



RECOMMENDATIONS

29 recommendations to combat social inequalities in health. The Norwegian Council on Social Inequalities in Health

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Abstract

All political parties in Norway agree that social inequalities in health comprise a public health problem and should be reduced. Against this background, the Council on Social Inequalities in Health has taken action to provide specific advice to reduce social health differences.

Our recommendations focus on the entire social gradient rather than just poverty and the socially disadvantaged. By proposing action on the *social determinants* of health such as affordable child-care, education, living environments and income structures, we aim to facilitate a possible re-orientation of policy away from redistribution to universalism.

The striking challenges of the causes of health differences are complex, and the 29 recommendations to combat social inequality of health demand cross sectorial actions. The recommendations are listed thematically and have not been prioritized. Some are fundamental and require pronounced changes across sectors, whereas others are minor and sector-specific.

Keywords: *Recommendations, Policy, Social Inequality of Health*

Introduction

By the endorsement of the 2011 Rio-declaration on Social Determinants of Health (SDH), the Norwegian authorities have agreed to adopt the SDH perspective in their efforts to tackle health inequalities, nationally and internationally. The declaration states:

‘Health inequities arise from the societal conditions in which people are born, grow, live, work and age, referred to as social determinants of health. These include early years’ experiences, education,

economic status, employment and decent work, housing and environment, and effective systems of preventing and treating ill health.’

This quote sketches out the life course perspective and lists many of the assumed social determinants of health, like childhood living conditions, education, work and income.

Further, in the Rio-declaration, all the authorities committed themselves to follow-up on the declaration’s

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recommendations on actions. These include: ‘... To improve daily living conditions; to tackle the inequitable distribution of power, money and resources; and to measure and understand the problem and assess the impact of action.’

This quote directs attention to the need for a more equal distribution of resources that are considered crucial for health, as well as for evaluations of the impact of policies and interventions that are implemented. The latter point is particularly important as a guideline for the work of the Norwegian Directorate of Health’s Council on Social Inequalities in Health.

Ten years have passed since the publication of the government white paper *National strategy to reduce social inequalities in health* (1). This is a respectable document with clear intentions, but the challenges faced by the Norwegian authorities are still apparent. Social inequalities in health remain and are in some respects even growing. The strategy thus produced few tangible results, but resulted in a heightened awareness of the challenges. The strategy period ended in 2017, and no new initiatives have replaced the strategy to address issues relating to social inequalities in health at a national level in Norway.

Nevertheless, the ambitions to reduce social differences are well described, including the recent Public Health Act and innovative initiatives launched by several local authorities. The incumbent government has pursued the ambitions to reduce social inequalities in health that were set out in the government white paper *The Public Health Report – Self-management and possibilities*, published five years ago (2), stating that ‘The population shall experience more years of good health and well-being and reduced social differences in health. We shall create a society that promotes the health of the entire population. The goal of increasing life expectancy shall primarily be achieved by reducing premature deaths and reducing social differences in health and life expectancy.’

The current government sees the reduction of health inequalities as an aim in itself and as a means to improve public health at large, i.e. increase the population’s life expectancy. All political parties agree that social inequalities in health comprise a public health problem and should be reduced. Against this background, the Council on Social Inequalities in Health has acted to provide useful advice to help reduce social health differences. Our recommendations are based on the already existing public health objectives of the Norwegian government.

In the Council’s mandate, a key obligation is to provide professional high quality recommendations and in general help to strengthen the Directorate of Health’s effort to reduce health differences. How to understand or define quality can be discussed. The

Council’s judgement is that the knowledge base is strong enough for giving recommendations. This view is in line with previous reviews of health inequalities on the global scene (3), in the European context (4) and in several national contexts like Great Britain (5), Denmark (6), Norway (7) and Sweden (8). The knowledge base could have been stronger and more diverse, and definitely needs strengthening. Therefore, the policies, interventions and actions that are proposed should be properly evaluated if they are acted upon.

The Council is aware that the scientific knowledge base can be challenged in particular by evidence produced by methods and strategies developed within the counterfactual paradigm (see e.g. O’Donnell et al. (9) for a comprehensive review). This evidence is considered part of the knowledge base, but is not assigned an exclusive status. An important reason for this is that in wealthy countries where the ill-health panorama is dominated by chronic diseases and the social circumstances are expected to influence health over a life span, the methods used are incapable of detecting the long-term effects that may occur (9). Hence, in addition to counterfactual evidence, the Council has adopted a broader approach and also considered the statistical associations’ strength, consistency, specificity, temporality, dose-response relationship, plausibility, and coherence (10). The members of the Council are researchers representing different disciplines. They have made these recommendations based on their knowledge of the currently best available evidence.

The Review of Social Inequalities in Health in Norway (7) provides a comprehensive overview of much of the research in the field as well as several of the challenges that remain. It also puts forward some good suggestions for measures that might be taken. Based on this review and other literature, the Council wants to provide an even clearer message. This article thus presents the targets that the Council recommends to give priority, and we hope that the government’s good intentions and plans will be converted into tangible action, set up in a manner that facilitates later evaluations.

The recommendations rest on a set of assumptions. The prevailing perspective in the field of health inequalities at a global level is that there are conditions within societies that create social inequalities in health, which again determine the average health of different social groups in a population. Norway has endorsed this view of public health. Therefore, the government should include social determinants in all public health reports.

Since there are multiple causes of health inequalities embedded in many societal spheres, it should be

recognized that there is a need for measures and instruments to be developed in sectors also outside the health sector. Examples include the welfare sector, the labour sector, the educational sector etc.

It is important to focus on the *gradient* and not just on the poverty problem. A gradient approach is the only effective approach for societies to level out health inequalities and thus enhance efforts to improve public health at large. First, government-based strategies should be aimed at the general population, and not just targeting measures specifically intended to help high-risk groups. This will benefit society as a whole. Second, the measures must be aimed at all aspects of the causal chain that lead to social inequalities in health. There should be a much stronger focus on the underlying structural causes of social differences in health. Preventing social inequalities in health warrants a focus on the complete causal chain – the causes of the causes – not just high-risk health behaviour such as smoking or unhealthy lifestyles. Such differences are primarily due to a structurally rooted skewed distribution of financial and social resources, education and employment in the population.

This does not mean that a policy to reduce differences in health cannot include elements that target individual groups. In a comprehensive strategy, targeted measures are crucial for reducing health inequalities, but it is the *universal measures* that have the greatest effect in levelling the social gradient and hence on overall public health.

We expect the government to set ambitious targets for improving public health and reducing social inequalities in health. If Norway is to achieve the goals in the 2014-2015 Public Health Report (2), it is necessary to focus on the systematic social differences in health in the population, directing attention to the gradient in health and the structural social determinants for health, and not just health behaviour and self-management. By doing so, the government's public health policy will be able to achieve the ambitious goals that have been put forward.

Fairer distribution of income (11,12,13)

Income inequality and income poverty are closely linked to the problem of health inequality

Income levels and poverty affect health, and health impacts on the distribution of income. Measures must therefore be aimed at both processes to help weaken the correlation between income/poverty and health.

From a public health perspective, the principal goal is to reduce differences in income that underlie differences in health.

Recommended measures

- Reduce economic differences in the population through more stringent progressive taxation
- Promote a general application of collective wage agreements in all industries to safeguard a living wage for all
- Raise child benefit to the inflation-adjusted level of 1996 and make it taxable
- Increase rates for financial and social security
- Evaluate 'incentive policies' to prevent unintended effects such as increasing numbers of poor

This is what we know

Wage and income differences have increased in Norway. Raising low incomes can be assumed to reduce income-related inequalities in health.

There are currently more families with children than ever before who are living in income poverty. Cuts and stagnation in several of the welfare benefits paid to these families are partly to blame for the growing poverty rate in this group. In general, we recommend an upward adjustment of financial support for families with children.

Social dumping is one mechanism that pushes down wages of people with few qualifications and in occupations and industries that are exposed to international competition. Evaluations show that action plans to combat social dumping have an impact.

Reducing benefits as a means of incentivising people of working age to take up employment (see reduction of the child supplement for disability benefit recipients) may have serious repercussions. One unintended and undesirable consequence of such a policy may therefore be that instead of the target group finding employment, they continue to receive benefits but have fewer financial resources than previously. Any measure or reform of this type should therefore be thoroughly evaluated. The question is: How many and who are not able to respond to or make use of enhanced financial incentives, and become/remain benefit recipients with even fewer financial resources and thus a higher risk of poor health?

A good childhood impacts on the entire life cycle (14,15,16,17,18)

Good life chances for all

Unequal life chances and lifestyles lead to social differences in health. What happens in the womb, in infancy and in childhood impacts on the socioeconomic status we have as adults and on our health potential through the entire life cycle.

From a public health perspective, an essential goal is to prevent and reduce negative external influences in the early life phase. This will provide a solid

foundation for good life chances, also in relation to health throughout childhood and later in life.

Recommended measures

- Increase funding for the work of child health centres and nurseries on prevention and health promotion
- Implement and follow-up the Norwegian Directorate of Health's staffing standard for child health centres and school health services
- Ensure that personnel working in services aimed at children and families are given opportunities to improve their professional competence relating to the role that childhood circumstances play in a child's development, the identification and mapping of difficult childhood circumstances, and in family guidance, through education and continued professional development
- Facilitate integrated services across sectors to enable families with complex needs to receive coordinated and comprehensive services

This is what we know

Childhood circumstances have a bearing on a child's health in both the short- and the long-term. The socio-economic conditions that children live in and the health behaviour of parents both impact on children's health and health habits later in life. The above measures will be able to address several factors.

Women who have given birth are at a higher risk of depression. Children who are brought up by mothers with long-term or recurring depression are prone to developing emotional, behavioural and social problems, and their cognitive development can also be affected.

Both pregnancy-related smoking and passive smoking may be harmful to children, inside and outside the womb. The proportion of smokers in the population is falling, and those who continue to smoke typically have low incomes and limited education. They are also more likely to be heavy smokers and compared to non-smokers, they tend to live an unhealthy lifestyle also in other ways.

Mothers who use drugs during pregnancy can inflict serious damage on their child's physical and mental health.

Nourishment for an infant after birth is vital to various health outcomes both short- and long-term. Breast milk is good for infants and is regarded as a foundation for health throughout the entire life cycle. Social inequality in breastfeeding follows the same pattern as for social inequality in health in general: Mothers with fewer socioeconomic resources are less likely to breast-feed than mothers with more socioeconomic resources.

Families with a low socioeconomic standing experience more concurrent acute and chronic stresses than families with a better standing. Parents sometimes need guidance and advice on many aspects of parenting, and vulnerable children need cross-agency support and follow-up to a greater degree than other children.

Good schools and education for all (19,20,21,22,23,24,25)

Education is an important source of knowledge, work, income and social inclusion

The risk of unemployment and exclusion from the labour market decreases with education, whereas income levels increase. Moreover, educated individuals are more likely to hold a trade union membership, be politically engaged and have on average better health.

From a public health perspective, an important goal is to provide high-quality schooling and ensure that as many pupils as possible complete upper secondary school. This may have a positive impact on living conditions and help prevent health problems later in life.

Recommended measures

- Facilitate child care enrolment for all children, 20 hours a week offered for free, strengthen active recruitment policies
- Reinforce learning of social competence throughout the entire educational system
- Improve guidance to pupils on education choices
- Introduce more flexible curricula and strengthen the element of practical work
- Improve the opportunities for adult learning for those with limited basic education

This is what we know

Investments made during childhood and adolescence are more effective than investments later in life. The child care centre provides an important foundation for educational success and has been shown to increase social mobility. Most children in Norway attend child care, but recent studies suggest that a further increase in enrolment would be beneficial. Children with an immigrant background are still underrepresented in child care. An offer of 20 hours free child care weekly combined with active recruitment have been shown to increase participation for this group. Children of immigrants perform better at school when they have had access to formal child care.

Success in the education system is correlated with later opportunities in working life, and low education levels are associated with poor health. Facilitating high-quality schooling and ensuring that as many pupils as possible complete an upper secondary education may therefore impact living conditions and prevent health problems later in life.

Initiatives for improved learning outcomes, higher completion rates and social levelling

The research literature in this field is extensive, and the causal factors are complex. However, several systematic literature reviews provide a solid basis for assessing different initiatives. The implementation is crucial to how

effective an initiative is, as is the actual content of the measure. Authorities, school owners and school heads should develop or select measures that research has shown to be effective. It is important to pay attention to local conditions, resources and available competence.

Programs that strengthen social competence, or a coordinator that ensures that all parties involved (pupils at risk, parents, teachers, the educational and psychological counselling services, health services etc.) work towards the same goal, may contribute to increasing attendance levels and improve behavior. Guidance initiatives could be advisory services or a buddy scheme. Initiatives like courses aimed at preparing participants for the next level of education help pupils look ahead and link what they are learning today to a future career or future education.

Making the school's content more attractive to more students, through flexible schemes allowing pupils to complete upper secondary school through individual curriculum goals with a greater element of practical work, is an initiative that may improve completion rates.

Healthy working life and high employment rate (26,27,28,29)

People who work enjoy better health, but some workplaces are detrimental to health

For a job not to be detrimental to an employee's health, it should provide a good physical and psychosocial working environment, as well as financial security. Having a decent job enables people to be more in control of their own life.

From a public health perspective, the primary objective is to facilitate a health-promoting working life and a high employment rate, reduce the numbers falling outside the labour market on health grounds, and safeguard sufficient social and financial security for those outside the labour market.

Recommended measures

- Strengthen the efforts to combat social dumping and the black economy
- Strengthen the Working Environment Act and the controls undertaken by the Norwegian Labour Inspection Authority
- Strengthen the cooperation between NAV, employers and the health service on an inclusive working life
- Increase the use of graded sick leave and continue to closely follow-up employees on sick leave

This is what we know

Few working environment factors show as clear a gradient as the physical factors, such as exposure to noise, hazardous pollutants, cold and vibrations. This creates occupational differences in health.

Occupational accidents often affect young people and those with an immigrant background, and primarily people with a low social position. They can have fatal consequences or result in lifelong injuries. Increased attention should be paid to preventing and/or minimizing occupational accidents, and novel preventive strategies should be considered and evaluated.

However, also psycho-social factors play a role. Self-determination in a job is a working environment factor with a strong social gradient that is also well documented as having an impact on health.

Research supports a recommendation for employment measures in the regular labour market and the use of graded sick leave. Studies indicate that such measures have a beneficial effect on health, and the evidence clearly shows that follow-up measures related to a current employer are more likely to lead to participation in the regular labour market than the alternatives. This pertains also to people with demanding psychiatric diagnoses.

Because the group outside the labour market tend to be characterised by complex problems, it is important that any measures they encounter are coordinated across sectors, such as NAV, the health service division and the education sector. For persons with musculoskeletal disorders, enhanced cooperation between employers, doctors and the employee with an aim of returning to work and adapting work tasks is also appropriate.

It is not possible to include everyone in the regular labour market. People who remain outside the labour market need financial and social security, and must be provided with the financial means to support themselves. Furthermore, they must be granted access to social arenas with meaningful activities to help prevent social isolation and loss of self-esteem and self-management skills.

Health-promoting behaviour in all social groups (30,31,32,33,34,35,36,37)

Harmful health habits are more common in groups with a low social status

Differences in health behaviour stem from unnecessary and unfair differences in social, economic and environmental living conditions. Today, most ill health in high-income countries such as Norway is caused by non-communicable diseases, and the risk factors for these disease groups are largely linked to unfavourable behaviours such as smoking, unhealthy diets, sedentary lifestyles, alcohol and drug use.

From a public health perspective, an important goal is to reduce social inequalities in health behaviours,

and particularly the differences in smoking, unhealthy diets, sedentary lifestyles and harmful alcohol use.

Recommended measures

- Strengthen tobacco and alcohol policies with measures targeting price and availability
- Strengthen measures to boost smoking cessation
- Provide free healthy meals to all school children in Norway on a daily basis
- Introduce a taxation trade-off for fruit and vegetables versus sugar, salt and fat

This is what we know

International comparative studies from a number of European countries show that the socioeconomic differences in health behaviour in Norway are among the largest in Europe. The differences in health behaviours caused by unnecessary and unfair differences in social, economic and environmental living conditions have a major bearing on the health differences. In terms of life expectancy, health behaviour largely explains why those with a university education live longer than those with only a compulsory education. Smoking is the single most important factor, with about half of the life expectancy differences being attributed to smoking habits.

For measures aimed at bringing about changes in individual health habits in the population, it is important to understand the background for the differences and to base the possible interventions on this knowledge. Otherwise, they are less likely to be effective. Research shows that social background and structural factors play a major role in social differences in health behaviour, and that measures directed at individuals rather than groups can be stigmatizing, expensive and ineffective.

Health services that reduce social differences in health (38,39,40,41,42,43,44)

Health services can reduce social inequalities in health by prioritising the most needy

Universal access to health and care services is an important welfare benefit. The thickness of a person's wallet or level of education should not determine whether a person is granted the medical services one needs. Most people claim to receive adequate help, but it is important to ensure that marginalised groups do not fall outside the healthcare system.

An evaluation of previous policies to reduce health differences in Norway shows that the health sector lags behind other social sectors in implementing measures that might reduce such differences. We believe it is time for public health services to take a more active role in combatting health inequalities by

initiating specific measures to ensure that necessary services may be granted to all members of society.

From a public health standpoint, the goal is for everyone to have equivalent access to health services, and benefit equally from such services.

Recommended measures

- Increase public funding and/or subsidies for dental care for adults, and introduce measures to incorporate dental health services for adults into the public health service
- Limit the preference for private health insurance by removing the tax deduction for businesses on such policies
- Provide free health services up to age 18, and freeze the level of co-payments for health care for adults
- Improve the statistics on the social distribution of health services related to access and outcomes

This is what we know

There are major social differences that relate to many aspects of health. Increased knowledge about differences in access to and outcomes from health care is thus warranted. However, we know that there are social inequalities in the use of specialist health services and dentists in Norway. A report by Statistics Norway shows a clear social gradient in the use of health services by income for groups with poorer health. The differences are particularly large for specialist health services with high patient fees.

The Norwegian dental care system is currently divided into a public and a private part. Adults aged 20 or more are expected to cover their own dental care costs. At the same time, there is an unmet need for dental services in low-income groups, where many report that they cannot afford to go to the dentist. A system where the state provides more subsidies or funding for dental care among the adult population is likely to reduce social inequalities in oral health.

International comparative studies show that privatisation and charging patient fees can increase social differences in health. New research shows that marketisation and privatisation of health services, as well as increasing patient fees, exacerbate social differences in health. Measures should therefore be aimed at reducing the use of patient co-payments in the public health service where possible, and initiatives to counter the privatisation and marketisation of health services in general

Structural measures and implementation (45,46,47,48)

Knowledge of social inequalities in health and recommendations in the public health reports do not facilitate sufficient action

A high level of awareness of unfair and unnecessary differences in health in a society improves the public

health policy at all levels. As such, an important aim is to expand the knowledge base of measures, initiatives and interventions that may help reduce social inequalities in health.

Recommended measures

- Evaluate the repercussions for different social groups of all relevant public initiatives, measures and reforms
- Equip all local authorities with financial instruments to systematically address social inequalities
- Appoint public health coordinators in all local authorities' planning departments or municipal secretariats to coordinate efforts to combat social inequalities in health

This is what we know

Consequences of distribution. All public initiatives, measures and reforms should be evaluated to determine whether the measure or strategy is less favourable for some groups or favours others. Social equality in health should permeate all of the authorities' daily work and reforms in all relevant sectors. This applies to all phases of reform processes: Initiation, investigation, planning, implementation and evaluation. Evaluations of relevant public policies, measures and interventions should provide knowledge about processes and effects for different socioeconomic groups.

Effort at all administrative levels. The local authorities have control over a number of instruments for reducing social differences. However, little money is provided in the national budget for local authorities' work on public health, except for the programme for public health work (*Program for folkehelsearbeid*). This means that some local authorities give the work a high priority while others do not. However, levelling the social gradient will also require policy instruments outside the control of the local authorities. The local authorities should learn more about what they can do to reduce social differences in health, and demand national initiatives in areas outside their control.

Importance of the Public Health Act. In 2012, Norway adopted the Public Health Act, in which one of the main objectives is to reduce social differences in health. This act requires local authorities to review the health challenges in their municipality. The reviews should also include assessments of how policies and measures affect different social groups. These topics should be included in a municipal plan and form the basis for policy-making and appropriate measures. The period 2011–2017 saw a large increase in the number of local authorities reviewing health challenges and using these reviews as the basis for planning and designing policies and measures. As such, the Public Health Act has played a key role in initiating public health work in the local authorities and at the local levels.

Municipal measures. Several measures instigated from local authorities have served as important tools for the prioritising of work on public health and efforts to reduce social differences in health at local levels. This particularly applies to the appointment of a public health coordinator in an almost full-time role. In 2014, 85 per cent of local authorities had a public health coordinator. The role of the public health coordinator is to bridge the gap between different agencies and departments and to help public health become a cross-sectoral responsibility. The establishment of cross-sectoral working groups and the preparation of municipal health reviews have also led to a greater focus on social inequality in the local authorities.

Conflict of interest

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References

- [1] St.meld. nr. 20 (2006–2007). Nasjonal strategi for å utjevne sosiale helseforskjeller. Oslo: Helse- og Omsorgsdepartementet.
- [2] St.meld. nr. 19 (2014–2015) Folkehelsemeldingen – Mestring og muligheter. Oslo: Helse- og Omsorgsdepartementet.
- [3] CSDH. *Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health.* Report, World Health Organization, 2008.
- [4] Marmot M. Health inequalities in the EU – Final report of a consortium. Report, European Commission/UCL Institute of Health Equity, December 2013.
- [5] Marmot M, Goldblatt P, Allen J, et al. *Fair Society Healthy Lives.* Report, UCL Institute of Health Equity, February 2010.
- [6] Diderichsen F, Andersen I and Manuel C. *Ulighed i Sundhed – årsager og indsatser.* Sundhedsstyrelsen/Københavns Universitet, Denmark, May 2011.
- [7] Dahl E, Bergslid H and van der Wel KA. *Sosial ulikhet i helse: En norsk kunnskapsoversikt.* Oslo and Akershus University College, Norway, March 2014.
- [8] Lundberg O, Albin M, Hartman L, et al. *Nästa steg på vägen mot en mer jämlik hälsa. Förslag för et långsiktig arbete för en god och jämlik hälsa. Slutbetenkände av kommisjon för jämlik hälsa. Swedish Government White Paper, SOU 2017:47.* Stockholm: Wolters Kluwers.
- [9] O'Donnell O, van Doorslaer E and van Ourti T. Health and Inequality. In: Atkinson AB and Bourguignon F (eds) *Handbook of Income Distribution. Volume 2.* Amsterdam: Elsevier, 2015, pp. 1419–1533.
- [10] Hill AB. The Environment and Disease: Association or Causation? President's Address. *Proceedings of the Royal Society of Medicine* 1965; 58: 295–300.
- [11] Elstad JI and Dahl E. Er inntektsulikhet en selvstendig risikofaktor for dødelighet? In: Mæland JG, Elstad JI, Næss Ø and Westin S. (eds) *Sosial epidemiologi. Sosiale årsaker til sykdom og helsesvikt.* Oslo: Gyldendal Akademisk, 2009, pp. 196–212.

- [12] Mortensen LH, Rehnberg J, Dahl E, et al. Shape of the association between income and mortality: a cohort study of Denmark, Finland, Norway and Sweden in 1995 and 2003. *BMJ Open* 2016; Dec 6 (12): e010974; doi: 10.1136/bmjopen-2015-010974.
- [13] Skalická V, Ringdal K and Witvliet MI. Socioeconomic inequalities in mortality and repeated measurement of explanatory risk factors in a 25 years follow-up. *PLoS One* 2015; Apr 8 10(4): e0124690. doi: 10.1371/journal.pone.0124690.
- [14] Barker DJP. *Mothers, babies and disease in later life*. Edinburgh: Churchill Livingstone, 1998.
- [15] Eberhard-Gran M, Eskild A, Tambs K, et al. Depression in postpartum and nonpostpartum women: prevalence and risk factors. *Acta Psychiatr Scand* 2002; 106: 426–33.
- [16] Lund M, Lund KE and Kvaavik E. Hardcore smokers in Norway 1996–2009. *Nicotine and Tobacco Research* 2011; 13: 1132–1139. doi: 10.1093/ntr/ntr166.
- [17] Haga SM, Ulleberg P, Slinning K, et al. A longitudinal study of postpartum depressive symptoms: multilevel growth curve analyses of emotion regulation strategies, breastfeeding self-efficacy, and social support. *Arch Womens Ment Health* 2012; 15(3): 175–84. doi: 10.1007/s00737-012-0274-2.
- [18] Kristiansen A, Lande B, Øverby NC, et al. Factors associated with exclusive breastfeeding and breastfeeding in Norway. *Public Health Nutrition* 2012; 13(12): 2087–96. doi: 10.1017/S1368980010002156.
- [19] Bakke A and Elstad JI. Kunnskapsløftet og sosioøkonomiske forskjeller i skoleresultater. In: Karseth B, Møller J and Aasen P. (eds) *Reformtakter: Om fornyelse og stabilitet i grunnsopplæringen*. Oslo: Universitetsforlaget, 2013, pp. 211–227.
- [20] Drange N and Telle K. Preschool and School Performance of Children from Immigrant Families. *Empirical Economics* 2017; 52(2): 825–867.
- [21] Drange N and Havnes T. Child care before age two and the development of language and numeracy: Evidence from a lottery. *Journal of Labor Economics* 2019; 37(2): 581–620.
- [22] Elstad JI. *Utdanning og helseulikheter. Problemstillinger og forskningsfunn*. Report, Helsedirektoratet, Oslo, August 2008.
- [23] Haugsbakken H and Buland T. *Leksehjelp - sluttrapport fra evaluering av Prosjekt leksehjelp*. Report, SINTEF, Trondheim, February, 2009.
- [24] Havnes T and Mogstad M. No Child Left Behind: Universal Child Care and Long-Run Outcomes. *American Economic Journal: Economic Policy* 2011; 3(2): 97–129.
- [25] Lillejord S, Halvorsrud K, Ruud E, et al. *Frafall i videregående opplæring. En systematisk kunnskapsoversikt*. Report, Kunnskapscenter for utdanning, Oslo, February 2015.
- [26] Nøkleby H, Blaasvær N and Berg RC. *Supported Employment for arbeidssøkere med bistandsbehov: en systematisk oversikt*. Report, Folkehelseinstituttet, Oslo, 2017.
- [27] Mehlum IS. *Betydningen av arbeidsmiljø for sosiale ulikheter i helse. Underlagsrapport til Kunnskapsoversikt om sosial ulikhet i helse: En norsk kunnskapsoversikt*. Report, Oslo and Akershus Community College/Statens arbeidsmiljøinstitutt, Oslo, 2013.
- [28] Ose SO, Bjerkan AM, Pettersen I, et al. *Evaluering av IA-avtalen (2001–2009)*. Report, SINTEF, Trondheim, June 2009.
- [29] Ose SO, Kaspersen SL, Reve SH, et al. *Sykefravær – gradering og tilrettelegging*. Report, SINTEF, Trondheim, 2012.
- [30] Bordieau P. Distinksjonen: en sosiologisk kritikk av dømmekraften. *Oslo, Pax*, 1995.
- [31] Cockerham WC. Health lifestyle theory and the convergence of agency and structure. *J Health Soc Behav* 2005 Mar; 46(1): 51–67.
- [32] Eikemo TA, Hoffmann R, Kulik MC, et al. How can inequalities in mortality be reduced? A quantitative analysis of 6 risk factors in 21 European populations. *PLoS One* 2014; 9: e110952. doi: 10.1371/journal.pone.0110952.
- [33] GDB 2016 Risk Factors Collaborators. Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet* 2017; 390: 1345–1422. doi: 10.1016/S0140-6736(17)32366-8.
- [34] World Health Organization. *Global status report on non-communicable diseases 2010*. Report, WHO, Geneva, 2011.
- [35] Mackenbach JP. Nordic paradox, Southern miracle, Eastern disaster: persistence of inequalities in mortality in Europe. *Eur J Public Health* 2017; Oct 1;27(suppl_4): 14–17. doi: 10.1093/eurpub/ckx160.
- [36] Mytton OT, Clarke D and Rayner M. Taxing unhealthy food and drinks to improve health. *BMJ* 2012; 344: e2931. doi: 10.1136/bmj.e2931.
- [37] Rose G. *The strategy of preventive medicine*. London, 1992.
- [38] Bambra C, Garthwaite K and Hunter D. All things being equal: Does it matter for equity how you organize and pay for health care? A review of the international evidence. *Int J of Health Services Research* 2014; 44(3): 457–477.
- [39] Elstad JI. Dental care coverage and income-related inequalities in foregone dental care in Europe during the great recession. *Community Dentistry and Oral Epidemiology* 2017 Aug; 45(4): 296–302. doi: 10.1111/cdoe.12288.
- [40] Elstad JI. Educational inequalities in hospital care for mortally ill patients in Norway. *Scandinavian Journal of Public Health* 2018 Feb; 46(1): 74–82. doi: 10.1177/1403494817705998.
- [41] Elstad JI. Income inequality and foregone medical care in Europe during The Great Recession: multilevel analyses of EU-SILC surveys 2008–2013. *Int J for Equity in Health* 2016; 15: 101. doi: 10.1186/s12939-016-0389-6.
- [42] Gelormino E, Bambra C and Spadea T. The Effects of Health Care Reforms on Health Inequalities: A Review and Analysis of the European Evidence Base. *Int J of Health Services* 2011; Vol (2): 209–230. doi: 10.2190/HS.41.2.b.
- [43] Gjevær Ø. *Nasjonal strategi for å utjevne sosiale helseforskjeller. I teori og praksis. Underlagsrapport til Sosial ulikhet i helse: En norsk kunnskapsoversikt*. Report, Oslo and Akershus Community College, Oslo, 2013.
- [44] Statistics Norway. *Sosial ulikhet i bruk av helsetjenester. En kartlegging*. Report, Statistics Norway, Oslo/Kongsvinger, 2017.
- [45] Fosse E and Helgesen MK. How can local governments level the social gradient in health among families with children? The case of Norway. *Int J of Child, Youth and Family Studies* 2015; 6(2): 328–346. doi: 10.18357/ijcyfs.62201513505
- [46] Hagen S, Helgesen M, Torp S and Fosse E. Health in All Policies: A cross sectional study of the public health coordinators' role in Norwegian municipalities. *Scand J of Public Health* 2015; 43(6): 597–605. doi: 10.1177/1403494815585614.
- [47] Hagen S, Torp S, Helgesen M and Fosse E. Promoting health by addressing living conditions in Norwegian municipalities. *Health Promotion International Advance Access* 2016; 32(6): 977–987. doi: 10.1093/heapro/daw052.
- [48] Helgesen MK, Fosse E and Hagen S. Capacity to reduce inequities in health in Norwegian municipalities. *Scand J of Public Health* 2017; 45 (Suppl 18): 77–82. doi: 10.1177/1403494817709412.