	1.59 ***	(1.28 - 1.98)	1.82 ***	(1.35 - 2.45)
Support						
Partner	1.69	(0.96 - 2.97)	0.88	(0.71 - 1.08)	0.73 *	(0.54 - 0.98)
Family/friends	0.62 *	(0.42 - 0.93)	0.83	(0.67 - 1.02)	0.62 **	(0.45 - 0.84)
Temperament						
Fearfulness	1.07	(0.67 - 1.70)	1.52 **	(1.20 - 1.92)	1.79 **	(1.26 - 2.55)
Distress	3.01 ***	(1.81 - 5.00)	2.24 ***	(1.70 - 2.93)	3.64 ***	(2.36 - 5.63)
Anger	0.70	(0.47 - 1.05)	1.01	(0.83 - 1.23)	1.42 *	(1.02 - 1.97)
Years of education	1.02	(0.84 - 1.24)	0.88 **	(0.80 - 0.97)	0.77 **	(0.65 - 0.90)
Work participation						
Yes	1.06	(0.45 - 2.47)	1.18	(0.78 - 1.78)	2.04 *	(1.03 - 4.03)
No	Reference category					

Note: R² = .40 (Cox & Snell), .46 (Nagelkerke), .25 (McFadden). Model $\chi^2(30) = 395.78$, $p < .000$;

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

Table 3. Multinomial regression with group membership as the dependent variable and the High symptom group as the reference group

	<u>High versus low-rising</u>		<u>High versus moderate</u>	
	OR	95% CI	OR	95% CI
Age	1.09	(0.65 - 1.81)	1.03	(0.75 - 1.42)
Strain				
Child related	0.49 *	(0.28 - 0.87)	0.83	(0.65 - 1.06)
Living condition	0.65	(0.38 - 1.09)	0.88	(0.69 - 1.12)
Support				
Partner	2.32 **	(1.28 - 4.22)	1.20	(0.93 - 1.55)
Family/friends	1.01	(0.64 - 1.61)	1.34 *	(1.01 - 1.79)
Temperament				
Fearfulness	0.59	(0.35 - 1.01)	0.85	(0.62 - 1.16)
Distress	0.83	(0.45 - 1.51)	0.61 *	(0.42 - 0.91)
Anger	0.49 **	(0.30 - 0.80)	0.71 *	(0.52 - 0.97)
Years of education	1.33 *	(1.06 - 1.68)	1.15	(0.99 - 1.33)
Work participation				
Yes	0.52	(0.19 - 1.42)	0.58	(0.31 - 1.09)
No	Reference category			

Note: $R^2 = .40$ (Cox & Snell), $.46$ (Nagelkerke), $.25$ (McFadden).

Model $\chi^2(30) = 395.78$, $p < .000$;

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

I. Questionnaire t1

**SMABARNFORELDRENE
TRIVSEL, HELSE OG LEVEKÅR
(barn i alder 16 - 18 mndr.)**



SPØRRESKJEMA TIL BRUK I PROSJEKTET
 "ROBUSTE BARN - BESKYTTENDE MILJØ"

Tildelt nr.....

Dato for utfylling/intervju.....

9-14

Barnets fødselsdato.....

15-20

Barnets kjønn..... 1 gutt 2 pike

21

SKAL KLIPPES VEKK PÅ SENTER FOR SOSIALT NETTVERK OG HELSE OG OPPBEVARES I LÅST SKAP.

Tildelt nummer.....

Barnets fulle navn.....

Adresse.....

Er du barnets	1 <input type="checkbox"/> Mor	2 <input type="checkbox"/> Far	22
Hvilket år er du født?	<input type="text"/> <input type="text"/>	Årstall	23-24
Har du norsk som morsmål?	1 <input type="checkbox"/> Ja	2 <input type="checkbox"/> Nei	25
Hvis nei, hvilket morsmål har du?	_____		26-28

*** FAMILIEFORHOLD ***

Er det andre barn som også bor hos deg?	1 <input type="checkbox"/> Ja	2 <input type="checkbox"/> Nei	29		
Hvis ja, hvor mange?	<input type="text"/>	Antall	30		
Hvis ja, hvilket årstall er de født?	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	31-38
Hvem bor sammen med deg og barnet/ barna?	1 <input type="checkbox"/>	Ingen	39		
	2 <input type="checkbox"/>	Ektefelle/samboer			
	3 <input type="checkbox"/>	Foreldre			
	4 <input type="checkbox"/>	Andre			
Er du	1 <input type="checkbox"/>	Gift	40		
	2 <input type="checkbox"/>	Ugift			
	3 <input type="checkbox"/>	Separert/skilt			
	4 <input type="checkbox"/>	Enke/enkemann			
Bor det slektninger i nærheten av deg; i tilfelle hvem? (Du kan krysse av for flere)	<input type="checkbox"/>	Nei	41		
	<input type="checkbox"/>	Mor	42		
	<input type="checkbox"/>	Far	43		
	<input type="checkbox"/>	Søsken	44		
	<input type="checkbox"/>	Svigerforeldre	45		
	<input type="checkbox"/>	Søsken til samboer/ektefelle	46		
	<input type="checkbox"/>	Fjernere slektninger	47		
Bor du i	1 <input type="checkbox"/>	Blokk/leilighet	48		
	2 <input type="checkbox"/>	Tomannsbolig/rekkehus			
	3 <input type="checkbox"/>	Enebolig			
	4 <input type="checkbox"/>	Annet			
Bor du i	1 <input type="checkbox"/>	By	49		
	2 <input type="checkbox"/>	Tettsted			
	3 <input type="checkbox"/>	Spredt bebyggelse			

* **UTDANNING OG ARBEID** *

Hvilken utdanning har du fullført?
Oppgi bare høyest fullførte utdanning

- | | | | |
|---|--------------------------|---|----|
| 1 | <input type="checkbox"/> | 7-årig folkeskole eller mindre. | |
| 2 | <input type="checkbox"/> | Framhaldsskole | |
| 3 | <input type="checkbox"/> | 9-årig grunnskole | |
| 4 | <input type="checkbox"/> | Realskole, grunnskolens 10. år | 50 |
| 5 | <input type="checkbox"/> | Ett- eller toårig videregående skole. | |
| 6 | <input type="checkbox"/> | Artium, økonomisk gymnas eller treårig videregående skole | |
| 7 | <input type="checkbox"/> | Høyskole/universitet, mindre enn 4 år. | |
| 8 | <input type="checkbox"/> | Høyskole/universitet, 4 år eller mer | |

Er du for tiden i lønnet arbeid?
(Sett kryss bare i én rute)

- | | | | |
|---|--------------------------|-------------------|----|
| 1 | <input type="checkbox"/> | Nei | 51 |
| 2 | <input type="checkbox"/> | Ja, deltidsarbeid | |
| 3 | <input type="checkbox"/> | Ja, heltidsarbeid | |

Hvis du ikke er i fullt lønnet arbeid, er du:
(Her kan du krysse av for flere)

- | | | |
|--------------------------|------------------------------|----|
| <input type="checkbox"/> | Heltids husmor/hjemmeværende | 52 |
| <input type="checkbox"/> | Svangerskapspermisjon | 53 |
| <input type="checkbox"/> | Langvarig sykemeldt | 54 |
| <input type="checkbox"/> | I attføring | 55 |
| <input type="checkbox"/> | Arbeidsløs/permittert | 56 |
| <input type="checkbox"/> | På pensjon/trygd/stønad | 57 |
| <input type="checkbox"/> | Under utdanning | 58 |
| <input type="checkbox"/> | Annet | 59 |

Hvis du er i arbeid utenfor hjemmet, hvem ser oftest etter barnet mens du er på jobb?
(Sett kryss i bare én rute)

- | | | | |
|---|--------------------------|-------------------|----|
| 1 | <input type="checkbox"/> | Ektefelle/samboer | |
| 2 | <input type="checkbox"/> | Annen familie | |
| 3 | <input type="checkbox"/> | Dagmamma | 60 |
| 4 | <input type="checkbox"/> | Barnehage | |
| 5 | <input type="checkbox"/> | Andre | |

Hvis du kunne velge helt fritt, hvem ville du helst skulle se etter barnet?
(Sett kryss i bare én rute)

- | | | | |
|---|--------------------------|-------------------|----|
| 1 | <input type="checkbox"/> | Meg selv | |
| 2 | <input type="checkbox"/> | Ektefelle/samboer | |
| 3 | <input type="checkbox"/> | Annen familie | 61 |
| 4 | <input type="checkbox"/> | Dagmamma | |
| 5 | <input type="checkbox"/> | Barnehage | |
| 6 | <input type="checkbox"/> | Andre | |

Er din eventuelle partner for tiden i lønnet arbeid?
(Sett bare kryss i én rute)

- | | | | |
|---|--------------------------|-----------------------------|----|
| 1 | <input type="checkbox"/> | Har ingen partner nå | 62 |
| 2 | <input type="checkbox"/> | Han er ikke i lønnet arbeid | |
| 3 | <input type="checkbox"/> | Ja, heltidsarbeid | |
| 4 | <input type="checkbox"/> | Ja, deltidsarbeid | |

Hvis han ikke er i lønnet arbeid på heltid, er han:
(Her kan du krysse av for flere)

- | | | |
|--------------------------|-------------------------|----|
| <input type="checkbox"/> | Husmor/hjemmeværende | 63 |
| <input type="checkbox"/> | Langvarig sykemeldt | 64 |
| <input type="checkbox"/> | I attføring | 65 |
| <input type="checkbox"/> | Arbeidsløs/permittert | 66 |
| <input type="checkbox"/> | På pensjon/trygd/stønad | 67 |
| <input type="checkbox"/> | Under utdanning | 68 |
| <input type="checkbox"/> | I militærtjeneste | 69 |
| <input type="checkbox"/> | Annet | 70 |

Har du spesielle omsorgsoppgaver som tilsyn eller pleie av:

1 Ja 2 Nei

Gamle
Andre voksne
Funksjonshemmede/
langvarig syke barn

71
72
73

* **Økonomi**

Hvordan klarer du/familien seg med den økonomien du/dere har?

1
2
3
4
5

Vi klarer oss svært dårlig
Vi klarer oss dårlig
Vi klarer oss
Vi klarer oss bra
Vi klarer oss meget bra

74

Har du, eller noen i husholdningen din, fått økonomisk støtte fra sosialkontoret i løpet av de siste 12 mndr.?

1
2
3

Ja
Nei
Vet ikke

75

Hvor stort lån har du/dere i forhold til brutto inntekt?

1
2
3
4

Har ikke lån
Mindre enn to ganger brutto inntekt
Ca. to ganger brutto inntekt
Mer enn to ganger brutto inntekt

76

* **SVANGERSKAP, FØDSEL OG BARSELTID**

Har det vært følgende forhold ved svangerskapet eller ved fødselen?

Sykdommer i svangerskapet?

1
2

Ja
Nei

77

Nevn i tilfelle hvilke:

78

Behandlet med medikamenter?

1
2

Ja
Nei

79

Nevn i tilfelle hvilke:

80

Yrkesaktiv?

1
2

Ja
Nei

81

Stoppet å arbeid i _____ mnd. av svangerskapet

82

Fødselskomplikasjoner?

- 1 Ja
2 Nei

83

Nevn i tilfelle hvilke:

84

Barnets fødselsvekt _____

85-87

Har barnet i de tre første levemånedene:

Hatt spesielt slapp muskulatur

- 1 Ja
2 Nei
3 Vet ikke

88

Hatt spesiell stiv muskulatur

- 1 Ja
2 Nei
3 Vet ikke

89

Virket "overfølsomt", måtte håndteres svært forsiktig for ikke å skrike eller snu seg vekk.

- 1 Ja
2 Nei
3 Vet ikke

90

Har det vært spesielle problemer i forbindelse med barnets spising i de 3 første måneder?
(Utenom evt. ammeproblemer)

- 1 Ja
2 Nei

91

Har du søkt råd hos lege, kiropraktor eller andre i barnets 3 første levemåneder på grunn av bekymringer med barnet?

- 1 Ja
2 Nei

92

I tilfelle ja, nevnt hva var det som særlig bekymret deg:

93

I tilfelle ja, hvilken yrkesgruppe tok du kontakt med:

94

*** BARNETS FYSISKE HELSE ***

Har barnet funksjonsvansker som antas å bli langvarige?

- 1 Ja
2 Nei
3 Under utredning
4 Er bekymret for at det kan være noe galt.

95

Hvis ja, muligens eller bekymret, kan du angi hvilke typer vansker barnet viser tegn på?
(du kan krysse av for flere):

<input type="checkbox"/>	Synsvansker	96
<input type="checkbox"/>	Hørselsvansker	97
<input type="checkbox"/>	Cerebral parese	98
<input type="checkbox"/>	Hjertefeil	99
<input type="checkbox"/>	Leppe/ganespalte	100
<input type="checkbox"/>	Downs syndrom (mongolisme)	101
<input type="checkbox"/>	Hoftefeil	102
<input type="checkbox"/>	Andre, nevn hvilke:	103

Har barnet en sykdom som antas å bli langvarig?

1	<input type="checkbox"/>	Ja	
2	<input type="checkbox"/>	Nei	
3	<input type="checkbox"/>	Under utredning	104
4	<input type="checkbox"/>	Er bekymret for at det kan være noe galt.	

Hvis ja, muligens eller bekymret, kan du angi hvilken sykdom barnet viser tegn på?
(Du kan krysse av for flere)

<input type="checkbox"/>	Allergisk eksem	105
<input type="checkbox"/>	Astma	106
<input type="checkbox"/>	Andre allergiske lidelser	107
<input type="checkbox"/>	Diabetes	108
<input type="checkbox"/>	Tarm/fordøyelseslidelser	109
<input type="checkbox"/>	Brokk	110
<input type="checkbox"/>	Andre, nevn hvilke:	111



Nå vil vi gå over til akutte sykdommer og skade, sykdommer som stadig gjentar seg og symptomer som kan være nærmest kroniske.

Tenk på de siste 12 mndr. Har barnet vært sykt eller blitt skadet i løpet av denne perioden?

1 Ja
2 Nei

112

Hvis ja, kan du angi hva det var som feilte barnet, hvor mange sykdomsperioder barnet har hatt og om du har kontaktet helsepersonell for dette?
(Du kan krysse av for flere):

TYPE LIDELSE	ANTALL EPISODER					
	1	2-4	5-10	Mer enn 10	Stadig eller vedvarende	Har kontaktet helsepers.
Halsesyke, forkjølelse, luftveis-infeksjoner, bronkitt, influensa o.l.						
Ørebetennelse o.l.						
Øyenkatarr o.l.						
Barnesykdom, som f.eks. vannkopper, meslinger o.l.						
Falsk krupp med pustevansker						
Anemi (blodfattig)						
Hudbetennelse						
Urinveisinfeksjon						
Plagsomt bleieutslett						
Diaré						
Forstoppelse						
Kolikk						
Brekninger (gulping regnes ikke med)						
Sprutbrekninger						
Moderat feber						
Høy feber						
Feberkrampe						
Skader som trengte medisinsk behandling (brudd, forbrenning, forgiftninger, kutt o.a.)						
Andre lidelser, hvilke?						

113

114

115

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131

TILHØRIGHET TIL NABOLAGET

Hvor mange ganger har du flyttet de siste 5 årene?

Ganger

132

Hvor mange år har du bodd i det nærmiljøet du bor nå?

År

133-134

Føler du tilhørighet til det stedet du bor nå?

- 1 I stor grad
 2 I noen grad
 3 Vet ikke
 4 I liten grad
 5 Ikke i det hele tatt

135

Er det steder i ditt nærmiljø hvor naboer naturlig møter hverandre for å slå av en prat?

- 1 Ja, mange
 2 Ja, noen
 3 Nei

136

BARNES LEKEMILJØ

Synes du dette nabolaget er et godt sted å bo for småbarnsfamilier?

- 1 Veldig bra
 2 Nokså bra
 3 Ikke særlig bra
 4 Absolutt ikke bra
 5 Vet ikke

137

Hvor mange småbarnsfamilier bor det i ditt nabolag?

- 1 Ingen
 2 1
 3 2-5
 4 Fler enn 5
 5 Vet ikke

138

Er det i ditt nabolag lekeplasser, løkker, bakgårder hager o.l. hvor små barn kan leke relativt trygt uten tilsyn?

- 1 Ja, mange
 2 Ja, noen
 3 Nei

139

Blir det av og til organisert aktiviteter i nabolaget som f.eks. 17.mai-fester e.l.?

- 1 Ja, for voksne
 2 Ja, for barn og voksne
 3 Nei
 4 Vet ikke

140

Hvilke problemer mener du går ut over småbarnsfamiliens trivsel og helse der du bor? (Her kan du krysse av for flere)

<input type="checkbox"/>	Mye ut- og innflytting	141
<input type="checkbox"/>	Lite sosialt fellesskap	142
<input type="checkbox"/>	Dyre boliger	143
<input type="checkbox"/>	Lite offentlig kommunikasjon	144
<input type="checkbox"/>	Manglende barnehage tilbud	145
<input type="checkbox"/>	Mye pendling	146
<input type="checkbox"/>	Mye biltrafikk, støy osv.	147
<input type="checkbox"/>	Lang reisevei til arbeidet	148
<input type="checkbox"/>	Manglende sikring av farlige steder i omgivelsene; trafikk, vann, skrenter osv.	149
<input type="checkbox"/>	Mye alkohol- og rusmisbruk	150

Annet som _____ 151

* **NABOER**

Hvor mange naboer stopper du og tar en prat med hvis du møter dem tilfeldig?

1	<input type="checkbox"/>	Ingen	
2	<input type="checkbox"/>	1	
3	<input type="checkbox"/>	2	152
4	<input type="checkbox"/>	3-4	
5	<input type="checkbox"/>	5 eller fler	

Hvor mange av disse naboene kjenner du ved navn?

1	<input type="checkbox"/>	Ingen	
2	<input type="checkbox"/>	1	
3	<input type="checkbox"/>	2	153
4	<input type="checkbox"/>	3-4	
5	<input type="checkbox"/>	5 eller fler	

Hvor mange familier/husstander i nabolaget kjenner du så godt at du besøker dem av og til?

1	<input type="checkbox"/>	Ingen	
2	<input type="checkbox"/>	1	
3	<input type="checkbox"/>	2	154
4	<input type="checkbox"/>	3-4	
5	<input type="checkbox"/>	5 eller fler	

Hvor mange naboer regner du som dine nære venner?

1	<input type="checkbox"/>	Ingen	
2	<input type="checkbox"/>	1	
3	<input type="checkbox"/>	2	155
4	<input type="checkbox"/>	3-4	
5	<input type="checkbox"/>	5 eller fler	

Er du og naboene til hjelp for hverandre, f.eks. når det gjelder å:
(Her kan du sette kryss ved flere)

- | | | |
|--------------------------|---|-----|
| <input type="checkbox"/> | Er ikke til praktisk hjelp for hverandre. | 156 |
| <input type="checkbox"/> | Vanne blomster, ta inn post, når noen er bortreist. | 157 |
| <input type="checkbox"/> | Låne daglige ting. | 158 |
| <input type="checkbox"/> | Se etter hverandres barn som leker ute. | 159 |
| <input type="checkbox"/> | Være barnevakt for hverandre om kvelden. | 160 |
| <input type="checkbox"/> | Passe hverandres barn på dagtid om dere f.eks. skal i butikken, til tannlege, frisør osv. | 161 |
| <input type="checkbox"/> | Annen praktisk hjelp. | 162 |

Har du deltatt i barselgruppe på helsestasjonen?

- | | | | |
|---|--------------------------|-----|-----|
| 1 | <input type="checkbox"/> | Ja | 163 |
| 2 | <input type="checkbox"/> | Nei | |

Hvis ja, ble du kjent med andre som du fremdeles besøker en gang iblant?

- | | | | |
|---|--------------------------|-----|-----|
| 1 | <input type="checkbox"/> | Ja | 164 |
| 2 | <input type="checkbox"/> | Nei | |

Vi vil nå gå over til spørsmål om barnets temperament og væremåte.

BARNETS TEMPERAMENT

Se skjema på neste side!

Husk å sette ett kryss på hver linje.



Kryss av på alle linjer

	1	2	3	4	5	
	Veldig typisk	Ganske typisk	Både/ og	Lite typisk	Ikke typisk	
Barnet blir lett sjenert.						165
Det skal lite til før barnet gråter.						166
Barnet like å være sammen med andre mennesker.						167
Barnet er alltid på farten.						168
Barnet vil heller leke med andre enn å leke for seg selv.						169
Barnet viser lett følelser.						170
Når barnet flytter seg, beveger det seg ofte langsomt.						171
Barnet like å være sammen med andre barn.						172
Barnet er i aktivitet og løper omkring med en gang det våkner om morgenen.						173
Barnet synes at andre mennesker er morsommere enn noe annet.						174
Barnet sutrer og gråte mye.						175
Barnet er veldig sosialt.						176
Barnet er full av energi.						177
Det tar lang tid før barnet blir vant til fremmede.						178
Det skal lite til før barnet hisser seg opp eller blir lei seg.						179
Barnet foretrekke å være alene.						180
Barnet foretrekker rolige, stillesittende leker fremfor mer aktive.						181
Barnet liker ikke å være alene.						182
Barnet reagerer intenst når det blir opphisset.						183
Barnet er veldig vennlig og tillitsfullt mot fremmede.						184
Barnet leker mye mindre nå enn hva det gjorde for en stund siden.						185
Barnet sitter ofte å pille på småting, vifter med hendene, vagger fra side til side o.l.						186
Barnet vrir seg bort med én gang når jeg har lyst til å kose eller prate.						187
Barnet tilkaller meg ofte ved å skrike eller rope.						188
Barnet kommer sjelden etter meg når jeg går ut på kjøkkenet o.l.						189
Barnet finner sjelden noe å leke med av seg selv.						190
Barnet kommer ofte bort til meg for å leke/prate/kose.						191
Barnet blir tydelig opphisset når det får ros (ler, hopper, skriker o.l.)						192
Barnet reagerer kun svakt om et annet barn tar hans/hennes leke (rynker brynene, smiler o.l.)						193
Det er ofte vanskelig å vite hva barnet vil eller ikke vil.						194
Barnet er lett å avlede.						195

* **BARNETS VÆREMÅTE**

Ut fra hvert spørsmål skal du sette kryss i den ruten som passer best for ditt barn **nå for tiden**. (Kryss av for alle områdene)

Har vanligvis god matlyst.	1	<input type="checkbox"/>	196
Har noen ganger dårlig matlyst.	2	<input type="checkbox"/>	
Har nesten alltid dårlig matlyst.	3	<input type="checkbox"/>	
Spiser all slags mat.	1	<input type="checkbox"/>	197
Har noen favorittretter, vil ikke spise enkelte ting.	2	<input type="checkbox"/>	
Er veldig kresen, vil ikke spise variert mat.	3	<input type="checkbox"/>	
Sover som regel svært lite i løpet av et døgn.	1	<input type="checkbox"/>	198
Sover noen ganger svært lite.	2	<input type="checkbox"/>	
Sover hverken lite eller mye.	3	<input type="checkbox"/>	
Sover som regel svært mye	4	<input type="checkbox"/>	
Er lett å legge og sovner greit.	1	<input type="checkbox"/>	199
Har litt vansker med å roe seg ved sengetid.	2	<input type="checkbox"/>	
Tar ofte mer enn én time på å roe seg i sengen.	3	<input type="checkbox"/>	
Våkner nesten aldri om natten.	1	<input type="checkbox"/>	200
Våkner noen ganger om natten, men roer seg lett.	2	<input type="checkbox"/>	
Våkner ofte og er vanskelig å roe.	3	<input type="checkbox"/>	
Er rolig om natten og sover derfor nesten aldri sammen med oss på grunn av uro.	1	<input type="checkbox"/>	201
Er av og til urolig om natten og sover derfor noen ganger hos oss.	2	<input type="checkbox"/>	
Er ofte urolig og sover derfor ofte sammen med oss.	3	<input type="checkbox"/>	
Er ikke tilstrekkelig aktiv.	1	<input type="checkbox"/>	202
Er ikke spesielt aktiv.	2	<input type="checkbox"/>	
Er svært aktiv.	3	<input type="checkbox"/>	
Er for aktiv, vil ikke sitte stille ved bordet eller andre steder mer enn i 5 minutter.	4	<input type="checkbox"/>	
Leker svært ofte intenst når hun/han er alene.	1	<input type="checkbox"/>	203
Inni mellom leker hun/han intenst for seg selv.	2	<input type="checkbox"/>	
Leker sjelden intenst med noe når hun/han er alene.	3	<input type="checkbox"/>	
Leker konsentrert inne i mer enn ett kvarter om gangen.	1	<input type="checkbox"/>	204
Konsentrerer seg vanligvis i 5-15 minutter, alt etter som.	2	<input type="checkbox"/>	
Leker nesten aldri konsentrert inne i mer enn i 5 minutter.	3	<input type="checkbox"/>	

Tar hele tiden i bruk nye ord og væremåter etter hvert som hun/han lærer dem.	1	<input type="checkbox"/>	
Oppfører seg noen ganger som da han/hun var yngre.	2	<input type="checkbox"/>	205
Bruker som regel de samme ord og væremåter som da hun/han var yngre.	3	<input type="checkbox"/>	
Er ikke sjenert, kan godt overlates til andre som hun/han kjenner.	1	<input type="checkbox"/>	
Blir urolig når hun/han er borte fra meg, men kommer over det.	2	<input type="checkbox"/>	206
Er svært klengete, kan ikke overlates til andre.	3	<input type="checkbox"/>	
Er selvstendig, ber om lite oppmerksomhet.	1	<input type="checkbox"/>	
Ber noen ganger om mye oppmerksomhet og følger etter meg hele dagen.	2	<input type="checkbox"/>	207
Krever for mye oppmerksomhet, følger etter meg hele dagen.	3	<input type="checkbox"/>	
Er lett å oppdra.	1	<input type="checkbox"/>	
Er noen ganger vanskelig å oppdra og å sette grenser for.	2	<input type="checkbox"/>	208
Er ofte svært vanskelig å oppdra og å sette grenser for.	3	<input type="checkbox"/>	
Har ikke raserianfall.	1	<input type="checkbox"/>	
Har noen ganger raserianfall som varer i noen minutter	2	<input type="checkbox"/>	209
Har hyppige, eller langvarige raserianfall	3	<input type="checkbox"/>	
Er vanligvis glad og fornøyd med unntak av korte perioder hvor hun/han f.eks. er trøtt.	1	<input type="checkbox"/>	
Er noen ganger urolig eller irritabel.	2	<input type="checkbox"/>	210
Er ofte urolig eller irritabel	3	<input type="checkbox"/>	
Virker sjelden lei seg eller ulykkelig.	1	<input type="checkbox"/>	
Virker noen ganger, eller i korte perioder, lei seg eller ulykkelig.	2	<input type="checkbox"/>	211
Virker ofte, eller i lengre perioder, lei seg eller ulykkelig.	3	<input type="checkbox"/>	
Er sjelden eller aldri bekymret og engstelig.	1	<input type="checkbox"/>	
Er noen ganger bekymret og engstelig i korte perioder.	2	<input type="checkbox"/>	212
Er engstelig for svært mange ting; nye omgivelser, endringer i måten å gjøre ting på, for å skade seg, farlige dyr, troll osv.	3	<input type="checkbox"/>	
Blir sjelden skremt av brå lyder eller av ting som skjer rundt oss.	1	<input type="checkbox"/>	
Blir av og til skremt av brå lyder og uventede ting.	2	<input type="checkbox"/>	213
Blir ofte skremt av brå lyder eller av ting som skjer rundt oss.	3	<input type="checkbox"/>	

- 0 Går godt sammen med sine søsken. 0 (1)
- 1 Har noen vansker med å være sammen med søsken. 1 (2)
- 2 Går dårlig sammen med sine søsken. 2 (3)
- 3 Barnet har ikke søsken. 3 (4)
- 214
-
- 0 Går godt sammen med andre barn. 0 (1)
- 1 Har noen vanske med å leke med, eller ved siden av, andre barn. 1 (2)
- 2 Leker sjelden sammen med, eller ved siden av, andre barn. 2 (3)
- 215
-
- Har sjelden smerter eller vondt (magen, hodet, kaster opp). 1
- Har smerter eller vondt en gang i blant. 2
- Har ofte smerter eller vondt. 3
- 216
-
- Bruker mer enn 10 ord på forståelig måte. 1
- Bruker 2 eller 3 ord på en forståelig måte. 2
- Bruker foreløpig ikke ord som er lette å forstå. 3 (1)
- 217
-
- Kan vise oss hvordan vanlige ting som hårbørste, spiseskje, o.l. skal brukes. 1 Ja
- 2 Nei
- 218
-
- Kan peke på kroppsdeler, f.eks. nese, øyne, hår o.l. 1 Ja
- 2 Nei
- 219
-
- Setter sammen to enkle ord og bruker disse, f.eks.: mer melk, pappa gått, se ball osv. 1 Ja
- 2 Nei
- 220

* **VÆREMÅTE PÅ FREMMEDE STEDER OG OVERFOR UKJENTE**

Når fremmede kommer hjem til oss pleier barnet vanligvis først å:
(Sett bare kryss i en av rutene)

- Trekke seg unna og avvise kontakt. 1
- Nøle og vente. 2
- Titte litt, men fortsette med det som hun/han holdt på med. 3
- Være vennlig og blid. 4
- Gå bort til den besøkende og klatre opp på fanget, strekke ut armene o.l. 5
- 221

Når barnet er på besøk på et nytt sted for første gang, pleier barnet vanligvis å:

- Klynge seg til meg. 1
- Utforske det nye stedet, men kommer tilbake til meg med jevne mellomrom. 2
- Utforske det nye stedet på selvstendig måte. 3
- 222

Hvis barnet klynger seg til **deg**, klynger det seg også til andre i slike situasjoner? (Du kan krysse av for flere)

- Nei, bare til meg
 Ja, også til faren
 Ja, også til besteforeldre
 Ja, også til søsken
 Ja, også til andre. Nevn hvem:

223
 224
 225
 226
 227

Hvis barnet må oppmuntres til å utforske det nye stedet, lar det seg også oppmuntre av andre enn deg? (Du kan krysse av for flere)

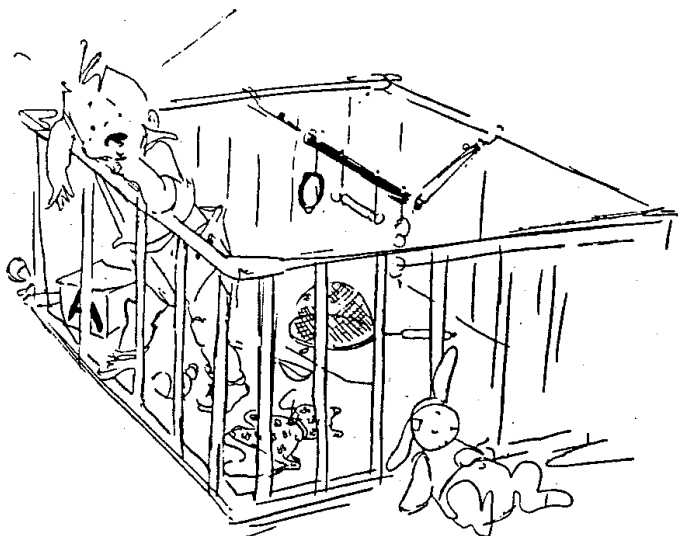
- Nei, bare av meg
 Ja, også av faren
 Ja, også av besteforeldre
 Ja, også av søsken
 Ja, også av andre. Nevn hvem:

228
 229
 230
 231
 232

Hvis barnet gråter og vil ha trøst, er det andre enn deg som kan roe det? (Du kan krysse av for flere)

- Nei, bare meg
 Ja, også faren
 Ja, også besteforeldre
 Ja, også søsken
 Ja, også av andre. Nevn hvem:

233
 234
 235
 236
 237



VÆREMÅTE - SAMMENLIGNET MED BARN FLEST

Alt i alt, hvordan vil du beskrive barnets temperament? Sammenlign henne / ham med andre barn på samme alder som du kjenner og kryss av for hva du mener passer best for ditt barn?

- | | | | |
|--|----------------------------|-----------------------|-----|
| Barnet viser sterke følelser (glede, sinne, angst) | 1 <input type="checkbox"/> | Mer enn barn flest | 238 |
| | 2 <input type="checkbox"/> | Omtrent vanlig | |
| | 3 <input type="checkbox"/> | Mindre enn barn flest | |
| Barnet er aktivt | 1 <input type="checkbox"/> | Mer enn barn flest | 239 |
| | 2 <input type="checkbox"/> | Omtrent vanlig | |
| | 3 <input type="checkbox"/> | Mindre enn barn flest | |
| Barnet tar kontakt med andre mennesker | 1 <input type="checkbox"/> | Mer enn barn flest | 240 |
| | 2 <input type="checkbox"/> | Omtrent vanlig | |
| | 3 <input type="checkbox"/> | Mindre enn barn flest | |
| Barnet sier selv fra når det vil noe. | 1 <input type="checkbox"/> | Mer enn barn flest | 241 |
| | 2 <input type="checkbox"/> | Omtrent vanlig | |
| | 3 <input type="checkbox"/> | Mindre enn barn flest | |
| Det er lett å skjønne hva barnet vil og ønsker. | 1 <input type="checkbox"/> | Mer enn barn flest | 242 |
| | 2 <input type="checkbox"/> | Omtrent vanlig | |
| | 3 <input type="checkbox"/> | Mindre enn barn flest | |
| Barnets humør er stort sett | 1 <input type="checkbox"/> | Positivt | 243 |
| | 2 <input type="checkbox"/> | Variabelt | |
| | 3 <input type="checkbox"/> | Negativt | |
| Jevnt over, vil du si at barnet er: | | | |
| - Klart lettere å ha med å gjøre enn barn flest | 1 <input type="checkbox"/> | | 244 |
| - Litt lettere å ha med å gjøre enn barn flest | 2 <input type="checkbox"/> | | |
| - Litt vanskeligere å ha med å gjøre enn barn flest | 3 <input type="checkbox"/> | | |
| - Klart vanskeligere å ha med å gjøre enn barn flest | 4 <input type="checkbox"/> | | |



Nå skal vi forlate barnet og gå over til spørsmål om deg selv.

DIN OPPLEVELSE AV STRESS SISTE UKE

Nedenfor er det liste over problemer eller plager folk av til har. Vurder hvor mye hvert problem var til plage eller ulempe for deg siste uke (til og med i dag). Sett ett kryss på hver linje.

	1	2	3	4	
	Ikke i det hele tatt	Litt	En god del	Svært mye	
1. Blir plutselig skremt uten grunn					245
2. Føler deg engstelig					246
3. Føler deg svimmel eller kraftløs					247
4. Er nervøs eller urolig					248
5. Har hjertebank					249
6. Skjelver					250
7. Føler deg anspent eller opphisset					251
8. Har hodepine					252
9. Har anfall av redsel eller panikk					253
10. Er rastløs, kan ikke sitte rolig					254
11. Føler deg slapp og uten energi					255
12. Anklager deg selv for ting					256
13. Har lett for å gråte					257
14. Har dårlig appetitt					258
15. Har vanskelig for å sove					259
16. Har lite håp for framtiden					260
17. Føler deg nedfor					261
18. Føler deg ensom					262
19. Følelse av å være fanget					263
20. Bekymrer deg for mange ting					264
21. Har ikke interesse for noe					265
22. Føler alt er anstrengende					266
23. Føler at du ikke er noe verd					267

* **LANGVARIGE BELASTNINGER OG VIKTIGE HENDELSER DET SISTE ÅRET**

Har du i løpet av de siste 12 mndr. hatt mer langvarige vanskeligheter knyttet til følgende belastninger? (Angi hvor stor belastningen har vært ved å sette kryss på hver av linjene)

GRAD AV BELASTNING	1	2	3	4	
	Nei	Noe	Ganske stor	Svært stor	
Boligproblem (vedlikehold, leieforhold o.l.)					268
Arbeid (arbeidsløshet, usikkert arbeid, vanskelige arbeidsforhold)					269
Problem med barnepass (barnehage, dagmamma, syke barn)					270
Økonomi (betaling av husleie, lån, forpliktelse o.l.)					271
Fysisk helse (funksjonshemming, kroppslig sykdom)					272
Samlivsproblemer (mye krangel, alvorlige samlivsproblemer, separasjon, skilsmisse)					273
Alkoholproblemer hos noen i husholdningen					274
Helseproblemer hos ektefelle (fysisk eller psykisk)					275
Helseproblemer hos barn (funksjonshemming, sykdom)					276
Problemer med barn (tilsyn, oppdragelse, skole, disiplin)					277
Problem med å tilpasse yrkesliv med barnomsorg					278
Annet, som:					279



Vi er nå interessert i å få vite noe om hva slags hendelser du har opplevd i løpet av de siste 12 måneder. Kryss av om du har opplevd noen av hendelsene som er listet opp under, og kryss deretter av for om du har opplevd hendelsen som svært negativ/vond, med blandede følelser, positivt/godt eller svært positivt/godt.

		1	2	3	4	5	
	Ja	Svært negativt/vondt	Negativt/vondt	Blandete følelser	positivt/godt	svært positivt/godt	
Flytting							280
Fått nye venner							281
Problem i forhold til venner eller familie							282
Skilsmisse eller separasjon							283
Ny samboer eller giftemål							284
Graviditet eller fødsel							285
Abort							286
Mistet barnepass							287
Fått barnepass							288
Fått ny jobb							289
Mistet arbeidet							290
Akutt sykdom eller skade hos meg selv							291
Akutt sykdom eller skade hos noen som står meg nær							292
Dødsfall hos noen som står meg nær							293
Psykisk, fysisk eller seksuell mishandling							294
Har påført andre skade eller bekymring							295
Har hendt meg noe som jeg ikke orker å si til noen							296
Annet, som							297

Har du for tiden belastninger eller plager som hindrer deg i:

1 2
Ja Nei

Å klare de praktiske gjøremål hjemme på en brukbar måte.

298

Å ha overskudd overfor barn og ektefelle/samboer

299

Å være sammen med venner

300

Å drive med aktiviteter på fritiden

301

Tenk på et problem eller hendelse som har plaget deg, eller som du har tenkt mye på, i løpet av den siste måneden.

Beskriv med få ord hva det dreier seg om: _____

302-303

Angi hvorledes du opplevde problemet eller hendelsen:
(Kryss av på alle linjene)

	1	2	3	4
	Ikke i det hele tatt	Litt	En del	Ganske mye
Gjorde problemet deg nervøs eller engstelig?				
Gjorde problemet deg trist eller deprimeret?				
Gjorde problemet deg sint eller rasende?				
Generelt, var dette en type problem du kunne endret eller gjort noe med?				
Generelt, var dette en type problem du bare måtte akseptere, eller bli vant til?				
Generelt, var dette en type problem som du måtte vite mer om før du kunne handle?				
Generelt, var dette en type problem hvor du måtte la være å gjøre det som du hadde mest lyst til?				

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Hva gjorde du for å mestre problemet / hendelsen?

Vær vennlig å sett et kryss i de rutene som best forklarer hva du gjorde. Husk å krysse av på alle linjene.

	HVOR OFTE GJORDE DU DETTE?				HVOR MYE HJALP DET?					
	Ikke i det hele tatt	Av og til	Mange ganger	Omtr. hele tiden	Ikke i det hele tatt	Litt	Av og til	Gan-ske mye	Vel-dig mye	
Jeg tenkte på noe annet, prøvde å glemme det og/eller gjorde noe annet, som f.eks å se på TV, for å få det ut av hodet.	0	1	2	3	0	1	2	3	4	311,312
Jeg unngikk andre mennesker, holdt følelsene mine for meg selv og prøvde å løse problemet selv.	0	1	2	3	0	1	2	3	4	313,314
Jeg prøvde å se det positive i situasjonen og/eller tenke på noe godt som kunne komme ut av situasjonen.	0	1	2	3	0	1	2	3	4	315,316
Jeg innså at jeg hadde forårsaket problemet selv og bebreidet meg selv for å ha stelt det i stand.	0	1	2	3	0	1	2	3	4	317,318
Jeg innså at det var andre som hadde skapt problemet og bebreidet dem for å la meg oppleve dette.	0	1	2	3	0	1	2	3	4	319,320
Jeg tenkte på mulige måter å løse situasjonen på, snakket med andre for å få mer informasjon om problemet og/eller prøvde å løse problemet.	0	1	2	3	0	1	2	3	4	321,322
Jeg snakket om hvordan jeg følte meg, ropte, skrek eller kastet ting.	0	1	2	3	0	1	2	3	4	323,324
Forsøkte å roe meg ned ved å snakke til meg selv, be, gå en tur eller bare ved å forsøke å slappe av.	0	1	2	3	0	1	2	3	4	325,326
Jeg fortsatte å tenke og å ønske at dette aldri hadde hendt, og/eller at jeg kunne endre det som hadde hendt.	0	1	2	3	0	1	2	3	4	327,328
Jeg oppsøkte familie, venner og andre for å få støtte og hjelp til å føle meg bedre.	0	1	2	3	0	1	2	3	4	329,330
Jeg bare aksepterte problemet fordi jeg visste at jeg ikke kunne gjøre noe med det.	0	1	2	3	0	1	2	3	4	331,332

• **HELSESPØRSMÅL**

Har du selv en mer langvarig sykdom eller funksjonshemming?

Ja	Nei
1	2
<input type="checkbox"/>	<input type="checkbox"/>

333

I tilfelle ja, nevnt hvilken:

334

Er det lenge siden du sist hadde kontakt med lege for annet enn forhold knyttet til svangerskapet?

1	<input type="checkbox"/>	Aldri
2	<input type="checkbox"/>	0-3 mndr.
3	<input type="checkbox"/>	6 mndr.
4	<input type="checkbox"/>	1 år
5	<input type="checkbox"/>	2-3 år
6	<input type="checkbox"/>	4 år eller mer

335

Er det lenge siden du sist hadde kontakt med psykiater/psykolog?

1	<input type="checkbox"/>	Aldri
2	<input type="checkbox"/>	0-3 mndr.
3	<input type="checkbox"/>	6 mndr.
4	<input type="checkbox"/>	1 år
5	<input type="checkbox"/>	2-3 år
6	<input type="checkbox"/>	4 år eller mer

336

Har du, eller ektefelle/samboer, i løpet av de siste 12 mndr. hatt kontakt med (kryss av på alle linjene):

Ja	Nei	
1	2	
<input type="checkbox"/>	<input type="checkbox"/>	Hjemmesykepleie
<input type="checkbox"/>	<input type="checkbox"/>	Hjemmehjelp
<input type="checkbox"/>	<input type="checkbox"/>	Husmorvikar
<input type="checkbox"/>	<input type="checkbox"/>	Annen sosial hjelp
<input type="checkbox"/>	<input type="checkbox"/>	Arbeidskontor
<input type="checkbox"/>	<input type="checkbox"/>	Annet

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Har du vært innlagt på sykehus

Siste 12 mndr.	Tidligere	
1	2	
<input type="checkbox"/>	<input type="checkbox"/>	Vanlig sykehus
<input type="checkbox"/>	<input type="checkbox"/>	Psykiatr. sykehus/ klinikk
<input type="checkbox"/>		Har aldri vært innlagt på sykehus

343

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345

Har du vært syk i løpet av de siste 12 måneder?

1	<input type="checkbox"/>	Ja
2	<input type="checkbox"/>	Nei

346

Hvis ja, hva var det som feilte deg:

347,348

Har du de siste 12 mndr. vært utsatt for ulykker eller blitt skadet?

1	<input type="checkbox"/>	Ja
2	<input type="checkbox"/>	Nei

349

Hvor ofte har du i løpet av den siste måneden brukt medikamenter som er

- | | A | B | |
|---|--------------------------|-----------------------------|-----------------------------|
| | Smerte-
stillende | avslappende/
beroligende | |
| 1 | <input type="checkbox"/> | <input type="checkbox"/> | Daglig |
| 2 | <input type="checkbox"/> | <input type="checkbox"/> | Hver uke, men ikke hver dag |
| 3 | <input type="checkbox"/> | <input type="checkbox"/> | Sjeldnere enn hver uke |
| 4 | <input type="checkbox"/> | <input type="checkbox"/> | Aldri |

350 A

351 B

Hvordan anser du helsen din for tiden å være?

- | | | |
|---|--------------------------|---------------|
| 1 | <input type="checkbox"/> | Dårlig |
| 2 | <input type="checkbox"/> | Ikke helt god |
| 3 | <input type="checkbox"/> | God |
| 4 | <input type="checkbox"/> | Svært god |

352

VI VIL NÅ GÅ OVER TIL SPØRSMÅL OM DIN KONTAKT MED ANDRE.

Hvor ofte ser du, eller snakker med i telefonen, følgende personer:
(Kryss av på alle linjene)

	1	2	3	4	5	6	7
	Ingen kontakt	Sjelden/aldri	1-2 ganger i året	3-11 ganger i året	Månedlig	Ukentlig	Daglig
Foreldre							
Søsken							
Svigerfamilie							
Annen slekt							
Venner							

353

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357

Har du noen fortrolige (utenom ektefelle/samboer) som du kan snakke med om det meste?

- | | | |
|---|--------------------------|--------------------------------|
| 1 | <input type="checkbox"/> | Jeg har ingen andre fortrolige |
| 2 | <input type="checkbox"/> | Jeg har 1 fortrolig |
| 3 | <input type="checkbox"/> | Jeg har 2 fortrolige |
| 4 | <input type="checkbox"/> | Jeg har flere fortrolige |

358

Har du noen (utenom ektefelle/samboer) som du kan regne med å få praktisk hjelp fra hvis du har problemer av betydning?

- | | | |
|---|--------------------------|------------------|
| 1 | <input type="checkbox"/> | Nei, ingen |
| 2 | <input type="checkbox"/> | Ja, én |
| 3 | <input type="checkbox"/> | Ja, 2 |
| 4 | <input type="checkbox"/> | Ja, 3 - 5 |
| 5 | <input type="checkbox"/> | Ja, 5 eller fler |

359

FAMILIE OG SLEKT

Når folk beskriver forholdet til ektefelle/samboer, bruker de ofte setninger som nedenfor. Hvordan stemmer disse beskrivelsene for deg?

Jeg har for tiden ingen ektefelle/samboer

Vi hjelper og støtter hverandre.	helt _____ helt enig 1 2 3 4 5 uenig	R	+		360
Det er en følelse av samhold mellom oss.	helt _____ helt enig 1 2 3 4 5 uenig	R	+	R	361
Vi viser sjelden åpent sinne hjemme.	helt _____ helt enig 1 2 3 4 5 uenig	(R)	÷	R	362
Vi kritiserer hverandre ofte.	helt _____ helt enig 1 2 3 4 5 uenig	R	(÷R)	÷	363 R
Når vi er uenige anstrender vi oss for å glatte over og hoide fred.	helt _____ helt enig 1 2 3 4 5 uenig	(R)	÷	R	364
Vi gjør sjelden noe på egen hånd i vår familie.	helt _____ helt enig 1 2 3 4 5 uenig	R	(÷R)	÷	365 R
Vi har selvstendige meninger i vår familie.	helt _____ helt enig 1 2 3 4 5 uenig		+	÷	366 R
Jeg føler meg nær knyttet til min ektefelle/samboer.	helt _____ helt enig 1 2 3 4 5 uenig		+		367 R
Min partner legger rimelig vekt på mine meninger.	helt _____ helt enig 1 2 3 4 5 uenig		+		368 R
Det forekommer at jeg føler meg utenfor, selv hjemme hos meg selv.	helt _____ helt enig 1 2 3 4 5 uenig	R	+		369 R
					370

Når folk beskriver sin opprinnelige familie (sine foreldre, og evt. søsken), bruker de ofte setninger som nedenfor. Hvordan stemmer disse beskrivelsene alt i alt for deg?

Jeg føler meg nær knyttet til min familie	helt _____ helt enig 1 2 3 4 5 uenig				371
Min familie legger rimelig vekt på mine meninger	helt _____ helt enig 1 2 3 4 5 uenig				372
Det forekommer at jeg føler meg utenfor selv i min egen familie	helt _____ helt enig 1 2 3 4 5 uenig				373

* VENNER

Omtrent hvor mange venner har du nå for tiden som du kan stikke innom eller ringe til bare for å prate?

- 1 Ingen
 2 1
 3 2
 4 3-4
 5 5 eller fler

374

Kjenner dine venner hverandre?

- 1 Ja, de fleste
 2 Ja, noen
 3 Nei, nesten ingen
 4 Nei, ingen

375

Hvor viktig er det for deg å treffe nære venner ofte?

- 1 Svært viktig
 2 Ganske viktig
 3 Hyggelig, men ikke så viktig
 4 Ikke viktig

376

Har noen av dine venner små barn?

- 1 Ja
 2 Nei

377

Hvis det er noe med barnets væremåte eller oppdragelse som bekymrer deg, hvem finner du det mest naturlig å snakke med?
 (Du kan krysse av for flere)

- Ingen 378
 Ektefelle/samboer 379
 Nær venn 380
 Nær slektning 381
 Arbeidskollega 382
 Nabo 383
 Dagmamma/barnehage 384
 Andre som er i samme situasjon 385
 Helsesøster 386
 Lege 387
 Andre 388

Er det ofte at andre spør deg om råd når de har problemer de strir med?

- 1 Aldri
 2 Sjelden
 3 Ofte
 4 Svært ofte

389

Hender det at andre folks behov for å snakke med deg kan oppleves som en belastning?

- 1 Aldri
 2 Sjelden
 3 Ofte
 4 Svært ofte

390

Når folk beskriver sine venner, bruker de ofte setninger som nedenfor. Hvordan stemmer disse beskrivelsene for deg?

Jeg føler meg nær knyttet til mine venner	helt enig	1	2	3	4	5	helt uenig	391
Mine venner legger rimelig vekt på mine meninger	helt enig	1	2	3	4	5	helt uenig	392
Det forekommer at jeg føler meg utenfor selv blant venner	helt enig	1	2	3	4	5	helt uenig	393

ALT I ALT

Alt i alt, synes du at du får tilstrekkelig:

Kontakt med andre	Ja	1	2	3	4	5	Nei	394
Omsorg/støtte	Ja	1	2	3	4	5	Nei	395
Forståelse/respekt	Ja	1	2	3	4	5	Nei	396
Praktisk hjelp med barnet	Ja	1	2	3	4	5	Nei	397
Annen praktisk hjelp	Ja	1	2	3	4	5	Nei	398
Følelse av å høre til i et fellesskap	Ja	1	2	3	4	5	Nei	399

Hvor ofte har du følelsen av at det er lite mening i det du driver med til daglig?	Meget ofte	1	2	3	4	5	6	7	Meget sjelden eller aldri	400
Føler du stort sett at forhold du ikke er herre over styrer livet ditt?	Meget ofte	1	2	3	4	5	6	7	Meget sjelden eller aldri	401
Slik som det nå er blitt, synes du at du stort sett kan bruke dagene dine slik som du selv vil?	Meget ofte	1	2	3	4	5	6	7	Meget sjelden eller aldri	402

* SPØRSMÅL OM DITT EGET TEMPERAMENT

Kryss av i de ruter som du mener er karakteristisk for deg.

Kryss på alle linjene.

	1	2	3	4	5
	Veldig typisk	Ganske typisk	Både/og	Lite typisk	Ikke typisk
Jeg liker å være sammen med andre mennesker.					
Jeg er vanligvis på farten.					
Jeg blir lett skremt.					
Jeg blir ofte lei meg.					
Når jeg ikke er fornøyd sier jeg fra med én gang.					
Jeg er litt av en einstøing.					
Jeg liker å være travelt opptatt hele tiden.					
Jeg regnes for å vær varmlodig og hissig.					
Jeg blir ofte frustrert.					
Jeg lever i høyt tempo.					
Vanlige hendelser plager og bekymrer meg.					
Jeg føler meg ofte usikker.					
Det er mange ting som ergrer meg.					
Når jeg blir skremt blir jeg nærmest panisk.					
Jeg vil heller samarbeide med andre enn å jobbe alene.					
Jeg blir lett følelsesmessig oppskaket.					
Jeg føler meg ofte fylt av virketrang.					
Det skal mye til for å gjøre meg sint.					
Jeg redd for færre ting enn folk flest.					
Jeg synes at andre mennesker er mer stimulerende enn noe annet.					

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II. Questionnaire t6

SPØRRESKJEMA TIL MØDRE I SJETTE RUNDE AV PROSJEKTET "TRIVSEL OG OPPVEKST"

Tildelt nr.

8 - 13 Dato for utfylling

14 - 19 Barnets fødselsdato

20 Barnets kjønn 0 Gutt 1 Jente

21 - 22 Hvilket år er du født? Årstall

Hvis du har **tvillinger**, er det fint om du anvender ett skjema for hvert barn. For barn nr. 2 er det ikke nødvendig å besvare spørsmål om deg selv (start på side 4 og besvar spørsmålene frem til "FAMILIE OG VENNER" på side 13, samt spørsmålene på side 15 og 16).

FAMILIEFORHOLD

23 Bor du sammen med din 14-15 åring? 2 Hele tiden 1 Halve tiden 0 Mindre enn halve tiden


24 Bor det andre barn/ungdommer hos deg? 2 Ja, heltid 1 Ja, deltid 0 Nei

25-32 Hvis ja, hvilke årstall er det/de andre barna født?

33 Hvor mange barn har du foreldreansvar for? Antall

34 Hvilke voksne bor sammen med deg? 1 Ingen andre
 2 Barnets biologiske far
 3 Annen ektefelle/samboer (bodd sammen mer enn 5 år)
 4 Annen ektefelle/samboer (bodd sammen mindre enn 5 år)
 5 Barnets besteforeldre
 6 Andre

- 35 Er du:
- 1 Gift
 - 2 Ugift
 - 3 Separert/skilt
 - 4 Enke

 Hvis du bor sammen med barnets far kan du hoppe over spørsmålene i den grå rammen.

Til deg som ikke bor sammen med barnets far:

36	Hvilket år skilte dere lag? (årstall)	3 Veldig enige	2 Nokså enige	1 Nokså uenige	0 Svært uenige
37	Hvor enige var dere i begynnelsen om <u>hvor</u> barnet skulle bo/ hvem som skulle ha daglig omsorg?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38	Hvor enige er dere i dag om barnets bosted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39	Hvor enige er dere i dag om fordelingen av foreldreansvar/foreldrerett?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

UTDANNING OG ARBEID

- 40 Hvilken utdanning har du?
Oppgi bare høyest fullførte utdanning
- 1 9-årig grunnskole eller mindre
 - 2 Ett eller to år på videregående skole (10-11 år)
 - 3 Artium, økonomisk gymnas, treårig videregående skole
 - 4 Høyskole/universitet, mindre enn 4 år
 - 5 Høyskole/universitet, 4 år eller mer
-
- 41 Er du for tiden i lønnet arbeid?
(Sett bare kryss i én rute)
- 1 Nei: Hjemmearbeidende/under utdanning/trygdet
 - 2 Ja, deltidsarbeid (mindre enn 50%)
 - 3 Ja, deltidsarbeid (50-80%)
 - 4 Ja, heltidsarbeid (80-100%)
-
- 42 Hvilken utdanning har barnets far?
Oppgi bare høyest fullførte utdanning
- 1 9-årig grunnskole eller mindre
 - 2 Ett eller to år på videregående skole (10-11 år)
 - 3 Artium, økonomisk gymnas, treårig videregående skole
 - 4 Høyskole/universitet, mindre enn 4 år
 - 5 Høyskole/universitet, 4 år eller mer

På skolen skal barna lære ting de får bruk for når de skal finne en jobb de kanskje ikke trives med. Selve skoletiden går ganske fort, den tar bare 20 år.

(Xavier 8år)

ØKONOMI

- 43 Hvordan klarer du/familien seg med den økonomien du/dere har?
- 1 Vi klarer oss svært dårlig
 2 Vi klarer oss dårlig
 3 Vi klarer oss
 4 Vi klarer oss bra
 5 Vi klarer oss meget bra
-
- 44 Har du, eller noen i husholdningen din, fått økonomisk støtte fra sosialkontoret i løpet av de siste 12 mnd.?
- 0 Nei
 1 Ja
 2 Vet ikke
-
- 45 Kan du anslå omtrent hvor høy inntekt du/dere hadde til sammen sist år?
 (Samlet brutto årsinntekt inkludert overføringer og bidrag, før skatt og fradrag er trukket fra)
- 1 Under 200 000
 2 200 - 349 000
 3 350 - 549 000
 4 550 - 749 000
 5 750 000 eller mer

NABOLAGET OG NABOER

- 46 Føler du tilhørighet til det stedet du bor nå?
- 3 I stor grad
 2 I noen grad
 1 I liten grad
 0 Ikke i det hele tatt

	0 Ingen	1 En	2 To	3 3-5	4 5 eller flere
47					
48					
49					

Er du og naboene til hjelp for hverandre f.eks når det gjelder å:
 (her kan du sette kryss ved flere)

	1 Ja	0 Nei
Vanne blomster, ta inn post for hverandre når noen er bortreist		
Låne ting		
Annen praktisk hjelp		

50

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52



BARNETS FYSISKE HELSE

Tenk på det siste året:

hvor ofte har barnet ditt hatt vondt i (inkl. idrettsskader):

	0	1	2	3
	Aldri	1 - 3 ganger pr. måned	1 - 3 ganger pr. uke	Daglig eller nesten daglig
53 Hodet:				
54 Magen:				
55 Ryggen:				
56 Armer/ben:				

57 Har barnet ditt hatt magesmerter minst én gang i måneden i tre måneder etter hverandre?
(NB! Gjelder ikke menstruasjonssmerter hos jenter)

Nei Ja

58 Hvis Ja, har magesmertene medført at barnet ditt måtte:
(Her kan du krysse av på flere)

- | | 0 | 1 |
|--|------------------------------|-----------------------------|
| a) Være hjemme fra skolen (eller avbryte skoledagen) | Nei <input type="checkbox"/> | Ja <input type="checkbox"/> |
| b) Avslutte eller unngå hobby/aktivitet (hjemme/skolen) | Nei <input type="checkbox"/> | Ja <input type="checkbox"/> |
| c) Ta medisiner mot smerte (f.eks Paracet, Ibux eller annet) | Nei <input type="checkbox"/> | Ja <input type="checkbox"/> |
| d) Gå til legen | Nei <input type="checkbox"/> | Ja <input type="checkbox"/> |
| e) Forandre/legge om kosten (maten) | Nei <input type="checkbox"/> | Ja <input type="checkbox"/> |

59 Totalt sett i løpet av det siste året, hvor plaget har barnet ditt vært av magesmerter?

- Ikke plaget 0
- Litt plaget 1
- Moderat plaget 2
- Mye plaget 3
- Svært mye plaget 4

Hvordan er barnets helse nå? 60

- 1 Svært dårlig
- 2 Litt dårlig
- 3 God
- 4 Svært god

Tar barnet ditt noen medisiner? 61

- 0 Nei
- 1 Ja
- 2 Hvis ja, nevne hvilke:.....
.....

62 Har barnet funksjonsvansker som er, eller antas å bli, langvarige?

- 0 Nei 1 Ja 2 Under utredning 3 Er bekymret for at det kan være noe galt

Hvis ja, hvilke funksjonsvansker? _____

Nå vil vi høre om sykdommer som **stadig gjentar** seg og mer **akutt** sykdom og skade.



Har barnet hatt en eller flere av følgende sykdommer det siste året? Kryss både av for **hva** det var som feilte barnet, om sykdommen har vært **langvarig** og om barnet har vært henvist til **spesialist** eller ikke.

TYPE SYKDOM	HAR HATT SYKDOMMEN?			VARIGHET?		HENVIST TIL SPESIALIST?	
	Nei	Ja	Usikker- under utredning	Langvarig (over 3 mnd.)	Kortvarig (enkel- episoder)	Nei	ja
	0	1	2	1	2	0	1
63, 64, 65	Allergi (astma, eksem, høysnue)						
66, 67, 68	Luftveisinfeksjoner (bronkitt, lungebetennelse, ørebetennelse, halsesyke)						
69, 70, 71	Urinveisinfeksjon (blærekatarr eller nyrebekkenbetennelse)						
72, 73, 74	Synsvansker						
75, 76, 77	Hørselsvansker						
78, 79, 80	Spiseforstyrrelser						
81, 82, 83	Ledd-/muskelsmerter						
84, 85, 86	Diabetes (sukkersyke)						
87, 88, 89	Skader som trengte medisinsk behandling (brudd, forbrenning, forgiftninger, hjernerystelse, kutt)						
90, 91, 92	Andre lidelser, nevn hvilke:						

Har barnet ditt noen gang prøvd å slanke seg? (Sett bare ett kryss)

0 Nei, ikke som jeg vet om 1 Ja, tidligere 2 Ja, hele tiden 93

Hvor mye veier barnet ditt? Ca kg Hvor høy er barnet ditt? Ca cm 94, 95



Har barnet ditt vært til behandling i følgende helsetjenester i løpet av **de siste 12 månedene**?
(Sett ett kryss på hver linje)

	0 Nei	1 Ja, en gang	2 Ja, flere ganger	3 Vet ikke	
Skolehelsetjenesten, helsestasjon for ungdom					96
PP-tjenesten					97
Lege/legevakt					98
Psykolog, psykiater, familierådgivning eller BUP					99
Sykehusinnleggelse					100
Fysioterapeut, kiropraktor, akupunktør eller annet					101
Alternative behandlere, hva					102

Tror du ungdommen din har:

	0 Nei, aldri	1 1 gang	2 2-5 ganger	3 6-10 ganger	4 Mer enn 10 ganger	
smakt mer enn noen slurker alkohol?						103
drukket så mye alkohol at han/hun har vært synlig beruset (full)?						104
sniffet eller brukt hasj, marihuana eller andre ulovlige rusmidler?						105
brukt legemidler (tabletter) for å få rus?						106

Tror du ungdommen din røyker?

0 Aldri prøvd 1 Har prøvd 2 Røyker av og til 3 Røyker daglig 107

SKOLE OG SKOLEFAG

Hvordan opplever du at barnet ditt greier seg på skolen sammenlignet med gjennomsnittet i klassen sin?

	1 Mye dårligere	2 Litt dårligere	3 Middels	4 Litt bedre	5 Mye bedre	
Norsk						108
Gymnastikk						109
Engelsk						110
Samfunnsfag (naturfag, historie)						111
Formingsfag						112
Matematikk						113
Alt i alt, hvordan klarer han/hun seg faglig:						114

Har ungdommen din fått ekstra støtte/undervisning i forbindelse med lese- og skrivevansker i løpet av det siste året?

0 Nei 1 Ja, noe 2 Ja, ganske mye 3 Ja, veldig mye 115

5 Veldig bra 4 Ganske bra 3 Både og 2 Ganske dårlig 1 Veldig dårlig

Alt i alt, hvordan trives han/hun på skolen 116

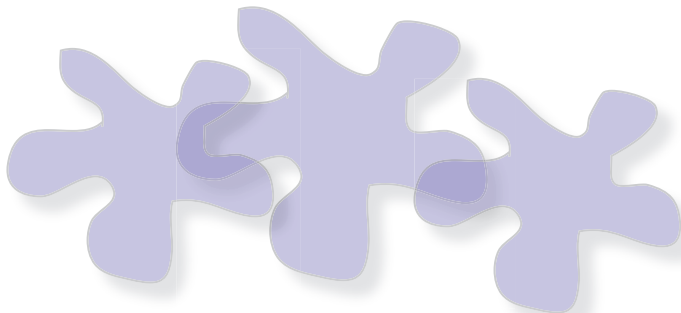
Hvor involvert er du vanligvis i hans/hennes skolearbeid?

	0 Stemmer ikke	1 Stemmer delvis	2 Stemmer	
Jeg er svært interessert i barnets skolearbeid				117
Jeg hjelper ham/henne ofte med skolearbeid				118
Jeg oppfordrer ham/henne til å ta høyere utdanning				119
Jeg roser ham/henne ofte for skolearbeidet				120
Jeg snakker sjelden med ham/henne om skolen				121

Hvor mange dager i uken er han/hun vanligvis sammen med venner utenom skoletiden? 122

(Ikke ta med organiserte aktiviteter)

- 0 Ingen dager
- 1 1-2 dager
- 2 3-4 dager
- 3 5-6 dager
- 4 Hver dag



BARNETS TEMPERAMENT OG VÆREMÅTE

Også denne gangen vil vi gjerne ha din beskrivelse av ham/henne.

Kryss av for hvor godt utsagnene beskriver barnet ditt (*husk å sette ett kryss på hver linje*):

	4	3	2	1	0	
	Stemmer veldig godt	Stemmer ganske godt	Både / og	Stemmer ganske dårlig	Stemmer veldig dårlig	
Liker å være sammen med andre mennesker						123
Er vanligvis på farten						124
Blir lett skremt						125
Blir ofte lei seg						126
Gir ikke opp selv om han/hun jobber med en vanskelig oppgave						127
Sier ifra med én gang når han/hun ikke er fornøyd						128
Trives best alene						129
Liker å være travelt opptatt hele tiden						130
Regnes for å være varmblodig og hissig						131
Har problemer med å gjøre ting ferdig						132
Blir ofte frustrert						133
Lever i et høyt tempo						134
Vanlige hendelser plager og bekymrer ham/henne						135
Føler seg ofte usikker						136
Jobber med en oppgave helt til den er fullført						137
Det er mange ting som irriterer ham/henne						138
Blir nærmest panisk når han/hun blir skremt						139
Vil heller samarbeide med andre enn å jobbe alene						140
Blir lett følelsesmessig opprørt						141
Føler seg ofte fylt av energi						142
Selv om han/hun blir avbrutt, fortsetter han/hun med oppgavene sine (som lekser og husarbeid) etterpå						143
Det skal mye til for å gjøre ham/henne sint						144
Er mindre engstelig for ting enn sine jevnaldrende						145
Synes at andre mennesker er mer stimulerende enn noe annet						146
Skifter fra en aktivitet til en annen, uten å bli ferdig med det han/hun holdt på med først						147

Nedenfor følger flere beskrivelser av hvorledes barn og ungdommer kan oppføre seg. Her skal du krysse av for **hvor godt** beskrivelsene passer på ungdommen din. Prøv å svare på alt selv om du ikke er helt sikker eller synes utsagnet virker rart:

Han/hun:	0 Stemmer svært dårlig	1 Stemmer ganske dårlig	2 Stemmer av og til	3 Stemmer ganske godt	4 Stemmer svært godt	
holder rommet sitt ryddig uten å bli bedt om det						148
presenterer seg uoppfordret når han/hun møter nye mennesker						149
reagerer forståelig hvis andre barn dytter eller slår						150
ber ekspeditøren om hjelp eller informasjon i butikker						151
lytter til det som sies på møter, for eksempel i en klubb eller en kirke						152
avviser på en høflig måte hvis andre ber om noe urimelig						153
roser andre i familien når de har lyktes med noe						154
får lett venner						155
har mange interesser						156
unngår situasjoner som kan skape problemer						157
hjelper deg/dere med husarbeidet uten å bli bedt om det						158
forsøker først å gjøre pliktene sine i huset selv, før han/hun ber deg om hjelp						159
kan styre sinnet sitt i konflikter med andre ungdommer						160
starter samtaler fremfor å vente på at andre skal snakke til ham/henne						161
avslutter konflikter med deg på en fredelig måte						162
kan styre sinnet sitt i konflikter med deg						163
utfører sine plikter i huset innen rimelig tid (Har ikke plikter <input type="checkbox"/>)						164
ber om lov før hun/han bruker noe som tilhører andre i familien						165
bruker tiden fornuftig i påvente av hjelp med lekser eller andre oppgaver						166
godtar vennenes forslag til aktiviteter						167
kan melde fra om uhell eller ulykker til rette vedkommende						168
kan ta imot ros eller skryt fra venner						169



Her ber vi deg angi hvor godt hvert av utsagnene nedenfor stemmer på barnet/ungdommen din. Svar på grunnlag av hans/hennes oppførsel **de siste seks månedene**:

	0 Stemmer svært dårlig	1 Stemmer nokså dårlig	2 Stemmer nokså godt	3 Stemmer svært godt	
Er rastløs, overaktiv, kan ikke være lenge i ro					170
Er stadig urolig eller i bevegelse					171
Er lett å avlede, mister lett konsentrasjonen					172
Tenker seg om før hun/han handler (gjør noe)					173
Fullfører oppgaver, har god konsentrasjonsevne					174

Når du sammenligner ungdommen din med ungdommer flest, vil du si at han/hun jevnt over er:

- Klart lettere å ha med å gjøre 1
 - Litt lettere å ha med å gjøre 2
 - Omtrent vanlig 3
 - Litt vanskeligere å ha med å gjøre 4
 - Klart vanskeligere å ha med å gjøre 5
- 175



PLAGSOMME FØLELSER OG TANKER

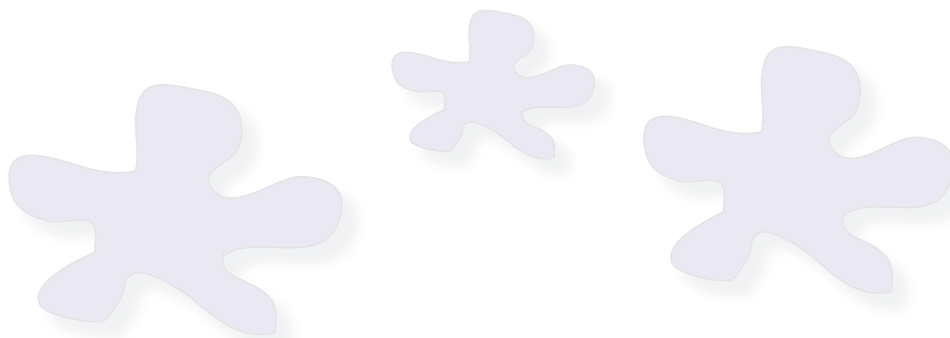
Mange kan være nedfor fra tid til annen, og noen er plaget av triste tanker. Tenk på **de siste to ukene** og angi hvor godt hvert av utsagnene stemmer på barnet/ungdommen din: **(Sett ett kryss på hver linje)**

Han/hun:	0 Stemmer sjelden	1 Stemmer noen ganger	2 Stemmer ofte	
var lei seg eller ulykkelig				176
følte seg så trøtt at han/hun bare ble sittende uten å gjøre noen ting				177
var veldig rastløs				178
var ikke glad for noe				179
følte seg lite verdt				180
gråt mye				181
hatet seg selv				182
tenkte at han/hun aldri kunne bli så god som andre ungdommer				183
følte seg ensom				184
tenkte at ingen egentlig var glad i ham/henne				185
følte seg som et dårlig menneske				186
syntes han/hun gjorde alt galt				187

Barn og unge kan også være engstelige i perioder. Tenk på hvordan ungdommen din har vært de siste månedene:

(Sett ett kryss på hver linje)

Barnet mitt:	4	3	2	1	0	
	Nesten alltid	Ofte	Av og til	Sjelden	Nesten aldri	
ble veldig urolig da han/hun måtte gå fra meg eller dra hjemmefra						188
unngikk sosiale aktiviteter fordi han/hun var redd for å bli kritisert eller avvist						189
bekymret seg mye for at det skulle hende noe fælt med meg						190
var redd for å bli forlatt og måtte passe på seg selv						191
bekymret seg mye for å komme bort fra meg eller å bli kidnappet						192
hadde forferdelige mareritt						193
var for mye bekymret						194
bekymret seg for mye for å bli avvist eller kritisert						195
var redd for å gå fra meg (f.eks. når han/hun skulle på skolen)						196
var engstelig i sosiale situasjoner fordi han/hun var redd for andre mennesker						197
var redd for å gjøre nye ting i frykt for å dumme seg ut						198
hengte seg så mye opp i detaljer eller tidsplaner at han/hun glemte hva det er han/hun egentlig skulle gjøre						199
måtte stadig sjekke at han/hun hadde gjort ting på den riktige måten (som at døren var låst, gymtøyet var med)						200
hadde problemer med å få dumme eller rare tanker ut av hodet						201
måtte tenke på spesielle måter (som på bestemte tall eller ord) for å forhindre at farlige ting skulle skje						202



BRUDD PÅ REGLER

Her er det listet opp handlinger som har å gjøre med brudd på regler i hjem, skole og samfunn. Ofte vet ikke foreldrene om ungdommen har gjort, eller vært med på, slike handlinger. Vi vil likevel spørre deg om **du vet** at ungdommen din har gjort noe av det følgende i løpet av de siste 12 månedene?

Sett ett kryss for hver linje:

	0 Ikke gjort det	1 1 gang	2 2-3 ganger	3 4-10 ganger	4 Mer enn 10 ganger	
Lurt seg fra å betale på kino, kafè, buss, tog eller liknende						203
Tatt penger fra noen i familien uten å ha lov til det						204
Tatt varer fra kjøpesenter, butikk eller kiosk uten å betale						205
Skulket en eller to skoletimer						206
Med vilje ødelagt eller knust vindusruter, benker, postkasser, hageplanter eller liknende						207
Skulket skolen en hel dag						208
Med vilje ødelagt stoler, bord, pulter, eller andre ting som tilhører skolen						209
Klort eller lugget noen (ikke søsken)						210
Med vilje ødelagt seter på en buss, kino, eller andre steder						211
Stjålet ting fra lommer eller veske når eieren ikke var tilstede						212
Oppholdt seg på andre steder enn han/hun har lov til						213
Brutt seg inn i en butikk, hus eller leilighet, for å stjele noe						214
Vært ute mye senere på kvelden eller natten, enn han/hun har lov til						215
Truet med å slå eller skade noen (ikke søsken)						216
Vært i slåsskamp på skolen eller andre steder						217
Truet eller tvunget noen til å gi ham/henne penger eller andre ting						218
Slått eller sparket noen (ikke søsken)						219
Hatt med seg våpen (kniv, balltre, eller liknende) eller andre våpenliknende gjenstander på skolen eller andre steder						220
Vært i slåsskamp der det har vært brukt våpen (kniv, balltre eller liknende) eller andre gjenstander						221

Her kommer noen beskrivelser av hvordan ungdom kan være mot hverandre. Hvor godt passer beskrivelsene på ditt barn?

	0	1	2	3	
	Stemmer ikke	Stemmer sjelden	Stemmer ofte	Stemmer alltid	
Barnet mitt unngår å sladre eller snakke om andre bak deres rygg					222
Når barnet mitt misliker noen, forsøker han/hun å få andre til å mislike vedkommende også					223
Når barnet mitt er sinna på noen, overser han/hun personen og snakker ikke til vedkommende					224
Av og til forteller barnet mitt sladder videre til andre om personer han/hun ikke liker					225

Tenk på vennene som er viktige for ungdommen din.

Vet du om noen av disse:	0 Ingen	1 En venn	2 Flere venner	
Drikker alkohol omtrent så ofte som 1 gang i uka				226
Har prøvd hasj, marijuana eller andre ulovlige rusmidler				227
Ofte havner i slåsskamp				228
Gjør ulovlige handlinger (som tyveri, hærverk eller annet)				229

Nå skal vi forlate spørsmål om barnet og gå over til spørsmål som omhandler deg selv:

FAMILIE OG VENNER

Her tenker vi på familien du vokste opp i (foreldre, søsken). Hvordan stemmer disse beskrivelsene for deg? (Sett ring rundt det tallet som best beskriver din opplevelse)

Jeg føler meg nært knyttet til min familie	Helt enig	1	2	3	4	5	Helt uenig	230
Min familie legger rimelig vekt på mine meninger	Helt enig	1	2	3	4	5	Helt uenig	231
Det forekommer at jeg føler meg utenfor selv i min egen familie	Helt enig	1	2	3	4	5	Helt uenig	232

Får du praktisk hjelp og avlastning fra nære slektninger (utenom ektefelle/samboer)?	4	<input type="checkbox"/>	Ja, svært ofte	233
	3	<input type="checkbox"/>	Ja, nokså ofte	
	2	<input type="checkbox"/>	Ja, av og til	
	1	<input type="checkbox"/>	Sjelden	
	0	<input type="checkbox"/>	Nei, aldri	

Her er det vennene dine vi tenker på. Hvordan stemmer disse beskrivelsene for deg?

Jeg føler meg nært knyttet til mine venner	Helt enig	1	2	3	4	5	Helt uenig	234
Mine venner legger rimelig vekt på mine meninger	Helt enig	1	2	3	4	5	Helt uenig	235
Det forekommer at jeg føler meg utenfor selv blant venner	Helt enig	1	2	3	4	5	Helt uenig	236

Får du praktisk hjelp og avlastning fra venner?	4	<input type="checkbox"/>	Ja, svært ofte	237
	3	<input type="checkbox"/>	Ja, nokså ofte	
	2	<input type="checkbox"/>	Ja, av og til	
	1	<input type="checkbox"/>	Sjelden	
	0	<input type="checkbox"/>	Nei, aldri	

DIN OPPLEVELSE AV STRESS SISTE UKE

Nedenfor er en liste over problemer eller plager folk kan ha. Vurder hvor mye av de følgende plager eller ulemper du har, eller har hatt, **siste uke (til og med i dag)**. Sett ett kryss på hver linje.

	0	1	2	3	
	Ikke i det hele tatt	Litt	En god del	Svært mye	
Blir plutselig skremt uten grunn					238
Føler deg engstelig					239
Føler deg svimmel eller kraftløs					240
Er nervøs eller urolig					241
Har hjertebank					242
Skjelver					243
Føler deg anspent eller opphisset					244
Har hodepine					245
Har anfall av redsel eller panikk					246
Er rastløs, kan ikke sitte rolig					247
Føler deg slapp og uten energi					248
Anklager deg selv for ting					249
Har lett for å gråte					250
Har dårlig appetitt					251
Har vanskelig for å sove					252
Har lite håp for fremtiden					253
Føler deg nedfor					254

	0 Ikke i det hele tatt	1 Litt	2 En god del	3 Svært mye	
Føler deg ensom					255
Har tanker om å ta ditt eget liv					256
Har følelse av å være fanget					257
Bekymrer deg for mange ting					258
Har ikke interesse for noe					259
Føler at alt er anstrengende					260
Føler at du ikke er verdt noe					261

BARNEOPPDRAGELSE

Tenk på 14-15 åringen din: Hvor ofte gjør du følgende? Det er viktig at du er så ærlig som mulig når du setter kryss.

	0 Nesten aldri	1 Sjelden	2 Av og til	3 Ofte	4 Nesten alltid	
Du sier noe pent til barnet ditt eller roser når han/hun har gjort en god jobb						262
Du truer med å gi barnet ditt en straff, men gjør det ikke likevel						263
Du opplever at det å få barnet ditt til å adlyde deg innebærer så mye trøbbel at det ikke er verdt det						264
Du belønner eller gir noe ekstra når barnet ditt har gjort som du ønsker						265
Du bestemmer deg for å gi barnet ditt en straff, men barnet ditt overtaler deg til å la være						266
Du viser at du liker det når barnet ditt har gjort noe i huset						267
Du varierer straffen barnet ditt får etter hvilket humør du er i						268
Du koser eller klemmer barnet ditt når han/hun har fått til noe						269

 Hvordan er forholdet ditt til barnet/ungdommen din nå for tiden?
Kryss av for den påstanden som passer best for deg.

	0 Stemmer ikke	1 Stemmer sjelden	2 Stemmer av og til	3 Stemmer ofte	4 Stemmer alltid	
Barnet mitt og jeg har et kjærlig og varmt forhold						270
Det virker som om barnet mitt og jeg alltid kjemper mot hverandre						271
Hvis barnet mitt blir opprørt, søker det trøst hos meg						272
Barnet mitt er utilpass med kjærtegn eller berøring fra meg						273
Barnet mitt setter pris på forholdet vårt						274
Når jeg roser barnet mitt, blir han/hun tydelig stolt						275

	0	1	2	3	4	
	Stemmer ikke	Stemmer sjelden	Stemmer av og til	Stemmer ofte	Stemmer alltid	
Barnet mitt forteller meg spontant ting om seg selv						276
Barnet mitt blir lett sint på meg						277
Det er lett å forstå hva barnet mitt føler						278
Barnet mitt fortsetter å stå på sitt etter å ha blitt irettesatt						279
Det å oppdra barnet mitt tapper meg for energi						280
Når barnet mitt er i dårlig humør, vet jeg at vi vil få en lang og vanskelig dag						281
Mitt barns følelser overfor meg kan være uforutsigbare eller skifte fort						282
Barnet mitt forsøker å lure eller manipulere meg						283
Barnet mitt deler sine følelser og opplevelser åpent med meg						284

	1	2	3	4	5	6	
	Til før 21:00	Til ca. 22:00	Til ca. 23:00	Til ca. 24:00	Til ca. 01:00	Til etter 01:00	
Hvor sent kan han/hun vanligvis være ute på hverdager? (mandag til torsdag)							285
Hvor sent kan han/hun vanligvis være ute i helgen? (fredag og lørdag)							286

Det kan være vanskelig å følge med på ungdommers aktiviteter. Disse spørsmålene handler om hva du som forelder vet om de tingene barnet/ungdommen din gjør.

Vet du vanligvis:

	1	2	3	4	
	Vet svært lite	Vet litt	Vet mye	Vet alt	
hvem barnet ditt er sammen med?					287
hvor barnet ditt er i fritiden?					288
hvordan barnet ditt bruker pengene sine?					289
hvor barnet ditt drar rett etter skolen?					290
hvor barnet ditt drar i løpet av dagen og kvelden i helgene?					291
om problemer/vanskeligheter som barnet ditt har på skolen?					292

	0	1	2	3	4	
	Nei	Én gang	Noen ganger	Minst én gang i måneden	Minst én gang i uken	
Tenk på det siste året: Har du tatt kontakt med foreldrene til barnets/ungdommens venner, for å sjekke hvor han/hun er og hva han/hun gjør?						293

LANGVARIGE BELASTNINGER

Her lurer vi på om du har hatt mer **langvarige** belastninger i løpet av de **siste 12 månedene**, og hvor stor belastningen har vært for deg. **Sett ett kryss pr. linje:**

	0 Ingen	1 Noe	2 Ganske stor	3 Svært stor	
Boligproblem (vedlikehold, leieforhold o.l.)					294
Problemer med arbeid (arbeidsløshet, usikkert arbeid, vanskelige arbeidsforhold)					295
Økonomiske problemer (betaling av husleie, lån, forpliktelse o.l.)					296
Problemer med egen fysisk helse (funksjonshemming, kroppslig sykdom)					297
Samlivsproblemer (mye krangel, alvorlige samlivsproblemer, separasjon, skilsmisse)					298
Problemer med alkohol eller andre rusmidler hos noen i familien					299
Helseproblemer hos ektefelle (fysiske eller psykiske)					300
Helseproblemer hos andre barn (funksjonshemming, sykdom)					301
Problemer med å strukturere barnas hverdag (vekking, deltakelse i familiens gjøremål o.l.)					302
Savnet å ha mer tid sammen med barnet/barna					303
Belastninger knyttet til humørsvingninger hos barnet/barna					304
Engstelse for hva barnet/barna utsetter seg for, eller kan bli utsatt for, i fritiden					305
Problemer rundt barnas skolegang					306
Annet:					307

Hvis man får en god oppdragelse, blir man høflig. Hvis man får en dårlig oppdragelse, får man det gøy.
(Tony André 6 år)



VIKTIGE HENDELSER

Kryss av for om du har opplevd noen av de følgende hendelsene i løpet av de siste 12 månedene.

	1	0	
	Ja	Nei	
Flytting			308
Fått nye venner			309
Problem i forhold til venner eller familie			310
Skilsmisse eller separasjon			311
Ny samboer eller giftemål			312
Graviditet eller fødsel			313
Abort			314
Fått/ skaffet meg noe jeg har ønsket meg lenge			315
Brann, trafikkulykke eller annet			316
Fått ny jobb			317
Mistet arbeidet			318
Akutt sykdom eller skade hos meg selv			319
Akutt sykdom eller skade hos noen som står meg nær			320
Dødsfall hos noen som står meg nær			321
Har påført andre skade eller bekymring			322
Har hendt meg noe som jeg ikke orker å si til noen			323
Annet:			324

Har du noen gang opplevd:	0	1	2	3	Var den som utsatte deg for dette:			
	Nei, aldri	Ja, som barn (under 18 år)	Ja, som voksen (over 18 år)	Ja, i løpet av det siste året	1 En fremmed person	2 I slekt/ familie med deg	3 En venn eller bekjent	
at noen systematisk og over lengre tid har forsøkt å kue, fornedre eller ydmyke deg?								325, 326
at noen har truet med å skade deg eller skade noen som står deg nær?								327, 328
å bli utsatt for fysiske overgrep?								329, 330
å bli presset til seksuelle handlinger?								331, 332

VANLIGE REAKSJONSMÅTER

Hvordan reagerer du når du får et problem, eller det skjer noe som uroer deg?

(Husk å krysse av på **alle** linjene)

	0	1	2	3	
	Nesten aldri	Av og til	Ofte	Nesten hele tiden	
Jeg prøver bare å glemme det ved å tenke på noe annet; gjøre noe annet					333
Jeg prøver å unngå andre mennesker; holder følelsene mine for meg selv					334
Jeg prøver å se det positive i situasjonen; tenke på noe godt som kan komme ut av den					335
Jeg innser at jeg selv er skyld i problemet og bebreider meg selv					336
Jeg mener at andre er skyld i problemet og bebreider dem					337
Jeg tenker på mulige måter å se på situasjonen på; prøver aktivt å løse problemet					338
Jeg snakker om hvordan jeg føler meg; gråter, skriker, blir sint og kaster ting					339
Jeg forsøker å roe meg ned ved å snakke til meg selv, be, gå en tur eller bare slappe av					340
Jeg prøver å forestille meg at dette aldri har hendt; drømmer om at ting hadde vært annerledes					341
Jeg oppsøker venner, familie og andre for å få støtte og hjelp					342
Jeg bare aksepterer problemet fordi jeg vet at det er lite jeg kan gjøre med det					343

HELSESPØRSMÅL

Det er mange av dere som har hatt helseplager i de senere år. Noen har vært alvorlige plaget, mens andre har hatt forbigående lidelser. Har du vært innlagt på sykehus (utenom i forbindelse med barnefødsler) i løpet av de siste 3 årene?

Vanlig sykehus	1	<input type="checkbox"/> Ja	0	<input type="checkbox"/> Nei	344
Psykiatrisk sykehus/klinikk	1	<input type="checkbox"/> Ja	0	<input type="checkbox"/> Nei	345

Er det lenge siden du sist hadde kontakt med lege (unntatt forhold knyttet til svangerskap og barn)?	0	<input type="checkbox"/> Aldri hatt slik kontakt.			
	1	<input type="checkbox"/> 0 - 3 mnd			
	2	<input type="checkbox"/> 3 - 6 mnd			346
	3	<input type="checkbox"/> 6 mnd. - 12 mnd			
	4	<input type="checkbox"/> 1 - 3 år			
	5	<input type="checkbox"/> 3 år eller mer			

Om du har hatt kontakt med psykiater eller psykolog, angi hvor lenge det er siden siste kontakt:

- 0 Aldri hatt slik kontakt
- 1 0-3 mnd
- 2 3 - 6 mnd
- 3 6 mnd - 12 mnd
- 4 1 - 3 år
- 5 3 år eller mer

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Hvordan anser du helsen din å være for tiden?

- 1 Dårlig
- 2 Ikke helt god
- 3 God
- 4 Svært god

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Hvor ofte har du i løpet av den siste måneden brukt følgende typer av medikamenter:

	3	2	1	0	
	Daglig	Hver uke, men ikke daglig	Sjeldnere enn hver uke	Aldri	
Smertestillende					349
Avslappende eller beroligende					350
Sovemedisiner					351
Andre, nevnt hvilke:					352

FORHOLDET TIL EKTEFELLE/SAMBOER/FAST PARTNER

Hvem mener du er 14-15 åringens viktigste farsfigur?

- 1 Biologisk/adoptivfar
- 2 Samboer/ektefelle som ikke er barnets far
- 3 Tidligere samboer/ektefelle som ikke er barnets far
- 4 Bestefar eller andre

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Har du for tiden: ektefelle/samboer 1 fast partner 2 ingen av delene 3

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Hvis du for tiden ikke har fast partner, ektefelle eller samboer, kan du hoppe til side 22.

Når folk beskriver forholdet til partneren, bruker de ofte setninger som nedenfor. Hvordan stemmer disse beskrivelsene for deg? (Sett ring rundt det tallet som best beskriver din opplevelse)



Jeg føler meg nært knyttet til min ektefelle/samboer	Helt enig	1	2	3	4	5	Helt uenig	355
Min partner legger rimelig vekt på mine meninger	Helt enig	1	2	3	4	5	Helt uenig	356
Det forekommer at jeg føler meg utenfor, selv hjemme hos meg selv	Helt enig	1	2	3	4	5	Helt uenig	357



Hvor godt synes du at partneren din møter behovene dine?	Veldig dårlig	1	2	3	4	5	Veldig godt	358
Hvor godt er partnerforholdet ditt sammenlignet med andres partnerforhold?	Veldig dårlig	1	2	3	4	5	Veldig godt	359
Hvor ofte har du ønsket at dere ikke hadde giftet dere eller vært sammen?	Aldri	1	2	3	4	5	Veldig ofte	360
I hvilken grad har forholdet ditt blitt som forventet?	I liten grad	1	2	3	4	5	I stor grad	361
Hvor glad er du i partneren din?	Veldig lite	1	2	3	4	5	Veldig mye	362



I de fleste forhold er det ting man er uenige om.

	1	2	3	4	5	
Her vil vi gjerne at du skal angi i hvilken grad du og din partner er enige om:	Alltid enige	Ofte enige	Av og til enige	Sjelden enige	Aldri enige	
hvordan dere ser på livet						363
hvordan dere skal ordne økonomien						364
hvilke ting dere synes er viktige						365
hvordan dere skal bruke ferier og fritid						366
forholdet til foreldre/svigerforeldre						367
hvor mye tid dere bør tilbringe sammen						368

Det er lettere å stikke av hvis man bare bor sammen. Det vanskeligste med ekteskapet er kanskje at man må ha så mye med hverandre å gjøre. (Gabriel 8 år)

Hvis du **ikke** bor sammen med barnets far, hvordan vil du karakterisere kommunikasjonen mellom dere?

5 svært god 4 god 3 passe 2 dårlig 1 svært dårlig 0 ikke eksisterende

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Hvor ofte vil du si at du og barnets far (samt eventuelt også du og nåværende partner):

	Barnets far					Nåværende partner, om dette er en annen enn barnets far					
	0 Aldri	1 Sjelden	2 1-3 ganger i mnd.	3 1-2 ganger i uken	4 Hver dag	0 Aldri	1 Sjelden	2 1-3 ganger i mnd.	3 1-2 ganger i uken	4 Hver dag	
har ubehagelige og stressende samtaler											370, 371
krangler											372, 373
uttrykker sinne og fiendtlighet											374, 375
har diskusjoner som ender med at noen dytter, slår eller sparker											376, 377

De fleste foreldre/par har perioder hvor de er uenige om hvorledes de skal oppdra barna sine eller organisere hverdagen. Tenk på hvordan det har vært i din familie i den **siste måneden**, og vær snill å angi hvor ofte følgende har skjedd:

	Barnets far					Nåværende partner, om dette er en annen enn barnets far					
	0 Nesten aldri	1 Sjelden	2 Noen ganger	3 Ofte	4 Nesten alltid	0 Nesten aldri	1 Sjelden	2 Noen ganger	3 Ofte	4 Nesten alltid	
Det har vært uenighet om hvilke regler som skal gjelde for barnet (f.eks. om leggetid eller steder hvor det er lov å være)											378, 379
Det har vært uenighet om hvordan vi skal sette grenser for barnet											380, 381
Barna har fått forskjellige regler fra hver av oss											382, 383
Vi har sabotert hverandre (ikke støttet hverandre)											384, 385
Det har manglet diskusjoner om ting i sin alminnelighet											386, 387
Det har vært uenighet om hva som skal regnes som ulydighet											388, 389

DITT EGET TEMPERAMENT

Til sist ber vi deg krysse av for de utsagn du mener best karakteriserer deg som person.

Kryss på alle linjene:

	5 Stemmer veldig godt	4 Stemmer ganske godt	3 Både/ og	2 Stemmer ganske dårlig	1 Stemmer veldig dårlig	
Jeg liker å være sammen med andre mennesker						390
Jeg er vanligvis på farten						391
Jeg blir lett skremt						392
Jeg blir ofte lei meg						393
Når jeg ikke er fornøyd sier jeg fra med én gang						394
Jeg er litt av en einstøing						395
Jeg liker å være travelt opptatt hele tiden						396
Jeg regnes for å være varmblodig og hissig						397
Jeg blir ofte frustrert						398
Jeg lever i et høyt tempo						399
Vanlige hendelser plager og bekymrer meg						400
Jeg føler meg ofte usikker						401
Det er mange ting som irriterer meg						402
Når jeg blir skremt blir jeg nærmest panisk						403
Jeg vil heller samarbeide med andre enn å jobbe alene						404
Jeg blir lett følelsesmessig oppskaket						405
Jeg føler meg ofte fylt av virkekrang						406
Det skal mye til for å gjøre meg sint						407
Jeg er mindre engstelig for ting enn mine jevnaldrende						408
Jeg synes at andre mennesker er mer stimulerende enn noe annet						409

Å fylle ut et så langt spørreskjema er en kjempeinnsats.

Tusen takk for at du har tatt deg tid til dette!

Vi vil sende deg tilbakemelding med sammendrag av hovedfunnene fra denne sjette innsamlingsrunden så snart dataene er analysert.

