

# Analyzing the variation in the level of sickness absence

**Essential explanations to the ups and downs of sick leave**



# Preface

The government has commissioned the Social Insurance Agency to analyze changes in sickness absenteeism over time (S2013 / 5798 / SF). The assignment relates in particular to study; public health trends, significant explanations beyond policy change in recent decades, changes in the administration of social insurance and how the short-term sickness absence and transition to public sickness benefit has varied over time. Furthermore, a comparison with other countries implemented to increase understanding of the factors that may underlie changes in sick leave. The work has been conducted in several sub-projects that are lifted up as chapters in this report. The report concludes with a synthesis that weaves together the different elements to answer the assignment.

The mission was reported to the Government (Ministry of Health and Social Affairs) in November 2014 in the form of a Social Insurance Report. The following persons have been active in the project team for the preparation of the report; Patric Tirmén (project manager), Petra Ornstein, Erik Jönsson, Margaretha Voss, Ulrik Lidwall, Anna Persson, Edward Palmer, Hans Goine, Jonathan Nikander, Peje Bengtsson, Therese Ljung, Bahjat Khaledi, Cecilia Eek and Carlos Arreyes. They all work in the Department of Analysis and Forecast at the Swedish Social Insurance Agency.

Laura Hartman  
Head of Dept. for Analysis and Forecast  
Swedish Social Insurance Agency Laura Hartman

# Summary

In light of the large variation in the level of sickness absence during the past decades, the Social Insurance Agency been commissioned by the government to analyze the changes in sickness absence levels. The commission specifically requested an analysis of trends in public health, essential explanations to the variation in sickness absence other than policy changes, changes in the administration of social insurance, and a comparison with other countries in order to increase the understanding of factors that may underlie changes in sickness absence. The report consists of four more or less self-contained chapters. The final chapter contains a synthesis of the various explanations to the variation in sickness absence that are discussed throughout the report. The synthesis highlights the factors we believe are most essential to explain the ups and downs of sick leave in different time periods. Our results are based on a compilation of existing research, grey literature, and our own analysis.

## **The development of public health in Sweden**

The report examines whether variation in public health comprises to a major factor in explaining the variation of sickness absence. Public health is examined using indicators from the survey of living conditions (ULF), and the inpatient and mortality registries held by the National Board of Health and Welfare. The main result is that there has been no major change in public health that could explain the large variation in sickness absence. The proportion of the population reporting good or very good health has remained relatively stable and does not seem to correlate with the development of sickness absence. Similarly, the proportion reporting poor or very poor health has also been stable, with an exception for the period between 1998 and 2008, when there is a correlation with absenteeism.

## **Changes in administration**

The question of if and how the administration of the social insurance correlate with the variation in sickness absence is answered through a review of available statistics, existing studies and annual reports. However, there are few sources available from before the turn of the millennium. In this context the term administration is used in a broad sense, not only including how laws are applied. There is only one study that studies changes in the legal quality of decisions. It refers to a comparison of assessments and decisions regarding entitlement to sickness benefits. The study compares decisions from 2010 to 2013 on grants and denials when applying for sickness benefits as well as the decisions relating to the assessment of employees against the norm for jobs in the labor market, the so-called 180-day assessment. The audit was done in light of the increase in sickness absence between 2010 and 2013. The review does not support the hypothe-

sis that the legal judgments and decisions changed in such a way that they can explain the rise in sickness absence.

The broad interpretation of administration that we discuss in this report includes the assessments, the methods used and the support provided to the caseworkers under the current legislation. Our analysis shows that, within the legal frameworks that provide some room for discretion, the administration has changed over time.

Over time there has been several initiatives aimed towards increasing the rule of law and the efficiency within the social insurance administration. Shortcomings in this respect were for example identified during the period of the so-called stepwise assessments, where it often took a long time before the sickness absent individual's work ability was tested against any other work than with his/her current employer. Other such periods were those characterized by a passive management in terms of investigations, assessments, and interventions. The introduction of the insurance medical decision support and the chain of rehabilitation are examples of support and regulatory changes that have helped creating a more unified and active management. Existing studies suggest that these initiatives have contributed to a lower level of absenteeism. There are also studies showing that the methods used by caseworkers when handling cases of sick leave are important. How and when the investigations and assessments are made matters, as well as how actions are planned, implemented and monitored. However, in determining the level of sickness absence the financial resources in the administration are probably more important. In periods of declining sickness absenteeism both political and administrative officials have put focus on the sickness insurance, and provided more resources. During periods of increasing sickness absence a greater part of the available resources has been used to ensure the payment of compensation to the insured individual, which has limited the possibilities to work actively with the sick leave cases.

### **An international perspective**

Swedish sickness absence is put in an international perspective. Sweden, along with the Netherlands and Norway, were significantly above average until the early 2000s and, unlike in most other countries, in these countries absenteeism exhibits strong cyclical variation.

Generally, sick leave is higher among women than men, and absenteeism increases with age. Sweden has, in an international perspective, a high proportion women and older people in the workforce. This indicates that Sweden can be expected to have a higher and more volatile sick leave. Our country comparison of the level and development of sickness absence confirms this. However, there are also factors other than age and sex that affect the level of sick leave and we have not been able to determine the sex and age distribution's importance for sickness absence variation.

From 2009, the level of sick leave for employees in Sweden hovered around the European average, albeit with a more rapid increase. In Sweden and the Netherlands, where absenteeism has been historically high and fluctuating,

this trend has been reversed by very different policy initiatives to tighten up the institutional framework for sick leave.

### **Our main results - factors that explain variation in sickness absence**

The question of what drives variation in sickness absence level is complex. It is difficult to single out any one factor that can explain both increases and decreases throughout the time period. Our results indicate that there are different forces in motion that generates the variation we see in absenteeism. The importance of these forces varies over time, while several factors interact with, and reinforce, each other. It is clear that the legal framework is of great importance, but sickness absence has varied substantially also during periods when there were no significant policy changes.

In accordance with the commission, this report focuses on the variations in sick leave levels. However, there are forces that do not themselves fluctuate significantly over time, and therefore cannot explain the trends that we analyze, but which we still believe need to be considered when we try to understand variation in sickness absence.

One such driving force is that the general demands for participation in working life have increased. We do not claim to have elaborated on this factor to full extent, but argue that our analysis should be read in light of this trend. Swedish labor market and the Swedish working life have undergone dramatic changes in recent decades. All indicators suggest the same thing: working life places greater demands on workers in terms of communication skills, stress tolerance, flexibility, competence and endurance. Our assessment is that an increasingly demanding work tasks helps to accentuate the trends of increasing absenteeism, and conversely, to discourage downs in absenteeism. The force we are talking about seems to be consistently working in one direction.

The second factor is about norms and behaviors in the population in relation to sick leave. We have not been able to find evidence for either large or frequent fluctuations in individuals' values on attitudes to sick leave. However, we believe the reported contextual factors may be of importance as a contribution to the understanding of trends in sickness absence. When absenteeism goes down, becomes less common as well as less stressful for the administrating agents, in several cases simultaneously with rule changes in the same direction, it seems connected to a change in public behaviors/norms in a more restrictive direction. However, when absenteeism is rising, our assessment is that the opposite occurs. Contextual behavioral changes do not, in our opinion, initiate trends in sickness absence. Rather they accentuate, enhance, ongoing downturns and upturns.

The increase in sick leave during the 1980s is probably explained by a combination of several factors reinforcing each other. Our conclusion is that the significant increase is explained by three factors. The first is that women's labor force participation increased over a couple of decades until the late 1980s. Since then, women have participated in the workforce to about the same extent as men. Being in the labor force is a prerequisite to being covered by social insurance, and the development has thus made it

possible for more women to utilize sick leave. The policy had also gradually become more generous while economic upturn made the threat of unemployment empty. The consequence was that the cost of absenteeism was low both in terms of economic loss and in terms of the risk of becoming unemployed. We cannot determine the impact if these factors operate separately, but our assessment is that their interaction leads to a significant increase in sickness absence levels.

In terms of sickness absence decline in the 1990s first half can be largely explained by a combination of a more restrictive regulations and the sharp economic downturn, both of which affect the individual's incentive to be on sick leave. At the same time the flow from sick leave to early retirement increased, which reduced the number of long-term sickness cases. The administration's position to work with sickness absence also improved during this period. Taken together, these factors do influence both the number of new cases of sickness and duration of cases.

The rise in sickness absence starting in 1997 seems to be largely explained by the financial crisis leaving traces both in public (self-reported) health as well as in the labor market in terms of increased competition and greater difficulties for people with impaired health to participate in working life. Additionally, the economic upturn may have contributed a weakening of the disciplinary effect of high unemployment. The increase in the inflow into sickness absence that these factors generated forced the insurance administration to prioritize benefit payments, and thus resources to work with ongoing cases were limited. It is likely that other stakeholders, health care in particular, were negatively affected by the increase in sickness absence. This may have resulted in a change in sick leave behavior that further fueled the rise in absenteeism. The conditions for granting disability pensions were changed while the population grew older. Increasing numbers remained in the sick leave instead of leaving the workforce permanently through the early retirement scheme.

The subsequent period of decline from 2003 began with great increase in the number of individuals who were granted early retirement. There are indications suggesting that the reduction in sickness absence can, to a large part, be explained by a new approach to health insurance. Large information campaigns were carried out, the dialogue between the Social Insurance Agency and health care sector were developed and several players were involved in the discussion, for example the National Board of Health and Welfare. At the same time the administration's resources were strengthened. Both physicians and the general public sickness absence behavior changed. The application of the insurance was reformed in order to meet the goal of halving the rate of sickness absence before 2008. Regulatory changes reinforced this development. One important new policy was the so called rehabilitation chain, aimed to reduce sick leave. Also, the financial incentives to work were strengthened.

Finally, we note that a significant explanation to the current rise in sickness absence is that more individuals remain in on sick leave instead of being transferred to early retirement. It is difficult to explain the increase in inflow during the past few years. To understand the current trend, we need more

knowledge about why the psychiatric diagnoses are increasing, and why women are particularly vulnerable.

To make the summary more readable, we report in Table 1 the various factors and their importance during different up- and downturns. The table illustrates the factors we consider to be driving the development during each time period. To illustrate the factors' influence on sick leave we use plus and minus signs. Several signs indicates greater importance. If the impact is uncertain, this is indicated by a question mark and if the impact is determined to be weak or nonexistent, this is indicated by the character tilde. In the table we also indicate if the inflow and/or duration of sickness cases is most affected.

The factor that the study points to as having the greatest effect on the *variation* in sickness absence over time has been the variation in conversion of sickness benefits to disability grants. For the period 1997-2003 the table identifies a number of factors that have all worked in the same direction, and reinforced the increase in compensated days of sickness absence. The decline in 2004 was largely the result of a conversion of longer sickness cases to disability grants and the focus of all important actors on reducing the upward trend in sickness absence. Beginning with the increase in compensated days and up until the most recent decline in 2004 rule changes that affected the development in the same direction as the current trend in the period, i.e. during recovery periods rule changes reinforced the increase and during periods of decline they reinforced the downturn.

For the most recent period, 2004-2014, we have factors working in opposite directions. Some factors seem to reinforce the direction of change while others inhibit the increase. Among the latter were the rehabilitation-chain rules introduced in 2008 regulating comparison of work capacity to alternative work situations and the introduction of medically determined guidelines for sickness absence for different diagnoses. The increase in the administration's caseload also affects its capacity to work with cases, because payments of compensation are prioritized. It's unclear how the present economic setting and development of the labor market, due among other things to the fact that many of those now seeking employment have weaker labor market qualifications, have affected the development of sickness benefits. At the same time, the new rules have held back the present upturn.

**Table 1 Assessment of various factors impact on the variation in sickness absence over time**

Increased sickness absence (+) Reduced sickness absence (-) Low / No effect (~) Unknown impact (?)

	Impact on inflow and/or duration	The 80's	1991-1996	1997-2003	2004-2009	2010-2014
Changes in the labor force	inflow/duration	++	?	+	~	?
Economic cycle / labor market	Inflow	+	--	+	~	?
Regulatory framework for sickness benefit	inflow/duration	++	--	~	-	~
Disability grants	duration	~	-	+	--	++
Changes in administration	inflow/duration	?	~	~	--	~
Composition of diagnoses	inflow/duration	?	?	+	~	+
Administrative resource capacity	duration	?	-	+	-	?

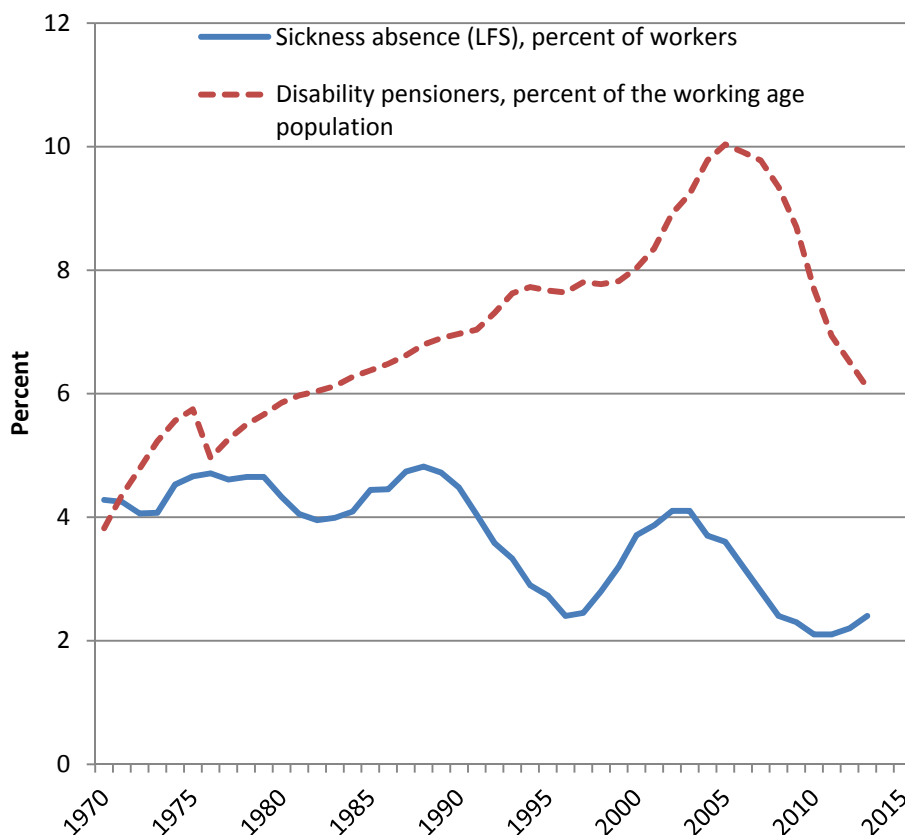
### What's in store for the future?

The focus of the report has been on the strong cyclical variation in the development of payments of compensated days of sickness, as illustrated in Figure 1. Albeit, with considerable cyclical variation, for a long time, compensated days of sickness rose, while at the same time the percent of the labor force with disability grants practically doubled from 1970. The increase in disability grants continued into the middle of the first decade of the new century, with an additional increase of 40 percent.

The continuous increase since 1970 in disability grants was broken around 2005, and a strong decline began from 2008 with the introduction of a ceiling on the number of possible days with sickness compensation in connection with the introduction of stronger criteria for granting disability. As a result, the percentage of the working age population with disability grants is now where it was in the early 1980s, and the decline is expected to continue. At the same time, compensated days of sickness are at an historical low. How then can the present situation be maintained and a repeat of past history be avoided?



**Figur 1** Sickness absence (LFS) and the percent of the working age population with disability pension 1970–2013



Source:: Labour Force Survey (LFS), Statistics Sweden and Swedish Social Insurance Agency

A sustainable solution to the problem of high and volatile sickness absence cannot be a reduction of labor supply through the disability pension scheme. Both the supply of and demand for labor needs to be strengthened in order to facilitate for individuals with impaired health to participate in the labor market. This can be done through improved treatment and rehabilitation methods and improved incentives for individuals to work. Also, employers both in the public and private sector might need stronger incentives to help employees return to work and include individuals with a weak labor market attachment due to health problems.

One way to accomplish this is through to strengthening the possibilities for people with impaired health to be a part of the labor market. Among other things, it is necessary to encourage scientific evaluations of possible initiatives and help the administration develop and implement evidence based methods. It is also necessary that the authorities concerned take the responsibility to disseminate knowledge about effective actions that can be taken at the level of the workplace and develop incentive structures to encourage the use of these actions.

## References

Alexanderson, K. (2004). *Den könssegregerade arbetsmarknaden–samband med sjukdom. I SOU 2004:43: Den könsuppdelade arbetsmarknaden, bilaga 9.* Stockholm: Fritzes.

Alexanderson, K., P. Allebeck, T. Hansson, G. Hensing, I. Jensen, A. Mastekaasa, och E. Vingård. (2003). *Sjukskrivning-orsaker, konsekvenser och praxis. En systematisk litteraturöversikt.* Stockholm: Statens beredning för medicinsk utvärdering, SBU.

Alexanderson, K., S. Marklund, E. Mittendorfer-Rutz och P. Svedberg (2011). *Studier om kvinnors och mäns sjukfrånvaro.* Karolinska Institutet.

Alexandersson, K. m.fl. (2013). *Läkares erfarenheter av arbete med sjukskrivning i Stockholm. Resultat från en enkätstudie år 2012 och jämförelser med 2008 och 2004.* Stockholm: Karolinska institutet.

Allebeck, P. och A. Mastekaasa (2004). *Risk factors for sick leave-general studies.* Scandinavian Journal of Public Health, 32(63), 49-108.

Anderson, P. M. och B.D. Meyer (2000). *The effects of the unemployment insurance payroll tax on wages, employment, claims and denials.* Journal of Public Economics, 78(1), 81-106.

Anderzén, I. och B.B. Arnetz (2005). *The impact of a prospective survey-based workplace intervention program on employee health, biologic stress markers, and organizational productivity.* Journal of Occupational and Environmental Medicine, 47(7), 671-682.

Andrén D. och M. Svensson (2012). *Part-time sick leave as a treatment method for individuals with musculoskeletal disorders.* Journal of Occupational Rehabilitation 22(3), 418-26.

Andrén, D. (2014). *Does part-time sick leave help individuals with mental disorders recover lost work capacity?* Journal of Occupational Rehabilitation, 24(2), 344-360.

Angelov, N., P. Johansson, E. Lindahl och E.A. Lindström (2011). *Kvinnors och mäns sjukfrånvaro.* IFAU Rapport 2011:2.

Angelov, N., P. Johansson, E. Lindahl (2013). *Gender differences in sickness absence and the gender division of family responsibilities.* IFAU working paper 2013:9.

Arai, M. och P.S. Thoursie (2005). *Incentives and selection in cyclical absenteeism.* Labour Economics, 12(2), 269-280.

Arbetsförmedlingen (2014a). *Var finns jobben? Bedömning till och med första halvåret 2015 och en långsiktig utblick*. Rapport.

Arbetsförmedlingen (2014b). *Arbetsmarknadsutsikterna våren 2014. Prognos för arbetsmarknaden 2014-2015*. Prognosrapport.

Arbetsmiljöverket (2011). *Arbetsmarknad i förändring – analys av regional branschförändringar*. Rapport 2011:12.

Arbetsmiljöverket (2014). *Arbetsmiljön 2014*. Rapport 2014:3.

Askildsen, J. E., E. Bratberg och Ø.A. Nilsen (2005). *Unemployment, labor force composition and sickness absence: a panel data study*. Health Economics, 14(11), 1087-1101.

Beemsterboer, W., R. Stewart, J. Groothoff, och F. Nijhuis (2009). *Literature review on sick leave determinants (1984–2004)*. International Journal of Occupational Medicine and Environmental Health 22(2), 169–179.

Bekker, M. H., C. G. Rutte, m.fl. (2009). *Sickness absence: A gender-focused review*. Psychology, Health and Medicine 14(4): 405–418.

Bertilsson M. (2013). *Work capacity and mental health - the phenomena and their importance in return to work*. Department of Public Health and Community Medicine, Institute of Medicine, Sahlgrenska Academy. Göteborg: University of Gothenburg.

Björkenstam, E., G. Ringbäck Weitoft, C. Lindholm, C. Björkenstam m.fl. (2014). *Associations between number of sick-leave days and future all-cause and cause-specific mortality: a population-based cohort study*. BMC Public Health, 14, 733.

Broström, G., P. Johansson och M. Palme (2004). *Economic incentives and gender differences in work absence behavior*. Swedish Economic Policy Review, 11, 33-63.

Bruce, C.J., och F.J. Atkins (1993). *Efficiency effects of premium-setting regimes under workers' compensation: Canada and the United States*. Journal of Labor Economics, 11(1), 38-69.

Card, D. och P.B. Levine (1994). *Unemployment insurance taxes and the cyclical and seasonal properties of unemployment*. Journal of Public Economics, 53(1), 1-29.

Eklund, J., B. Hansson, L. Karlqvist, L. Lindbeck, och W.P. Neumann (2006). *Arbetsmiljöarbete och effekter - en kunskapsöversikt*. Arbetslivsinstitutet 2006:17.

Engström, P., H. Goine, P. Johansson, E. Palmer och P. Tollin Engström (2010). *Underlättar tidiga insatser i sjukskrivningsprocessen återgången i arbete?* IFAU Rapport 2010:6.

Esping-Andersen, G. (1990/2000). *Three Worlds of Welfar Capitalism. I C. Pierson, och F. Castles (red.): The Welfare State – A Reader*. Cambridge: Polity Press.

Ferrarini, T., K. Nelson, O. Sjöberg, J. Palme (2012). *Sveriges socialförsäkringar i jämförande perspektiv. En institutionell analys av sjuk-, arbetsskade- och arbetslöshetsförsäkringarna i 18 OECD-länder 1930 till 2010*. Underlagsrapport till den parlamentariska socialförsäkringsutredningen (S 2010:04).

Ferrie, J.E., J. Vahtera, M. Kivimäki, H. Westerlund, M. Melchior et al. (2009). *Diagnosis-specific sickness absence and all-cause mortality in the GAZEL study*. *Journal of Epidemiology Community Health*, 63,50-55.

Finanspolitiska rådet (2011). *Svensk finanspolitik*. Finanspolitiska rådets rapport 2011.

Folkhälsoinstitutet och Socialstyrelsen (2013). *Folkhälsan i Sverige. Årsrapport 2013*. Stockholm: Socialstyrelsen.

Folkhälsomyndigheten (2014). *Folkhälsan i Sverige. Årsrapport 2014*. Stockholm: Folkhälsomyndigheten.

Försäkringskassan (2002) *Sjukfrånvaron i Sverige i ett europeiskt perspektiv*. Försäkringskassan analyserar 2002:11. Stockholm: Försäkringskassan.

Försäkringskassan (2005a). Avstämningsmöte. Försäkringskassans metodundersökning 2004. Försäkringskassan analyserar 2005:18.

Försäkringskassan (2005b). *Sjukfrånvaron i Sverige i ett europeiskt perspektiv 1983–2004*. Försäkringskassan redovisar 2005:6. Stockholm: Försäkringskassan.

Försäkringskassan (2005c). *Att leva på kassan. Allmän försäkring och lokal kultur*. Försäkringskassan analyserar 2005:4. Stockholm: Försäkringskassan.

Försäkringskassan (2006a). *Sjukskrivning, kulturer och attityder*. Försäkringskassan analyserar 2006:16. Stockholm: Försäkringskassan.

Försäkringskassan (2006b). *Årsredovisning 2005*. Stockholm: Försäkringskassan.

Försäkringskassan (2006c). *SASSAM-kartläggning*. Försäkringskassans metodundersökning 2004. Försäkringskassan redovisar 2006:1. Stockholm: Försäkringskassan.

Försäkringskassan (2006d). *Handläggarnas upplevelser och användning av metoder och aktiviteter*. Försäkringskassans metodundersökning 2005. Försäkringskassan analyserar 2006:23. Stockholm: Försäkringskassan.

Försäkringskassan (2007a). *Årsredovisning 2006*. Stockholm: Försäkringskassan.

Försäkringskassan (2007b). *De gemensamma metoderna i sjukförsäkringen - hur blev det?* Försäkringskassan redovisar 2007:8. Stockholm: Försäkringskassan.

Försäkringskassan (2008a). *Deltidssjukskrivning – En registerstudie över utvecklingen 1995-2006*. Socialförsäkringsrapport 2008:12. Stockholm: Försäkringskassan.

Försäkringskassan (2008b). *Årsredovisning 2007*. Stockholm: Försäkringskassan.

Försäkringskassan (2009a). *Beslutsstödet. Sjukskrivningsmönster före och efter införandet av försäkringsmedicinska rekommendationer för fysiska sjukdomar*. Socialförsäkringsrapport 2009:5. Stockholm: Försäkringskassan.

Försäkringskassan (2009b). *Sjukfrånvaron i Sverige – på väg mot europeiska nivåer? Utvecklingen i åtta länder 1990–2007*. Socialförsäkringsrapport 2009:10. Stockholm: Försäkringskassan.

Försäkringskassan (2010a). *Beslutsstödet. Sjukskrivningsmönster före och efter införandet av specifika försäkringsmedicinska rekommendationer för psykiska sjukdomar*. Socialförsäkringsrapport 2010:7. Stockholm: Försäkringskassan.

Försäkringskassan (2010b). *Tidiga insatser i sjukfallen – vad leder de till?* Socialförsäkringsrapport 2010:8. Stockholm: Försäkringskassan.

Försäkringskassan (2011a). *Nya ohälsomått inom sjukförsäkringen. En introduktion till det nya sjukpenningtalet samt nybeviljade sjukersättningar eller aktivitetsersättningar per 1000 registrerade försäkrade?* Socialförsäkringsrapport 2011:6. Stockholm: Försäkringskassan.

Försäkringskassan (2011b). *En utvärdering av sjukskrivningsprocessen efter införandet av de nya sjukskrivningsreglerna*. Socialförsäkringsrapport 2011:15. Stockholm: Försäkringskassan.

Försäkringskassan (2011c). *Mellan arbete och sjukdom. Rapport från forskarseminariet i Umeå 19-20 januari 2011*. Socialförsäkringsrapport 2011:3. Stockholm: Försäkringskassan.

Försäkringskassan (2011d). *Försäkringsmedicinska beslutsstödet, en långtidsuppföljning av förändringar i sjukskrivningsmönster*. Socialförsäkringsrapport 2011:7. Stockholm: Försäkringskassan.

Försäkringskassan (2012). *Sjukskrivningar i olika yrken under 2000-talet. Antal ersatta sjukskrivningsdagar per anställd år 2002-2010*. Socialförsäkringsrapport 2012:14. Stockholm: Försäkringskassan.

Försäkringskassan (2013a). *Socialförsäkringen i siffror 2013*. Stockholm: Försäkringskassan.

Försäkringskassan (2013b). *Sjukfrånvaro i psykiska diagnoser. Slutrapport till regeringen, dnr 009246-2013*. Stockholm: Försäkringskassan.

Försäkringskassan (2013c). *Uppföljning av sjukförsäkringens utveckling. Delredovisning 1 av regeringsuppdrag 2013*. Svar på regeringsuppdrag, dnr 3023-2013. Stockholm: Försäkringskassan.

Försäkringskassan (2013d). *Uppföljning av sjukförsäkringens utveckling, delredovisning 3 av regeringsuppdrag år 2013*. Svar på Regeringsuppdrag, dnr 3023-2013. Stockholm: Försäkringskassan.

Försäkringskassan (2013e). *Metoder för bedömning av arbetsförmåga inom sjukförsäkringen – slutrapport 2013-01-14*. Stockholm: Försäkringskassan.

Försäkringskassan (2014a). *Socialförsäkringen i siffror 2014*. Stockholm: Försäkringskassan.

Försäkringskassan (2014b). *Sjukfrånvarons utveckling Delrapport 1, år 2014*. Socialförsäkringsrapport 2014:12. Stockholm: Försäkringskassan.

Försäkringskassan (2014c). *Analys av sjukförsäkringens utveckling 2013*. Socialförsäkringsrapport 2014:6. Stockholm: Försäkringskassan.

Försäkringskassan (2014d). *Beslutsunderlag och beslut i sjukpenning ärenden – En jämförelse mellan 2010 och 2013*. Rättslig uppföljning 2014:2. Stockholm: Försäkringskassan.

Försäkringskassan (2014e). *Nya siffror om inflödet till sjukpenning. Sjukfrånvaron under sjuklöneperioden*. Socialförsäkringsrapport 2014:15. Stockholm: Försäkringskassan.

Gautier, P. och B. van der Klaauw (2011). *Att kombinera socialförsäkringar med incitament till arbete. I Långtidsutredningen 2011, bilaga 8*. Stockholm: Fritzes.

Goine, H., A. Knutsson, S. Marklund och B. Karlsson (2004). *Sickness absence and early retirement at two workplaces—effects of organisational intervention in Sweden*. Social Science and Medicine, 58(1), 99-108.

Hall, C. (2008). *Påverkades arbetslöshetstiden av sänkningen av de arbetslösas sjukpenning?* IFAU Rapport 2008:15.

Hall, C., och L. Hartman (2010). *Moral hazard among the sick and unemployed: evidence from a Swedish social insurance reform*. Empirical Economics, 39(1), 27-50.

Hemmingsson (2004). *Samband mellan sjukskrivning och arbetslöshet. I C. Högstedt, M. Bjurwald, S. Marklund, E. Palmer och T. Theorell (red): Den höga sjukfrånvaron – sanning och konsekvens*. Stockholm: Statens folkhälsoinstitut.

Hemström, Ö. (2002) *Långtidssjukskrivna, förtidspensionärer, långtidsarbetslösa och långtidsfriska. I SOU 2002:5: Handlingsplan för ökad hälsa i arbetslivet, bilaga 2:4*. Stockholm: Fritzes.

Henrekson M, K. Lantto och M. Persson (1992), *Bruk och missbruk av sjukförsäkring*. SNS Förlag, Stockholm.

Henrekson, M. och M. Persson (2004). *The effects on sick leave of changes in the sickness insurance system*. Journal of Labor Economics, 22(1), 87-113.

Hesselius, P. (2007). *Does sickness absence increase the risk of unemployment?* The Journal of Socio-Economics, 36(2), 288-310.

Hesselius, P., P. Johansson och J. Vikström (2013). *Social Behaviour in Work Absence*. The Scandinavian Journal of Economics, 115(4), 995-1019.

Hesselius, P., J.P. Nilsson, och P. Johansson (2009). *Sick of your colleagues absence?* Journal of the European Economic Association, 7(2-3), 583-594.

Hägglund, P. (2010). *Rehabiliteringskedjans effekter på sjukskrivningstiderna*. IFAU Rapport 2010:1.

Hägglund, P. och P. Skogman Thoursie (2010). *De senaste reformerna inom sjukförsäkringen: En diskussion om deras förväntade effekter*. Rapport till Finanspolitiska rådet 2010/5.

Ichino, A. och G. Maggi (1999). *Work environment and individual background: explaining regional shirking differentials in a large Italian firm*. National bureau of economic research 7415.

IFAU (2010). *Rehabiliteringskedjans effekter på sjukskrivningstiderna*. IFAU rapport 2010:1.

Inspektionen för socialförsäkringen (2011a). *Graviditetspenning och sjukpenning vid graviditet*. Rapport 2011: 16. Stockholm: Inspektionen för socialförsäkringen.

Inspektionen för socialförsäkringen (2011b). *Försäkringskassans tillämpning av den nya sjukskrivningsprocessen*. Huvudrapport. Rapport 2011:4. Stockholm: Inspektionen för socialförsäkringen.

Inspektionen för socialförsäkringen (2011c). *Effekter av tidiga insatser för sjukskrivna*. Stockholm: Inspektionen för socialförsäkringen. Rapport 2011:17.

Inspektionen för socialförsäkringen (2014a). *Effekterna av handläggarnas attityder på sjukskrivningstiderna*. Stockholm: Inspektionen för socialförsäkring. Rapport 2014:1.

Inspektionen för socialförsäkringen (2014b). *Socialförsäkringsmål i förvaltningsdomstolarna*. Rapport 2014:18. Stockholm: Inspektionen för socialförsäkringen.

Jiang GX, G. Hadlaczky och D. Wasserman. *Självordsförsök i Sverige 1987-2012*. Stockholm: Nationellt centrum för suicidforskning och prevention vid psykisk ohälsa (NASP).

Johansson E, P. Böckerman och A. Uutela (2009). *Alcohol consumption and sickness absence: evidence from microdata*. European Journal of Public Health, 19(1):19-22.

- Johansson, P. och M. Palme (1996). *Do economic incentives affect work absence? Empirical evidence using Swedish micro data*. Journal of Public Economics, 59(2), 195-218.
- Johansson, P. och M. Palme (2002). *Assessing the effect of public policy on worker absenteeism*. Journal of Human Resources, 37(2), 381-409.
- Johansson, P. och M. Palme (2005). *Moral hazard and sickness insurance*. Journal of Public Economics, 89(9), 1879-1890.
- Johnson, B. (2010). *Kampen om sjukfrånvaron*. Lund: Arkiv förlag.
- Junestav, M. (2010). *Sjukskrivning som politiskt problem i välfärdsdebatten – det politiska språket och institutionell förändring*. IFAU Rapport 2010:16.
- Järvholm, B. B. Karlsson och R. Mannelqvist (2009). *Arbetsförmåga i sjukförsäkringen – så beskrivs begreppet i lagstiftningen*. Läkartidningen 106(17).
- Jönsson L., M. Palme och I. Svensson (2011). *Påverkar folkhälsan utnyttjandet av sjukersättningen?* Ekonomisk debatt 39(4), 56-68.
- Karasek, R. (1979). *Job demands, job decision latitude and mental strain: Implications for job redesign*. Administrative Science Quarterly 24(2), 285-308.
- Karasek, R. & T. Theorell (1990). *Healthy Work: Stress, Productivity, and the Reconstruction of Working Life*. New York: Basic Books.
- Kivimäki, M., J. Head, J.E. Ferrie, M.J. Shipley, J. Vahtera och M.G. Marmot. (2003). *Sickness absence as a global measure of health: evidence from mortality in the Whitehall II prospective cohort study*. British Medical Journal, 327, 364.
- Kivimäki, M., T. Honkonen, K. Wahlbeck, M. Elovainio, J. Pentti, T. Klaukka och J. Vahtera (2007). *Organisational downsizing and increased use of psychotropic drugs among employees who remain in employment*. Journal of Epidemiology and Community Health, 61(2), 154-158.
- Kumlin, S., och B. Rothstein (2005). *Making and breaking social capital the impact of welfare-state institutions*. Comparative Political Studies, 38(4), 339-365.
- Lagerström, J. (2010). *Påverkas sjukfrånvaron av ekonomiska drivkrafter och arbetsmiljö?* IFAU Rapport 2010:9.
- Lantto, K., och E. Lindblom (1987). *Är arbetslösheten hälsosam?* Ekonomisk Debatt, 4(87), 333-6.
- Larsson, L. (2006). *Sick of being unemployed? Interactions between unemployment and sickness insurance*. The Scandinavian Journal of Economics, 108(1), 97-113.



- Larsson, L., A. Kruse, M. Palme, och M. Persson (2005). *En hållbar sjukpenningförsäkring*. Stockholm: SNS förlag.
- Larsson, T., S. Marklund och P. Westerholm (2005). *Den galopperande sjukfrånvaron: sken, fenomen och väsen*. Stockholm: Arbetslivsinstitutet.
- Léger, D., och V. Bayon (2010). *Societal costs of insomnia*. *Sleep Medicine Reviews*, 14, 379-389.
- Lindbeck, A., M. Palme och M. Persson (2006). *Job security and work absence: Evidence from a natural experiment*. CESifo working papers 1687.
- Lindbeck, A., M. Palme och M. Persson (2008). *Social interaction and sickness absence*. CESifo working paper 2215.
- Lidwall, U. (2010). *Long-term sickness absence. Aspects of Society, Work, and Family*. Department of Clinical Neuroscience, Division of Insurance Medicine. Stockholm: Karolinska Institutet.
- Lidwall, U. (2013). *Termination of sickness benefits or transition to disability pension after changes in sickness insurance: a Swedish register study*. *Disability and Rehabilitation*, 35(2), 118-124.
- Lidwall, U. (2014). *Sick leave diagnoses and return to work: a Swedish register study*. *Disability and rehabilitation*, posted online May 2014.
- Lidwall, U., Bergendorff, S., Voss, M., & Marklund, S. (2009). *Long-term sickness absence: changes in risk factors and the population at risk*. *International Journal of Occupational Medicine and Environmental Health*, 22(2), 157-168.
- Lidwall, U. och S. Marklund (2011). *Trends in long-term sickness absence in Sweden 1992–2008: the role of economic conditions, legislation, demography, work environment and alcohol consumption*. *International Journal of Social Welfare*, 20(2), 167-179.
- Lidwall U, S. Marklund och P. Skogman Thoursie (2005). *Sickness absence in Sweden. I R.Å Gustafsson och I Lundberg (red): Worklife and Health in Sweden 2004*. Stockholm: Arbetslivsinstitutet.
- Lidwall, U och P. Skogman Thoursie (2000). *Sickness absence during the last decades. I Marklund (red): Worklife and health in Sweden*. Stockholm: Arbetslivsinstitutet.
- Linden-Boström, M. och C. Persson (2013). *A selective follow-up study on a public health survey*. *European Journal of Public Health*, 23(1), 152-157.
- Marklund, S. och A. Wikman (2000) *Inledning. I Marklund (red); Arbetsliv och hälsa 2000*. Stockholm: Arbetslivsinstitutet.
- Markussen, S., och K. Røed (2012). *Social Insurance Networks*. IZA discussion paper 6446.

- Marmot M., A. Feeney, M. Shipley, F. North och S.L. Syme (1995). *Sickness absence as a measure of health status and functioning: from the UK Whitehall II study*. Journal of Epidemiology and Community Health 49(2), 124-130.
- Martikainen P., M. Laaksonen, K. Piha och T. Lallukka 2007. *Does survey non-response bias the association between occupational social class and health?* Scandinavian Journal of Public Health 35(2), 212-215.
- Mastekaasa, A. (1996). *Unemployment and health: Selection effects*. Journal of Community & Applied Social Psychology, 6(3), 189-205.
- Michie, S. och S. Williams (2003). *Reducing work related psychological ill health and sickness absence: a systematic literature review*. Occupational and Environmental Medicine 60(1), 3-9.
- MISSOC (2014). *Social Protection in the Member States of the European Union and European Economic Area and in Switzerland. Comparative Tables*.  
[http://www.missoc.org/MISSOC/INFORMATIONBASE/COMPARATIVE TABLES/MISSOCDATABASE/comparativeTablesSearchResultTree.jsp](http://www.missoc.org/MISSOC/INFORMATIONBASE/COMPARATIVE_TABLES/MISSOCDATABASE/comparativeTablesSearchResultTree.jsp)
- Neovius, K., K. Johansson, M. Kark, och M. Neovius (2009). *Obesity status and sick leave: a systematic review*. Obesity Review 10(1), 17-27.
- NHS (2012). *Guidelines on prevention and management of sickness absence* The NHS Staff Council. Working in Partnership
- Nossen, J.P. (2008). *Sykefraværet og konjunktorene - hva vet vi om sammenhengen?* Arbeid og velferd 2008:4.
- Norström, T. (2006). *Per capita alcohol consumption and sickness absence*. Addiction 101(10), 1421-1427.
- Norström, T. och I.S. Moan (2009). *Per capita alcohol consumption and sickness absence in Norway*. The European Journal of Public Health 19(4), 383-388.
- Nyman K, S. Bergendorff och E. Palmer (2002). *Den svenska sjukan: sjukfrånvaro i åtta länder*. Rapport till ESO, Expertgruppen för studier i offentlig ekonomi, DS 2002:49. Stockholm: Finansdepartementet.
- OECD (2009). *Sickness, disability and work: Breaking the barriers. Sweden: will the recent reforms make it?* Paris: OECD Publishing.
- OECD (2012). *Sick on the job? Myths and realities about mental health and work*. Paris: OECD Publishing.
- Olsson, M. (2009). *Employment protection and sickness absence*. Labour Economics, 16(2), 208-214.
- Olsson, S. (2006). *Attityder och regionala skillnader i sjukförsäkring. I Palmer (red.): SKA-projektet – Sjukförsäkring, kulturer och attityder*. Analyserar 2006:16. Försäkringskassan.

Palmer, E., I. Svensson, P. Tirmén, och N. Österlund (2008) *Sjukförmåner på deltid – vägen mot ett ökat deltagande i arbetslivet? I L. Hartman (red): Välfärd på deltid*. Stockholm: SNS förlag.

Proposition 1994/95:147. *Rätten till förtidspension och sjukpenning samt folkpension för gifta*.

Proposition 2002/03:1. *Budgetpropositionen för 2003*.

Proposition 2007/08:136. *En reformerad sjukförsäkring för ökad återgång i arbete*.

Proposition 2009/10:1. *Budgetpropositionen för 2010*.

Ramstedt M., A. Lindell och J. Raninen (2013). *Tal om alkohol 2012 – en statistisk årsrapport från Monitorprojektet*. Forskningsrapport nr 67. Stockholm: Centrum för socialvetenskaplig alkohol- och drogforskning (SoRAD).

RFV (2002) Svensk sjukfrånvaro i ett europeiskt perspektiv. RFV Analyserar 2002:11. Stockholm: Riksförsäkringsverket

RFV (2004a). *Kvinnor, män och sjukfrånvaro*. Socialförsäkringsboken 2004. Stockholm: Riksförsäkringsverket.

RFV (2004b). *Årsredovisning 2003*. Stockholm: Riksförsäkringsverket

RFV (2005a). *Årsredovisning 2004*. Stockholm: Riksförsäkringsverket

RFV (2005b). *Årsredovisning 2005*. Stockholm: Riksförsäkringsverket

Riksrevisionen (2010). *En förändrad sjukskrivningsprocess*. RiR 2010:9. Stockholm: Riksrevisionen.

SCB (2014a). *Folk- och bostadsräkningen 1980*. Hämtat från webbplats 2014-11-14. [http://www.scb.se/sv/\\_/Hitta-statistik/Historisk-statistik/Statistik-efter-serie/Sveriges-officiella-statistik-SOS-utg-1912-/Folk--och-bostadsrakningarna-1860-1990/Folk--och-bostadsrakningen-1980--Population-and-housing-census/](http://www.scb.se/sv/_/Hitta-statistik/Historisk-statistik/Statistik-efter-serie/Sveriges-officiella-statistik-SOS-utg-1912-/Folk--och-bostadsrakningarna-1860-1990/Folk--och-bostadsrakningen-1980--Population-and-housing-census/)

SCB (2003a). *Sjukfrånvarande enligt SCB och sjukskrivna enligt RFV*. Bakgrundsfakta till arbetsmarknads- och utbildningsstatistiken 2003:4. Örebro: Statistiska centralbyrån.

SCB (2003b). *Studie av bortfallet i 2000-års undersökning av levnadsförhållanden (ULF)*. Bakgrundsfakta till Befolknings- och välfärdsstatistik 2003:8. Örebro: Statistiska centralbyrån.

SCB (2006). *Ohälsa och sjukvård 1980–2005*. Levnadsförhållanden rapport 113. Örebro: Statistiska centralbyrån.

SCB (2010). *Förändringar i Undersökningarna av levnadsförhållandena 2006–2008. En studie av jämförbarheten över tid för välfärdsindikatorerna.* Bakgrundsfakta till Befolknings- och välfärdsstatistik 2010:4. Örebro: Statistiska centralbyrån.

SCB (2014b). *Yrkesstatistiken.* Hämtat från webbplats 2014-09-25.  
[http://www.statistikdatabasen.scb.se/pxweb/sv/ssd/START\\_\\_AM\\_\\_AM0208\\_\\_AM0208B/YREG18/?rxid=e6b7e098-20ff-4e43-a24d-cd7f581c937e](http://www.statistikdatabasen.scb.se/pxweb/sv/ssd/START__AM__AM0208__AM0208B/YREG18/?rxid=e6b7e098-20ff-4e43-a24d-cd7f581c937e)

Siegrist, J. (1996). *Adverse health effects of high-effort/low-reward conditions.* Journal of Occupational Health Psychology, 1(1), 27-41.

Sjögren Lindquist, G. och E. Wadensjö (2011). *Avtalsbestämda ersättningar, andra kompletterande ersättningar och arbetsutbudet.* Rapport till Expertgruppen för studier i offentlig ekonomi 2011:4.

Social Security Administration (2014). *Social Security Programs Throughout the World: Europe, 2014.* <http://www.ssa.gov/policy/docs/progdesc/ssptw/2014-2015/europe/index.html>

Socialstyrelsen (2014). *Om försäkringsmedicinskt beslutsstöd.* Hämtat från webbplats 2014-09-25.  
<http://www.socialstyrelsen.se/riktlinjer/forsakringsmedicinsktbeslutsstod/omforsakringsmedicinsktbeslutsstod>

SOU 1988:41. *Rehabiliteringsberedningens betänkande.* Stockholm: Fritzes förlag.

SOU 1989:101. *Förtidspension och rörlig pensionsålder.* Stockholm: Fritzes förlag.

SOU 1990:49. *Arbete och hälsa. Betänkande av arbetsmiljökommissionen.* Stockholm: Fritzes förlag.

SOU 2002:62. *Kunskapsläge sjukförsäkringen. Delbetänkande från Utredningen om Analys av Hälsa och Arbete (AHA-utredningen).* Stockholm: Fritzes förlag.

SOU 2003:13. *Slutbetänkande från Utredningen om analys av hälsa och arbete (AHA-utredningen).* Stockholm: Fritzes förlag.

SOU 2006:86. *Mera försäkring, mera arbete.* Stockholm: Fritzes förlag.

SOU 2006:107. *Fokus på åtgärder. En plan för effektiv rehabilitering i arbetslivet.* Stockholm: Fritzes förlag.

SOU 2009:89. *Gränlandet mellan sjukdom och arbete. Slutbetänkande av arbetsförmågeutredningen.* Stockholm: Fritzes förlag.

SOU 2011:11. *Långtidsutredningen 2011.* Stockholm: Fritzes förlag.

Socialförsäkringsutredningen (2006). *Samtal om socialförsäkring nr 14 – Nya siffror om socialförsäkringen.* Stockholm: Fritzes förlag.

- Skogman Thoursie P, U. Lidwall och S. Marklund (2005). *Trends in new disability pensions. I R.Å. Gustafsson och I. Lundberg (red): Worklife and Health in Sweden 2004*. Stockholm: Arbetslivsinstitutet.
- Socialstyrelsen (2009). *Folkhälso rapport 2009*. Stockholm: Socialstyrelsen.
- Socialstyrelsen (2013). *Sjukdomar i slutenvård 1987-2012*. Stockholm: Socialstyrelsen.
- Socialstyrelsen (2014a). *Registeruppgifter om tobaksrökningens skadeverkningar*. Hämtat från webbplats 2014-10-17.  
<http://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/19371/2014-3-4.pdf>
- Socialstyrelsen (2014b). *Cancerincidens i Sverige 2012. Nya diagnosticerade cancerfall 2012*. Hämtat från webbplats 2014-10-17.  
<http://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/19291/2013-12-17.pdf>
- Socialstyrelsen (2014c). *Om försäkringsmedicinskt beslutsstöd*. Hämtat från webbplats 2014-09-25.  
<http://www.socialstyrelsen.se/riktlinjer/forsakringsmedicinsktbeslutsstod/omforsakringsmedicinsktbeslutsstod>
- Stansfeld, S. och B. Candy (2006). *Psychosocial work environment and mental health – a meta-analytic review*. *Scandinavian Journal of Work, Environment and Health* 32(6), 443-62.
- Statistics Finland (2013a) *Unemployment rate 7.9 per cent in November*.  
[http://www.tilastokeskus.fi/til/tyti/2013/11/tyti\\_2013\\_11\\_2013-12-20\\_tie\\_001\\_en.html](http://www.tilastokeskus.fi/til/tyti/2013/11/tyti_2013_11_2013-12-20_tie_001_en.html)
- Statistics Finland (2013b) *Population by labour force status, sex and age (5 yr)* [http://193.166.171.75/database/StatFin/Tym/tyti/tyti\\_en.asp](http://193.166.171.75/database/StatFin/Tym/tyti/tyti_en.asp)
- Statskontoret (2009). *Den nya Försäkringskassan – i rätt riktning men långt kvar*. Rapport 2009:19
- Stenbeck, M. och G. Persson (2006). *The National Public Health Report 2005. Chapter 10: Working life, work environment and health*. *Scandinavian Journal of Public Health*, 34(67), 229-245.
- Svallfors, S. (1996). *Välfärdsstatens moraliska ekonomi. Välfärdsopinionen i 90-talets Sverige*. Umeå: Boréa förlag.
- Svallfors, S. (2010). *Trygg, stöttande, tillitsfull? Svenskarnas syn på socialförsäkringarna*. Underlagsrapport till den parlamentariska socialförsäkringsutredningen (S 2010:04).
- Sveriges Företagshälsor (2014). *Jobbhälsobarometern, delrapport 2014:2*.
- Söderberg, E. (2011). *Försäkringsmedicinskt beslutsstöd – en vägledning för sjukskrivning*. *Socialmedicinsk tidskrift* 88(5), 389-398.

- Theorell, T., G. Oxenstierna och H. Westerlund (2004) *Ju färre vi är tillsammans... sjukskrivningsmönster vid strukturella förändringar i C. Högstedt, M. Bjurwald, S. Marklund, E. Palmer och T. Theorell (red): Den höga sjukfrånvaron – sanning och konsekvens*. Stockholm: Statens folkhälsoinstitut.
- Topel, R.H. (1983). *On layoffs and unemployment insurance*. The American Economic Review, 541-559.
- Upmark, M., C. Edlund (2006). *Den komplexa sjukfrånvaron*. Lund: Studentlitteratur.
- Vahtera, J., M. Kivimäki, P. Forma, J. Wikström, T. Halmeenmäki, A. Linna, och J. Pentti (2005). *Organisational downsizing as a predictor of disability pension: the 10-town prospective cohort study*. Journal of Epidemiology and Community Health, 59(3), 238-242.
- Vahtera, J., M. Kivimäki, J. Pentti, A. Linna, M. Virtanen, P. Virtanen, P. och J.E. Ferrie (2004). *Organisational downsizing, sickness absence, and mortality: 10-town prospective cohort study*. BMJ, 328(7439), 555.
- Wikman, A. (2006). *Utsorterad från arbetslivet – en fördjupad analys. I J. Olofsson och M. Zavisic (red) Vägar till en öppnare arbetsmarknad*. Stockholm: Arbetslivsinstitutet.
- Wikman A., S. Marklund och K. Alexanderson (2005). *Illness, disease, and sickness absence: an empirical test of differences between concepts of ill health*. Journal of Epidemiology and Community Health, 59, 450-454.
- Åkerstedt T., G. Kecklund, L. Alfredsson och J. Selen (2007). *Predicting long-term sickness absence from sleep and fatigue*. Journal of Sleep Research, 16(4), 341-5.
- Åkerstedt, T., G. Kecklund, och J. Selen (2010). *Disturbed sleep and fatigue as predictors of return from long-term sickness absence*. Industrial Health 48(2), 209-14.
- Åmark, K. (2005). *Hundra år av välfärdspolitik: Välfärdsstatens framväxt i Norge och Sverige*. Umeå: Boréa Bokförlag.