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Work/home conflict and facilitation: COR(e) relations

A longitudinal study on work-home interaction in different occupational groups in Norway

Thesis for the degree of Philosophiae Doctor

Trondheim, December 2009

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To my mother
Acknowledgements

The inspiration to this thesis came during the work on my master thesis about burnout that I finished in 2000. Burnout is assumed to be related to chronic stress at work. However, I felt that just narrowing precursors to burnout to the work life was too simplistic as the boarders between work and home life seems to be more permeable than ever for most workers in contemporary societies. We are whole human beings, affected by both our home and work life. This became the starting point to an exiting journey in the science of work-home interaction and a four-year doctoral project in Health Science at the Norwegian University of Science and Technology (NTNU). I am very grateful to the University for providing financial support and giving me the opportunity to explore this phenomenon in depth.

I would like to express my gratitude to my main supervisor Professor Geir Arild Espnes for support and encouragement and an undoubted belief in me. Your positive attitude and quick response is highly appreciated. My gratitude also goes to my friend and collaborating partner PhD Ellen Melbye Langballe. Tank you for constructive criticism, fruitful discussions and keeping the line between Oslo and Trondheim hot through enduring phone calls and frequent e-mail contact. You have contributed especially to make this journey less lonesome. Ellen was also the person who introduced me to my subsidiary supervisor Professor Erik Falkum and the exciting longitudinal project “Burnout in eight occupational groups in Norway”.

Thank you Erik for providing valuable assistance and for letting me take part in the project and to include a scale on work-home interaction, the foundation of my thesis. The project has been founded by the Research Institute of the Norwegian Medical Association where Professor Olaf Aasland is head of the department. I am grateful for the opportunity to take part in this project and the access to the data. Geir, Ellen, Erik, and Olaf have all been co-authors on my papers. Thank you all for the comments and objections, I hope we can continue our collaboration also in the future. I also want to express my gratitude to all the participants who took time to answer the comprehensive questionnaire, not once, but twice!

Appreciations and thanks also go to all my colleagues at Institute of Social Work and Health Science and the Psychosomatic Research Group. A big hug to my research fellows Linda Erntsen, Unni Karin Moksnes, Monica Lillefjell and Marit Christensen for support and friendship. I would also like to thank Kyrre Svarva for helping me with the final layout of this thesis.
Finally, I want to express my gratitude to *all my friends* and my *loving family*! Thanks to *Anita* and *Katerine* for “taking me for a walk” regularly, clearing up my mind and to my “syforening” - *Eva, Kristin* and *Trude* – for a strong and long lasting friendship. Especially I want to express my gratefulness to my parents *Helene* and *Thor* for teaching me what a good family life is about. Thank you for all your love and support through the years and for giving me faith on myself. Words can not express my thankfulness. A huge gratitude also goes to my sister and best friend *Gunn Merete*. You and your family mean a lot to me. And last, but not least I want to express my appreciation to the boys in my life and the very essence of my own feeling of facilitation; *Frode, Jonas* and *Oliver* – for me there would not been any “family-to-work facilitation” without you. Thank you for being you.

Siw Tone Innstrand
Trondheim, November, 2009
Summary

Changes in family structure, work context, and the composition of the work force mean a host of new challenges for both men and women as they struggle to cope with the often competing pressures of work demands and personal responsibilities. However, multiple roles might also provide arenas for joy and personal growth. In contemporary societies, work and home constitute two of the most important domains in life. Knowledge of how these domains interact has profound implications for individuals, organizations, and the society.

This thesis studies both the direction of this interaction (work-to-home vs. home-to-work) and type of effect (conflict vs. facilitation). Building upon Hobfoll’s (1989) Conservation of Resources (COR) theory, it examines how individual,- (gender and job performance-based self-esteem), family,- (family structure), and organizational,- (workload and autonomy) factors, and health (burnout) relate to work-home interaction (WHI). Using a sample of employees from eight occupational groups in Norway, the thesis aims to explore the nature of WHI, who is affected, and what its consequences may be.

The findings support the four-factorial structure of WHI. Overall, being female, emotionally exhausted, having a strong sense of job performance-based self-esteem, experiencing excessive workload, and being a parent are characteristics associated with more conflict. Conversely, being female, perceiving high autonomy at work, and being part of a childless couple are characteristics associated with more facilitation. The longitudinal analysis indicates that some of these associations are reciprocally related. Thus, WHI can act as both precursor and outcome simultaneously. A particularly noticeable finding was the buffering effect of work-to-home facilitation on burnout. Similarly, although a problem in itself, disengagement seems to prevent work-to-home conflict. Methodological and theoretical implications of the findings are discussed. It is argued that as long as work and family/home are the two most important life domains in contemporary societies, a more profound understanding of the factors that affect health and well-being needs to be found in the relationship between work and home.
### Abbreviations

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<td>CFA</td>
<td>Confirmatory Factor Analyses</td>
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<td>WHI</td>
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List of papers

This thesis is based on the following four papers, which will be referred to in the text by their Roman numerals.


Introduction

Health is not bought with a chemist’s pill
Nor saved by the surgeon’s knife
Health is not the absence of ill
But the fight for the fullness of life

Piet Hein.

This poem by Piet Hein coincides with the World Health Organization (WHO) definition of health: “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (Preamble to the Constitution of the World Health Organization, 1946). The WHO defines health not only in physical terms, as the absence of disease and infirmity, but includes mental and social dimensions as well. Work and family/home life constitute the dominant life roles for most employed adults in contemporary society. How people preserve these roles and handle the interaction between them may have several different impacts on health (for a review, see Allen, Herst, Bruck, & Sutton, 2000). A recent study among male and female physicians indicates that work-home interaction plays a role above and beyond both individual factors and work-related factors in determining the level of experienced burnout (Langballe, Innstrand, Aasland, & Falkum, 2009).

Work-home conflict is an important concern for individuals, organizations and society because it is related to negative consequences like impaired health, absenteeism, job turnover, and use of health services (Allen et al., 2000; Carr, Boyar, & Gregory, 2008; Duxbury & Higgins, 2001; Duxbury, Higgins, & Johnson, 1999; Frone, 2000; Väänänen et al., 2008), and even influence on partner well-being (Bakker, Demerouti, & Dollard, 2008; Dikkers, Geurts, Kinnunen, Kompier, & Taris, 2007). Conversely, researchers have begun to recognize the positive aspects of the interaction, as recent studies have found work-home facilitation to be related to favourable outcomes like improved well-being, affective commitment, less depression and turnover intentions, motivation and productivity (Allis & O’Driscoll, 2008; Hammer et al., 2005; Hill, et al., 2007; Wayne, Randel, & Stevens, 2006). However, to date, systematic research on potential outcomes of facilitation is still lacking (O’Driscoll, Brough, & Kalliath, 2009).
A cross-cultural study by Spector et al. (2004) showed that work/family conflict was universally reported among workers in Asian, Latin American, and Anglo countries. However, comparing work-family conflict in the Netherlands, Sweden and the UK, Cousins and Tang (2004) found that despite the establishment of gender equality and work–family reconciliation policies in Sweden, higher proportions of both mothers and fathers reported high levels of conflict between their work and family lives compared to the two other countries. Work-family issues are central in Sweden, and the majority of workers report work/non-work imbalance, rather than balance (Johansson, 2002). Research of work-home interaction in Norway is scarce. It is important to learn more about both the dysfunctional, negative consequences as well as the beneficial outcomes of the interrelationship between work and home life in a Norwegian setting.

**Societal background and trends**

The family, work context, and the composition of the work force have changed considerably during the last decades in Norway, as in the rest of the Western countries. These changes profoundly affect work-home interaction. One of the major changes in the post-war period has been the dramatic entry of women into the labour force (Roos, Trigg, & Hartman, 2006). In Norway, women account for 47% of the workforce (Kristiansen, Flatebø, & Modig, 2006). The increased number of employed women has contributed to a shift from a male-breadwinner to a dual-earner household, i.e. both men and women face responsibilities at work and at home. Another change in the composition of the workforce affecting work and family is the increased proportion of educated employees. Three times as many Norwegians now have a university or college degree, compared to the 1970 figure, and just as many women as men have a higher education (Kristiansen et al., 2006). Parallel to the growth in educational and career options, the average childbearing age has increased by approximately four years to 30.3 years since the early 1970s (Kristiansen & Sandnes, 2006).

Additionally, a rapidly growing segment of the workforce is that of the “knowledge worker,” operating in the areas of product development, business consultation, and information systems (Parker, Wall, & Cordery, 2001). Developments in information technology have had major implications for the way work is conducted and where. Norway, like the other Nordic countries, is at the forefront when it comes to access to and use of ICT equipment, e.g. internet access. This is also the case for the use of personal computers at home and for the use of mobile phones (Kristiansen et al., 2006). Workplace flexibility,
defined as “the ability of workers to make choices influencing when, where, and for how long they engage in work-related tasks” (Hill, Grzywacz et al., 2008, p. 152) has been related to both health (Grzywacz, Carlson, & Shulkin, 2008) and work/family issues (Hill, Jacob et al., 2008).

Whereas the post-war period was the great era of the nuclear family, there has been a shift in the family structure from the beginning of the 1970s, with fewer marriages and increasing divorce rates (Nielsen, 2008). This development has resulted in a doubling of the number of one-person households - 38% altogether (Kristiansen et al., 2006). A study by Jacobs and Gerson (2001) suggests that it is the composition of the family with more dual-earner couples and single-parent households, rather than changes in the length of the work-week per se, that has created concern for the work-family balance. Thus, it may be the decline in support from home that gives rise to the feeling of less time and hence, work-family conflict.

These trends indicate that the current frames of work/family interaction are quite different from the frames that prevailed when the major role theories were developed. For example, the classical hypothesis linking work and home life has been criticized for being gender biased, as it was derived from research on work conceived on the basis of men’s experiences and the notion of the male breadwinner (Lambert, 1990). A comprehensive review by Allen et al. (2000) indicates a greater desire for balance between work and family lives in contemporary societies. Quality of life seems to be more easily affected by violations of this balance. By investigating consequences of structural shifts in the family and work lives of managerial women, Roos et al. (2006) found that although the family remains highly important, women’s sense of self and personal worth today increasingly depend on work experiences, compared to previous generations. Thus, “work has become a source of social integration, recreation and especially friendship, in addition to economic security” (Roos et al., 2006, p. 209). This statement coincide with findings of nationwide studies in Norway (Lund & Skjåk, 1997) and Denmark (Hoppe, 1998), which indicated that work and leisure are of equal importance. Altogether, these trends suggest that the issue of work and home will be salient in the years to come. Thus, to acquire fullness of life or health, the interaction between these two domains has to be considered.
Empirical and theoretical background

Definitions

Work-family balance

The WHI literature contains two definitions of work-family balance (Frone, 2003). The first and most widely held of them is a “lack of conflict or interference between work and family roles”. In the literature, “conflict” and “interference” are used interchangeably. The most widely cited definition of work-family conflict describes it as

…a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect. That is, participation in the work (family) role is made more difficult by virtue of participation in the family (work) role.

(Greenhaus & Beutell, 1985, p. 77)

As indicated by this definition, and largely supported empirically (e.g. Byron, 2005; Carlson & Frone, 2003), this interference may be bidirectional. Thus, work can interfere with family (work-to-family conflict) and family can interfere with work (family-to-work conflict).

However, consistent with the development of positive psychology (Seligman & Csikszentmihalyi, 2000; Seligman, Steen, Park, & Peterson, 2005), scholars have broadened the focus and started to examine how involvement in one role positively influences the other role. Work can have an independent, positive influence on family life, and family life can have an independent, positive influence on work life (Grzywacz & Marks, 2000). Thus, the second meaning of work-family balance suggests that it is more than lack of conflict, i.e. it may also indicate “the extent to which an individual is equally engaged in – and equally satisfied with– his or her work role and family role” (Greenhaus, Collins, & Shaw, 2003). For example, Greenhaus and Powell’s (2006) empirical study of work-family enrichment suggests that support and resources from one domain can enhance performance in the other domain through both instrumental (i.e. skills and money) and affective (i.e. positive moods and emotions) paths. In the recent literature, constructs representing the positive side of the work-family interface, such as positive spillover, enhancement, facilitation, and enrichment (Carlson, Kacmar, Wayne, & Grzywacz, 2006) are prevalent. In the present thesis, I use the term “facilitation”, which has been defined as
“...occurring when, by virtue of participation in one role (e.g. work), one’s performance or functioning in the other role (e.g. family) is enhanced.”


**Work-home interaction**

In the literature, the term “work/non-work interface” is used as a global concept referring to the point where “work” and “non-work” meet each other, either in a negative or positive way (Geurts & Demerouti, 2003). Most research on this topic has focused on one specific element of the non-work domain, namely the family. The main reason is that, for many individuals, the family is the major arena of their off-the-job life (Brough & O’Driscoll, 2005). Because employees have a variety of needs and responsibilities beyond those in their nearest family, I have chosen to use the term “work/home” rather than “work/family” in the present thesis. However, in some of the papers that only include respondents with a family (Paper I and Paper II), the term “work/family” is used. Similarly, the term “work/family” is used when it refers to literature using this term. In order to focus on both conflict and facilitation and on the bidirectionality of effects, the term “work-home interaction” (WHI) is used. In this thesis the Demerouti and Geurts (2004) definition of WHI has been broadened by including the resource aspect. Thus, work-home interaction is defined as follows:

A process in which one’s functioning (and behaviour) in one domain (e.g. home) is influenced (positively or negatively) by quantitative or qualitative demands/resources from the other domain (e.g. work).

**Linking mechanisms involved in WHI**

A variety of linking mechanisms has been proposed to explain the nature of the relationship between work and home life (Edwards & Rothbard, 2000), the most classical of which are *segmentation, compensation, and spillover* (Lambert, 1990; Zedeck & Mosier, 1990). *Segmentation* refers to the active separation of work and family so that the two domains do not influence one another (Edwards & Rothbard, 2000). Although this separation may result from inherent independence of the spheres, a prevalent view is that it does not occur “naturally,” but through an active attempt by the worker to separate work and family life in order to deal with work-related stress, known as psychological disengagement (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964 in Lambert, 1990). Demerouti and Geurts (2004) found that segmentation was used in one-third of their sample, i.e. work and home were treated as...
separate spheres of life. Compensation occurs when dissatisfaction in one domain makes a person increase involvement or seek rewards in the other domain (Edwards & Rothbard, 2000). Demerouti and Geurts (2004) found compensation to occur in a group experiencing both positive and negative interaction. The spillover concept refers to the effect of work and family on the other domain that makes the two domains similar or that generates similarities between them (e.g. affect, values, skills, or behaviors) (Edwards & Rothbard, 2000). The work/home literature contains empirical evidence that both positive and negative spillover occur (e.g. Byron, 2005; Demerouti & Geurts, 2004; Sumer & Knight, 2001).

Although empirical evidence suggests that all these linking mechanisms exist, they do not provide a conceptual basis for understanding the dynamics of WHI (Frone, 2003; Grandey & Cropanzano, 1999). These mechanisms are used to explain how the relationship between work and home life is linked, but they do not explain why interference or facilitation occurs. Without a comprehensive understanding of the processes which link work and family life, it is difficult to identify strategies that promote balance, or to adequately evaluate the effectiveness of existing workplace policies (Lambert, 1990). A more integrative and dynamic view of the interaction is needed. Whereas previous studies focused explicitly on the work-home interface (as did the classical hypotheses), more recent empirical studies have derived their conceptual models from more general sociological theories and from general stress models (Geurts & Demerouti, 2003).

However, many of the more prominent stress theories have been criticized for their lack of focus on the positive aspects of stress (Nelson & Simmons, 2003). One exception is the Conservation of Resources (COR) theory (Hobfoll, 1989, 2001) which encompasses several theories of stress, but extends these theories through a resource perspective. COR theory may serve as a heuristic model to WHI research as it addresses how the interaction between work and home comes about, what causes WHI, and the consequences of WHI. In this thesis I use insight from previous WHI research and COR theory to construct an integrative model of WHI and some of its core relations. The model is graphically depicted in Figure 1. It is an elaboration of Hobfoll and Shirom’s (2001) COR model of the interplay between home and work stressors, and provides a theoretical framework for the relationships examined in the present thesis. In the following sections, I demonstrate how the model can be applied to WHI research. First, I outline the theory and its general application. Second, I turn to WHI literature and examine how COR theory illuminates this area of research. Hence, the literature presented is restricted to the model and the aim of the thesis.
Conservation of resources theory applied to WHI

The basic tenet of the COR theory is that people have a deeply-rooted motivation to obtain, retain, and protect what they value, labeled *resources*. Both work and home life comprise a range of resources which are valued and sought after (i.e. see Hobfoll, 2001). The COR theory integrates work and home life through the concept of resources that join these different domains in a common economy in which resources are exchanged (Hobfoll & Freedy, 1993). As indicated by the two separate arrows between work resources and home resources in Figure 1, empirical evidence shows that this exchange is bidirectional but unique in how it operates in each direction (Byron, 2005; Carlson, Kacmar, Wayne, & Grzywacz, 2006; Grzywacz & Marks, 2000; Kinnunen & Mauno, 1998; Montgomery, Peeters, Schaufeli, & Den Ouden, 2003; Peeters, Montgomery, Bakker, & Schaufeli, 2005). Stress or conflict occurs because resources are lost, threatened, or fail to give the anticipated return in the process of juggling both work and home life (Grandey & Cropanzano, 1999). On the other hand, facilitation follows when resources contribute to the exchange of gains between the domains (Hobfoll, 1989; Wayne, Grzywacz, Carlson, & Kacmar, 2007).
Resources are defined as “…those objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions, or energies” (Hobfoll, 1989, p. 516). The three latter resources are especially relevant for the present thesis. **Objects** are valued through their physical nature or their ability to acquire a secondary status value (Hobfoll, 1989, 1998). **Personal characteristics** are those traits or skills that result from one’s orientation to the world (Wayne et al., 2007) and which are regarded as resources to the extent that they aid stress resistance (Hobfoll, 1989). Examples of personal trait resources are self-esteem and self-efficacy, whereas personal skills might be occupational skills, social aplomb, or leadership ability (Hobfoll, 1998). **Conditions** are resources that are valued and sought after, such as marriage and tenure (Hobfoll, 1989), and that are regarded as important to the extent that they promote access to or possession of other resources (Hobfoll, 1998). **Energy** resources are typified in their value in aiding the acquisition of other resources, such as time for work and family and opportunities for advancement. Thus, energy resources can be invested or retained in order to enhance resource acquisition, protect against resource loss, or combat loss cycles once they begin (Hobfoll, 1998). In addition to these resources possessed directly by individuals, **social support** is seen as a resource in that it preserves other types of resources (Hobfoll, 1989).

These resources may be rooted both in the work domain and the home domain. In Figure 1 they are labeled “work resources” and “home resources”. Hobfoll (1998, 2001) has identified 74 work-related and non-work-related resources. Examples of work-related resources are “time for work,” “stable employment,” and “support from co-workers”. Non-work-related resources are, for example, “good marriage,” “free time,” or “time with loved ones”. Losses and gains of these resources are important, because in addition to an instrumental value, they also have a symbolic value by defining social identity (Hobfoll, 1989).

The COR model expands upon previous stress models in that it not only describes what individuals do when confronted with stress,1 but also in the absence of threats. Specifically, when confronted with stress, individuals are predicted by the model to strive to minimize net loss of resources. Significant and ongoing drain of resources may provide a state of chronic stress, such as burnout (Hobfoll & Shirom, 2001). Conversely, when not currently confronted with threats, people strive to develop resource surpluses to offset the possibility of

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1 By stress I mean “the uncomfortable cognitive state resulting from exposure to a stressor that can result in psychological and physiological strain” (Hendrix, Summer, Leap, & Steel, 1995, p. 75).
future loss. When people develop resource surpluses, they are likely to experience positive
well-being and health.

Resources are not distributed equally, however, and the COR theory postulates that
those with the most resources are less vulnerable to resource loss and more capable of
resource gain. For example, a strong social network (partner, friends) provides social support
and a safety net when strain occurs. This implies that those who lack strong resource pools are
more likely to experience spirals of resource loss; initial loss begets further loss. Similarly,
those with a strong resource pool are more likely to experience spirals of resource gain. Initial
resource gain begets further resource gain (Hobfoll, 1998).

- **Personal characteristics and WHI**

Some researchers have changed the focus from asking “What is the relationship?” to “Do
people experience the relationship in different ways?” People do not simply respond to work
and family settings; rather, they bring unique qualities to the relationship. These personal
factors include demographic variables (e.g. gender), basic personality characteristics, and
work-related attitudes and values. For example, Carlson (1999) found that a type A
personality and a personal tendency towards negative affectivity played a role above and
beyond situational variables in determining the level of perceived work-family conflict. Other
research on individual differences in relation to work and home interaction has investigated
attachment style, extroversion, neuroticism, personal growth, and life role values (Aryee,
Srinivas, & Tan, 2005; Carlson & Kacmar, 2000; Grzywacz & Butler, 2005; Sumer & Knight,
2001; Wayne et al., 2004). Recently, Bakker, Demerouti, and Burke (2009) found a positive
relationship between workaholism and work-family conflict. Similarly, Wayne et al. (2006)
found that work and family identities predicted enrichment (facilitation) above and beyond
key situational factors, suggesting the importance of one’s self-concept to work and family
experiences.

The COR theory proposes that threat or loss of highly valued personal characteristics
may ensue in stress and work/home conflict. For example, prior research indicates that role
identification is positively related to time investment in that role (Rothbard & Edwards,
2003), and that highly identified roles are related to more work-home conflict (Adams, King,
& King, 1996; Byron, 2005; Frone, Russell, & Cooper, 1992; Olson-Buchanan & Boswell,
2006). However, as demonstrated by the COR theory, personal characteristics are also
regarded as resources to the extent that they aid stress resistance (Hobfoll, 1989). Job self-
efficacy is considered to be such a resource (Bandura, 1997; Wood & Bandura, 1989). For example, the findings of Erdwins and colleagues (Erdwins, Buffardi, Casper, & O’Brien, 2001) indicate that a person’s perception that he or she works for a supportive organization may enhance feelings of competency and effectiveness in his or her job which, in turn, may reduce conflict between work and family roles.

Another personal characteristic which may relate to one’s resources is gender. Despite the increase of women in the work force, women still take on the main responsibilities at home (Kitterød, 2005; Kristiansen & Sandnes, 2006). Even though the gap between the genders in Norway is among the smallest in the world when it comes to economic participation and opportunities, educational attainments, and political empowerment (Hausmann, Tyson, & Zahidi, 2008), there is a gap between principles and practice when it comes to equal opportunities for combining employment and parenthood (Bo, 2008). In a comprehensive review of work and family research, Eby and colleagues (Eby, Casper, Lockwood, Boredeaux, & Brinley, 2005) concluded that gender differences and gender role issues are essential to fully understanding the work-family interface.

- **Job characteristics and WHI**

According to the COR model, as more strain is experienced in one domain, fewer resources are available to fulfill one’s role in another domain. Thus, the experience of workload may leave fewer resources available for family demands. Conversely, the COR model posits that those with greater resources are less vulnerable to resource loss and more capable of resource gain (Hobfoll, 1989, 2001). This confers with findings suggesting that job flexibility both reduces work-family conflict and enhances work-family fit and facilitation (Grzywacz & Butler, 2005; Hill, Yang, Hawkins, & Ferris, 2004). Clark (2001) found that employees who reported high work control were more satisfied with both work and family life. Workload and autonomy are examples of energy resources that may aid the acquisition of other resources, such as time for work and family. Some of the most consistent findings in the work/non-work literature highlight a negative relationship between workload (working hours and job demands) and work-family balance, and a positive relationship between job autonomy and work-family balance (Byron, 2005; Geurts & Demerouti, 2003; Voydanoff, 2005).
• **Home characteristics and WHI**

There is convincing evidence that different home characteristics are related to WHI. For example, it has been demonstrated that marital status and the age and number of children living at home relate to conflicts between work and home (Byron, 2005; Erickson, Nichols, & Ritter, 2000; Grandey & Cropanzano, 1999; Gryzwacz & Marks, 2000; Kinnunen, Feldt, Geurts, & Pulkkinen, 2006; Kinnunen & Mauno, 1998; Mattingly & Sayer, 2006; Premeaux, Adkins, & Mossholder, 2007). Similarly, Bergman and colleagues (Bergmann, Ahmad, & Stewart, 2008) found that the more perceived responsibility at home, the higher the evening cortisol levels in both men and women.

In terms of COR theory, marriage and cohabitation are examples of condition resources that are valued and sought after by many people. It relates to conflict if this valued condition is threatened or lost in the juggling of work and home, or through a resource depletion associated with increased responsibility. However, people living with a partner may also have more resources to draw from (i.e. their spouse, more finances). For example, Wayne et al. (2006) found that having a supportive family culture was associated with greater work-family enrichment. Byron’s (2005) meta-analysis indicates that married people experience less WHI compared to single parents. Thus, being married or cohabiting may also enable facilitation instrumentally (more resources to draw on or by) or affectively (i.e. positive moods and emotions), as suggested by Greenhaus and Powell (2006).

• **Impaired health (i.e. burnout) and WHI**

Work/family conflict has negative effects on work, home life, and general well-being and health (Allen et al., 2000). For example, Frone (2000) found that employees who report work/family conflict are more likely to experience mental health problems than employees who do not.

One corollary of the COR theory is that individuals must invest resources in order to limit loss of resources, to protect resources, or to gain resources. For example, individuals experiencing stress or conflict in their interaction between work and family may need to increase their investment of time, energy, and trust in those relationships. As illustrated in Figure 1, enduring investments of resources may promote burnout. The COR theory describes burnout as a state of extreme resource depletion (Hobfoll & Shirom, 2001), a conception that was recently supported empirically in a study by Neveu (2007). In the present thesis, burnout is conceptualized and measured by the Oldenburg Burnout Inventory (OLBI; Demerouti,
1999 in Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). The OLBI includes two dimensions of burnout: exhaustion and disengagement from work. Exhaustion is defined as “a consequence of intensive physical, affective, and cognitive strain” (Demerouti et al., 2001, p. 500), resulting from prolonged exposure to certain demands (i.e. work-home conflict). Disengagement refers to “distancing oneself from one’s work, and experiencing negative attitudes toward the work object, work content, or one’s work in general” (Demerouti et al., 2001, p. 501).

Leiter (1990) found that loss of resources related to both work and family predicted burnout six months later. Similarly, Hallsten (2005) demonstrated that those who agreed with the statement that home assignments consumed a lot of energy had higher levels of burnout than those who did not. In a recent study of family involvement and burnout, ten Brummelhuis and colleagues (ten Brummelhuis, van der Lippe, Kluwer, & Flap, 2008) found family involvement to be both enriching and depleting. Thus, whereas family involvement tends to increase energy, resources, and self-esteem, it also requires time and energy.

In a study among police officers in Norway, burnout was a strong predictor of work-family conflict (Mikkelsen & Burke, 2004). This relates to another corollary of the COR theory, suggesting that those who lack resources are not only more vulnerable to resource loss, but initial loss also begets future loss, creating loss spirals (Hobfoll, 1989, 1998, 2001). This proposition has been supported by Demerouti, Bakker, and Bulters (2004), who found work-pressure, work/home conflict, and exhaustion to be reciprocally related in a loss spiral fashion.

- **Positive health (i.e. engagement) and WHI**

Seligman recently introduced the concept of positive health to underline the idea that health may be “a state beyond the mere absence of disease” (p. 3, 2008). The COR theory posits that people strive to develop resource surpluses to offset the possibility of future loss. According to the COR model, such resource surpluses are likely to provide experiences of positive well-being or eustress (Hobfoll, 1998). One of the primary indicators of the eustress response is engagement (Nelson & Simmons, 2003).

The research on job engagement, the positive antithesis of burnout, has taken two different but related paths (Maslach, Schaufeli, & Leiter, 2001). One approach regards engagement as the direct opposite of the three original burnout dimensions (Langballe, Falkum, Innstrand, & Aasland, 2006; Maslach, 1993): exhaustion, cynicism, and lack of professional efficacy. The other approach defines engagement in its own right,
operationalized as vigor, dedication, and absorption. In the OLBI, the exhaustion and disengagement subscales refer to vigor and dedication, respectively (Demerouti & Bakker, 2008). Burnout and engagement are different kinds of employee states which have different antecedents (Schaufeli, Taris, & van Rhenen, 2008). Whereas burnout is particularly related to job demands (Innstrand, Espnes, & Mykletun, 2002) engagement is more related to job resources (Maslach et al., 2001), and particularly, to social support (Schaufeli & Bakker, 2004).

The research focus on engagement is rather new, and studies examining the relationship between engagement and WHI are scarce. One exception is a longitudinal study among Finnish health care personnel which indicates that work-to-family conflicts predict low vigor (Mauno, Kinnunen, & Ruokolainen, 2007). Mauno et al.’s (2007) findings also indicate that balanced, multiple roles have positive effects, as employees with children at home felt more vigor and dedication at work than childless employees.

The COR theory further anticipates that positive experiences or resources are likely to accumulate, creating a positive spiral of resources, which, in turn, is likely to have positive health-promoting effects. Exploring positive gain spirals at work, Hakanen, Perhoniemi, and Toppinen-Tanner (2008) found support for both reciprocal gain spirals (between job resources and work engagement and between personal initiatives and work engagement) and resource caravans (from job resources through work engagement via personal initiatives to work-unit innovativeness). Similarly, Llorens et al. (2007) and Xanthopoulou et al. (2008) demonstrated positive gain spirals between resources and work engagement. Consequently, work/home facilitation may result in a positive spiral of resources as well as in positive health effects.

**Aims and research questions**

**Aims**

The aim of the present thesis was to expand our knowledge of work-home interaction (WHI) by examining specific hypotheses on the nature and consequences of WHI derived from the Conservation of Resources (COR) theory. The major objectives were to test the ability of this model to predict and explain the nature of WHI, to identify who is affected, and what the consequences of WHI may be.
Research questions

The research questions are expressed as hypotheses in the four papers enclosed in the thesis. This thesis consists of four papers with the following research questions:

1- What is the factorial structure of WHI? (Paper I)
2- Are there gender differences in WHI factor scores? (Paper I)
3- How does WHI relate to burnout? (Paper II)
4- Are personal vulnerability factors related to WHI? (Paper III)
5- Do WHI factor scores differ by family structure? (Paper IV)
6- Do the effects of workload and autonomy on WHI differ by family structure? (Paper IV)

Methods

Sample and procedure

This thesis was conducted as part of a two-wave prospective Norwegian cohort study called “A study on burnout in different occupational groups in Norway”. The main aim of the project was to investigate a wide range of research questions related to work and health within and outside the human services. Representative national samples of eight different occupational groups (lawyers, physicians, nurses, teachers, church ministers, bus drivers, and people working in advertisement and information technology) were drawn by Statistics Norway. Descriptions of the different occupational groups are enclosed in Appendix I. For each occupation, a random sample of 1000 persons was drawn from the central Norwegian registers of employees and employment. Equal numbers of males and females were drawn from all occupations except for the population of church ministers, which contained 599 men and 401 women. The description of sampling procedures is enclosed in Appendix II (in Norwegian only).

A comprehensive questionnaire was distributed by mail in October/November 2003 and October/November 2005 (see Appendix III, in Norwegian). All respondents were offered participation in a small lottery for returning the questionnaire. Recent studies indicate that lottery incentives do not alter the selection of respondents (Aadahl & Jørgensen, 2004). Those who responded at Time 1 were asked to participate again at Time 2. Attached to each questionnaire was a cover letter that explained the objective of the survey and assured respondents of the confidentiality of their responses (see Appendices III and IV, in Norwegian only).
The data collection was financed by the Research Institute of the Norwegian Medical Association.

**Response rate**

The overall response rate was 63 percent\(^2\) in the first wave. The church ministers had the highest response rate (70%), whilst those employed in advertisement had the lowest one (52%). Overall, there was a lower response rate among men in the first wave.

Only those who responded in 2003 and were alive and not hospitalized in 2005 were asked to participate by answering the same questionnaire in the second round (N = 4969). Of these, 3475 (70%) responded. Response rates by gender and occupation are presented in Figure 2.

![Response rates by gender and occupation.](image)

*Note: T1 = Time 1, T2 = Time 2.*

**Attrition rate**

Given the potential impact of selective non-responses on the validity of a study, it is important to examine the non-responses with an eye for positional bias (Taris, 2000). The systematic evaluation of responses and attrition indicates that the sample is representative of the Norwegian populations in each occupation (Wedde, Holmøy, Skaare, & Villund, 2004). Moreover, inspection of the non-response patterns revealed that whereas the average non-

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\(^2\) In Paper II the response rate was reported to be 64%; this should be 63%.
response rate was 36 percent in the first survey, the corresponding figure for the second data collection was 30 percent (see Skaare, 2006). Attrition rates between 30 and 40 percent are quite common (Taris, 2000). A misprint of page 2 and 11 in some of the second round questionnaires may have led to a lower response rate than could be expected. Although information from these missing pages was not used in the present thesis, the non-response rates indicate that generalization should be performed with caution. Appendix V provides an English summary of Statistics Norway’s evaluation of sample deviations in each occupation (Skaare, 2006; Wedde et al., 2004).

**Measures**

As different subsamples are used in the papers, the internal consistencies (Chronbach’s alphas) are reported in each paper. The internal consistencies were acceptable in all papers (for a discussion of reliability, see Discussion section, page 33).

**Work-home interaction**

At the time of the first investigation in 2003, there was only one available measure that had taken the positive side of the work-home interaction into account (Kinnunen et al., 2006). This measure was used in publications (e.g. Aryee et al., 2005; Grzywacz & Bass, 2003; Grzywacz & Marks, 2000; Wayne et al., 2004) based on the National Survey of Midlife Development conducted in the United States (MIDUS) in 1995. It was acquired from a study by Wayne et al., 2004 and translated into Norwegian by the authors. The scale was tested on a small sample prior to the distribution of the questionnaire.

The items describe two directions of influence (work-to-home vs. home-to-work) and two types of effect (conflict vs. facilitation). Sample items are “My job reduces the effort I can give to activities at home” (work-to-home conflict); “Responsibilities at home reduce the effort I can devote to my job” (home-to-work conflict); “The things I do at work help me deal with personal and practical issues at home” (work-to-home facilitation); and “Talking with someone at home helps me deal with problems at work” (home-to-work facilitation).

Some minor changes in the original scale were made to adjust the instrument to Norwegian conditions, language, and the study. A five-point response scale, ranging from totally disagree to totally agree, was chosen to minimize error due to the application of many different scales. One of the original items describing home-to-work facilitation (item 14;
“Providing for what is needed at home makes you work harder at your job”) was replaced by an item used in a study by Kirchmeyer (1992) and Sumer & Knight (2001) (“My home life develops skills in me that are useful at work”). When the scale was tested prior to the distribution of the questionnaire, all respondents had some difficulties answering this original statement. In previous studies, this item failed to produce significant factor loadings (Aryee et al., 2005), and it has also been excluded by others due to loadings on multiple factors (Grzywacz & Bass, 2003; Grzywacz & Marks, 2000). The new statement from Kirchmeyer (1992) and Sumer & Knight (2001) also parallels one of the work-to-home facilitation statements used in the scale (“The skills I use in my job are useful for things I have to do at home”). The internal reliability (Cronbach’s alpha) of the home-to-work facilitation factor in the present study was higher than the internal reliability of the original scale obtained by Wayne et al. (2004) (α = .75 vs. α = .68).

In Paper I, the fit indices, factor loadings, and modification indices of the separate Confirmatory Factor Analyses (CFA) indicated that the model could be improved in several ways. Item 1 (“My job reduces the effort I can give to activities at home”) and item 3 (“The job makes me too tired to do the things that need my attention at home”) proved to have highly correlated error terms, meaning that the fit would improve if the error terms of these items were allowed to correlate. Unless there are clear theoretical or methodological reasons for allowing measurement errors to covary, it should be avoided (Diamantopoulos & Siguaw, 2000). Correlated error terms produce multidimensional factor scores that are difficult to interpret. In this case, the content similarity of items 1 and 3 indicate that they represent precise alternatives of the same subject. This is the most plausible explanation of the high amount of shared error variance. Hence, item 3 was omitted due to previous criticism of a related item; “After work, I come home too tired to do some of the things I’d like to do”. This item has been criticized for failure to discriminate between dimensions (Carlson, Kacmar, & Williams, 2000) and to confound with its possible consequence (Geurts et. al, 2005; Kinnunen et al., 2006).

Item 7 (“A good day at work makes me a better partner at home”) loaded weakly on work-to-home facilitation (the standardized loadings ranged from 0.31 to 0.46). Moreover, in some of the occupational groups (physicians and nurses) this item was suggested to load on the work-to-home conflict dimension. The item had also been eliminated in previous studies due to their loadings on multiple factors (Grzywacz & Bass, 2003; Grzywacz & Butler, 2003; Grzywacz & Marks, 2000). Item 14 (“My home life develops skills in me that are useful at work”) was the new item included by the authors to parallel the work-to-home facilitation
measure (“The skills I use in my job are useful for things I have to do at home”). However, the modification indices suggested loadings on multiple factors and correlated error terms with its parallel statement, indicating failure to discriminate between them.

Finally, the home-to-work facilitation item 16 (“my home life helps me relax and feel ready for the next day at work”) was suggested to load on both conflict dimensions, especially the home-to-work conflict dimension. A possible explanation of this relationship with the home-to-work conflict dimension may be that a busy home life, due to the needs of small children and/or other home responsibilities, would exhaust one’s resources and thereby load on the conflict measure instead. Hochschild (1997) found that for some of the respondents in her study, home was not a place to relax, but rather another workplace. The two worlds had been reversed in the sense that the only way to get relief from the “work” of being home was to go to the “home” of work. Thus, the scale was modified accordingly, resulting in a modified work-home interaction scale. See the appendix attached to Paper I for an overview of the original items and items omitted in the scale. The modified scale was chosen for the subsequent latent mean analysis in Paper I, and in all of the analyses in Paper II, Paper III, and Paper IV.

**Burnout**

In Paper II, burnout was measured by a Norwegian version of the 16-item Oldenburg Burnout Inventory (OLBI), translated by one of the authors, back translated by a bilingual German psychiatrist and compared with the English and Swedish versions of the instrument. The construct and convergent validity of the measure have been confirmed in previous validation studies in Germany (Demerouti et al., 2001), the Netherland (Demerouti & Bakker, 2008), Greece (Demerouti, Bakker, Vardakou, & Kantas, 2003), United States (Halbesleben & Demerouti, 2005) and Norway (Falkum, Langballe, Innstrand, Aasland, & Føre, unpublished paper).

The OLBI contains two burnout dimensions: exhaustion and disengagement from work (Halbesleben & Demerouti, 2005). It describes each dimension by both positively and negatively worded items, and includes emotional, cognitive, and physical components of exhaustion (Cox, Tisserand, & Taris, 2005). In the original version of the inventory, both the Exhaustion and the Disengagement subscales were described by eight items, of which four items in each scale were positively and negatively worded, respectively. In the present Norwegian version, one of the positively worded items of the Disengagement scale was given
the opposite sign (original item: “I always find new and interesting aspects in my work,” applied item: “I am less interested in my job now than in the beginning”). Sample items are “I feel emotionally depleted by work” (exhaustion), and “With time I have lost a deep interest in my job” (disengagement). The items were scored on a 5-point scale, ranging from totally disagree to totally agree.

**Job performance-based self-esteem**

Paper III examines a hypothetical individual determinant of work-home interaction, namely job performance-based self-esteem. The job performance-based self-esteem measure was developed for the present study. Job performance-based self-esteem is based on a concept developed by Hallsten (Hallsten, 1993; Hallsten, Josephson, & Torgén, 2005) and is a three-item latent variable describing self-worth generated at work (sample items: “If I fail in my job, I am a failure as a person”, “I must succeed in my work to have a sense of worth”, and “If I don’t do a really good job, I will lose the respect of others”. The respondents expressed their perceptions of a job performance-based self-esteem on a 5-point scale (1 = totally disagree, 5 = totally agree).

**Autonomy**

The extent to which employees have the freedom to schedule work and decide how it should be carried out was assessed in Paper IV by four items: How often do you think you have: (1) “sufficient possibilities to discuss the organization of your own work”; (2) “sufficient influence on decisions regarding your own working plan” ; (3) “so much influence on your own work that you can delay issues that were planned, for example when you have too much to do”; and (4) “the possibility to take the day off or take compensatory time off, a half or a whole day, on a short notice”. The 5-point response scale ranged from never (scored 1) to often (scored 5). The autonomy scale has been used in a previous study among Norwegian physicians conducted by the Research Institute of the Norwegian Medical Association (i.e. see Aasland, Olff, Falkum, Schweder, & Ursin, 1997).

**Workload**

Workload was assessed by three items (in Paper IV): How often do you think you: (1) “work under unacceptable work pressure”; (2) “have so many job tasks that it prevents you from
working effectively”; and (3) “have problems doing special tasks without being interrupted”. The 5-point response scale ranged from never (scored 1) to often (scored 5). The workload scale has been used in a previous study among Norwegian physicians conducted by the Research Institute of the Norwegian Medical Association (i.e. see Aasland et al., 1997).

**Statistical analysis**

Descriptives, correlations, and multiple regressions were performed with the SPSS statistical package (version 13.0). Structural equation analyses were conducted using the LISREL 8.7 (LInear Structural RELationship) computer program (Jöreskog & Sörbom, 2004) with the covariance matrix of the indicators as input matrix and maximum likelihood as estimator. Missing values were handled using the listwise procedure.

Structural equation modelling (SEM) is a general statistical modelling technique, which can be viewed as a combination of factor analysis and regression or path analysis. SEM analyses test theoretical models using the scientific methods of hypothesis testing to advance our understanding of the complex relationships amongst constructs. SEM fits the aims of the present thesis. The focus in SEM is often on theoretical constructs, which are represented by latent factors. The relationships between the theoretical constructs are represented by regression or path coefficients between the factors (Hox & Bechger, 1998). The real strength of SEM is that we may specify and estimate more complicated path models with intervening variables between the independent and dependent variables and latent factors as well (Hox & Bechger, 1998). Moreover, measurement errors are corrected for when latent variables are included in SEM analyses (Mackenzie, 2001). A number of fit indices were employed in testing the fit of the proposed models to the empirical data: Chi-square statistics ($\chi^2$), the Root mean square error of approximation (RMSEA), the Goodness-of-fit index (GFI), the Non-normed fit index (NNFI), and the Comparative fit index (CFI). The three first fit measures ($\chi^2$, RMSEA, and GFI) are measures of absolute fit and describe the degree to which the overall model predicts the observed covariance or correlation matrix (Hair, Anderson, Tatham, & Black, 1998). The two remaining fit measures (NNFI and CFI) are incremental fit measures and compare the proposed model to some baseline model (Hair et al., 1998), usually the independence model (Schumacker & Lomax, 2004; Jöreskog & Sörbom, 1993). Details of the various fit indices are reported in Box I.
Box I. Fit indices utilized in the SEM analyses.

<table>
<thead>
<tr>
<th>MODEL FIT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chi-square statistics</strong></td>
</tr>
<tr>
<td>The most fundamental measure of overall fit is the likelihood-ratio chi-square ($\chi^2$). A large value of chi-square relative to the degrees of freedom signifies that the observed and estimated matrices differ considerably, due to the fact that the researcher is looking for non-significant differences (Hair et al., 1998). A non-significant chi-square value indicates that the sample covariance matrix and the reproduced model-implied covariance matrix are similar (Schumacker &amp; Lomax, 2004). However, chi-square statistics are sensitive to sample size, and it is recommended to complete this measure with other measures of fit (Diamantopoulos &amp; Siguaw, 2000; Hair et al., 1998; Sharma, 1996).</td>
</tr>
<tr>
<td><strong>Root mean square error of approximation</strong></td>
</tr>
<tr>
<td>The RMSEA is generally regarded as one of the most informative fit indices and shows “how well would the model, with unknown but optimally chosen parameter values, fit the population covariance matrix if it were available” (Diamantopoulos &amp; Siguaw, 2000). By convention, there is good model fit if RMSEA is less than or equal to .05 (Schumacker &amp; Lomax, 2004). There is an adequate fit if RMSEA is less than or equal to .08 (Brown &amp; Cudeck, 1993).</td>
</tr>
<tr>
<td><strong>Goodness-of-fit index</strong></td>
</tr>
<tr>
<td>GFI is an indicator of the relevant amount of variances and covariances accounted for by the model and thus shows how closely the model comes to perfectly reproducing the observed covariance matrix (Diamantopoulos &amp; Siguaw, 2000). As GFI often runs high compared to other fit models, some suggest using .95 as the cut-off. By convention, GFI should be equal to or greater than .90 to accept the model (Diamantopoulos &amp; Siguaw, 2000). Values close to .95 reflect a good fit (Schumacker &amp; Lomax, 2004).</td>
</tr>
<tr>
<td><strong>MODEL COMPARISON</strong></td>
</tr>
<tr>
<td><strong>Non-normed fit index</strong></td>
</tr>
<tr>
<td>The Bentler-Bonett non-normed fit index (NNFI), also labelled the Tucker-Lewis index (TLI), is found to be relatively independent of sample size. An NNFI close to 1 indicates a good fit. The recommended level of acceptable fit is .90 (Hair et al., 1998) whereas values close to .95 reflect a good model fit (Schumacker &amp; Lomax, 2004).</td>
</tr>
<tr>
<td><strong>Comparative fit index</strong></td>
</tr>
<tr>
<td>The comparative fit index (CFI) is, together with RMSEA, one of the most frequently reported fit indices (Tabachnick &amp; Fidell, 2001). A CFI close to 1 indicates a very good fit. By convention, CFI should be equal to or greater than .90 to accept the model, indicating that 90% of the covariances in the data can be reproduced by the given model (Diamantopoulos &amp; Siguaw, 2000).</td>
</tr>
</tbody>
</table>

Papers I and IV are based on the cross-sectional data from Time 1, whereas Papers II and III are longitudinal and utilize data from both survey rounds.
In Paper I, multigroup confirmatory factor analyses (CFA) were used to test the factorial structure of WHI. CFA is part of SEM and may be used to confirm that the indicators sort themselves into factors corresponding to how the researcher has linked the indicators to latent variables. Gender differences were explored by performing multigroup latent mean analyses. Since latent variables are not associated with measurement error, latent mean analysis is more sensitive than traditional statistical techniques and thereby more likely to detect between-group differences (Hancock, Lawrence, & Nevitt, 2000; Hong, Malik, & Lee, 2003; Little, 1997). Before testing between-group differences in latent means, we examined a series of measurement invariance tests as recommended by Cheung and Rensvold (2002), following the procedure suggested by Bollen (1989) and Millsap and Everson (1991). Testing for invariance involves specifying a model in which certain parameters are free to take any value across groups (the variant model), and then comparing that model with the more restrictive one in which these parameters are constrained to be equal across groups (the invariant model). A meaningful comparison can only be made if the measure is comparable across different groups (Chen, 2008). The results from the invariance tests across gender are enclosed in Appendix VI. Measurement invariance was supported as all models provided adequate fit to the data (RMSEA ≤ .08 and NNFI/CFI ≥ .90), and the change in CFI did not exceed the -0.01 threshold (Cheung & Rensvold, 2002; Vandenberg & Lance, 2000).

Both Papers II and Paper III test reciprocal relationships by means of cross-lagged SEM analyses. SEM has the advantage of determining causal priority and causal predominance when finding reciprocal relationships (De Lange, Taris, Kompier, Houtman, & Bongers, 2004). Cross-lagged techniques are particularly designed to test causal structures where measurements of the same variables have been made at two different times in the same sample (Edwards, Guppy, & Cockerton, 2007).

Although SEM contains a variety of powerful analytical techniques, it is too limited by the assumption of normality and large samples to provide confidence in the results (Hox & Bechger, 1998). These assumptions were not violated in Papers I, II, or III. However, due to the relatively few respondents compared to the number of parameters being analysed in some of the sub-samples in Paper IV (singles living alone, single parents, married/cohabiting respondents with and without children), multiple regression analyses with dummy variables and interaction effects were performed by SPSS 13. The use of dummy variables and interaction effects provides statistical power of the full sample and permits comparisons across family structure categories.
Summary of papers

Paper I

Title: Gender specific perceptions of four dimensions of the work/family interaction.
Published in Journal of Career Assessment, 2009, 17(4), 402-416.

Background: Although most work-family researchers acknowledge the bidirectional structure of work-family interaction (WFI) and that measurement should describe the components of both conflict and facilitation, there is a lack of validated scales that take this into consideration. This study aimed to test the factorial structure of a WFI instrument in terms of the direction of influence (work-to-family vs. family-to-work) and type of effect (conflict vs. facilitation) and examined gender differences along these four dimensions.

Methods: Multigroup confirmatory factor analyses (CFA) were used to test the factorial structure of WFI. Gender differences were explored by performing multigroup and separate latent mean analyses. All analyses were performed by means of LISREL (N = 3313).

Results: The hypothesized four-factor model had a clearly better fit than the alternative one-factor and two-factor models. However, separate CFAs in the eight different occupational groups revealed poor indicator properties of some of the items. Hence, a modified model was presented. Latent mean comparisons on the total sample revealed significant gender differences along all dimensions. Overall, women reported more conflict and facilitation in both directions compared to men.

Conclusion: The present study offers empirical evidence that the work-family balance is more than lack of conflict, and suggests that women are more sensitive to the interaction between work and family than are men.
Paper II

Title: Positive and negative work-family interaction and burnout: A longitudinal study of reciprocal relations.

Published in Work & Stress, 2008, 22 (1), 1-15.

Background: Some of the strongest and most consistent findings in the literature of work-family conflict support the relationships between work-family conflict and burnout. However, as previous findings are mainly based on cross-sectional data, they do not demonstrate causal relationships. This study examined the longitudinal relationship between work-family interaction (WFI) and burnout in representative samples of eight different occupational groups in Norway (N = 2235). Building upon Hobfoll’s (1989) Conservations of Resources (COR) theory, it proposed three causal models: a normal (WFI → burnout), a reverse (WFI ← burnout), and a reciprocal (WFI ↔ burnout) relationship.

Methods: Data were collected at two points in time with a two-year interval.
The proposed causal models were tested by cross-lagged structural equation modeling (SEM), using LISREL.

Results: The results of the SEM analyses revealed evidence for a normal, reverse, and reciprocal relationship between WFI and burnout. In general, lagged positive effects were found between the conflict dimensions of WFI and burnout and lagged negative effects between the facilitation dimension of WFI and burnout. One exception was a significant lagged negative effect between the burnout dimension disengagement at Time 1 and work-to-family conflict at Time 2, suggesting that distancing oneself from the job may act as a coping strategy, causing lower levels of work-to-family conflict.

Conclusion: The findings of the present study indicate that work-family interaction and burnout may act as both a predictor and a consequence of each other. The study highlights the importance of examining reversed effects whenever possible. Knowledge of reciprocal relationships is important for preventive interventions at the work place, as well as for theory building and research.
**Paper III**

Title: *Personal vulnerability and work-home interaction: The effect of job performance-based self-esteem on work/home conflict and facilitation.*

Submitted

**Background:** Studies examining how certain individual differences may impact the perception of work-home interactions (WHI) are scarce. In the present study, the longitudinal relationship between work-home interaction and job performance-based self-esteem was examined (JPB-SE). A normal (JPB-SE → WHI), a reverse (JPB-SE ← WHI), and a reciprocal (JPB-SE ↔ WHI) relationship were hypothesized. WHI was conceptualized both according to the direction of the interaction (work-to-home vs. home-to-work) and the effect (conflict vs. facilitation).

**Methods:** Cross-lagged structural equation modeling (SEM) was performed by means of LISREL in a two-wave panel group (N=3475).

**Results:** The SEM analysis indicated a reciprocal relationship, meaning that job performance-based self-esteem may act as a precursor as well as an outcome of work-home interaction. Inspection of the parameter estimates suggested that job performance-based self-esteem was positively related to work/home conflict, but only weakly associated with work/home facilitation.

**Conclusion:** Self-esteem highly contingent on job performance may be seen as a vulnerability factor for work/home conflict. As people in Western societies generally tend to view identity as merited by one’s own acts and accomplishments, a deeper understanding of how such motivational structures may impact individuals’ health and well-being is highly warranted.
**Paper IV**

Title: *Work/home conflict and facilitation across four different family structures in Norway.*
Accepted for publication: *Community, Work and Family.*

**Background:** Current changes in gender and family roles have increased the need for studies of work-home interaction (WHI) across different family structures. The present paper examines four dimensions of WHI among employees in traditional two-parent families, childless couples, single parents, and single individuals (N=2414). Building upon Hobfoll’s (1989, 2001) Conservation of Resources (COR) theory, more work/home conflict and facilitation were hypothesized among those who have acquired more roles (two-parent families), and that the effect of workload and autonomy on WHI would be stronger for this group.

**Methods:** Regression with dummy variables that distinguish between singles, single parents, and childless couples from two-parent families (reference category) was performed by SPSS 13.

**Results:** The study indicated that bidirectional work/home conflict is more profound among two-parent families and single parents than among childless couples and singles. Most home-to-work facilitation was reported among childless couples, whereas work-to-home facilitation did not seem to vary by family structure. With few exceptions, the effects of workload and autonomy on WHI did not differ by family structure.

**Conclusion:** The study highlights the need for further studies exploring the work-home interaction across different family structures, as the private lives of most employees interact significantly with their work lives and vice versa. The finding that the effects of workload and autonomy on WHI do not differ by family structure implies that reducing workload and increasing autonomy are likely to increase facilitation and reduce conflict between the two life domains for all employees.
General discussion

Despite a substantial increase in the literature on work-home interaction (WHI), the research concerning this issue remains limited both theoretically and methodologically. Proper theoretical frameworks have been lacking (Greenhaus, 2008). WHI research has been criticized for an almost exclusive focus on conflict, overreliance on cross-sectional designs, use of unsophisticated analytical techniques, and for leaving effects of individual differences largely unexamined (for reviews, see Allen et al., 2000; Byron, 2005; Eby et al., 2005).

Another criticism concerns the samples used in WHI research, which have precluded specific studies of single parents or singles without children (Casper, Eby, Bordeaux, Lockwood, & Lambert, 2007). The present thesis aims to overcome some of these limitations in the WHI literature by using a fourfold taxonomy of the work-home interaction, encompassing both the direction of influence (work-to-home vs. home-to-work) and type of effect (conflict vs. facilitation). Moreover, the data are based on large, nationally representative samples of both men and women measured at two points in time, mainly analysed by structural equation modelling (SEM). Different sub-samples (gender, family structure) as well as situational (workload and autonomy), individual (job performance-based self-esteem), and health (utbrenthet) factors are examined.

Building upon Conservation of Resources (COR) theory (Hobfoll, 1989, 2001), a major objective of this thesis has been to test the viability of a resource-based model of WHI and its ability to predict and explain the nature of WHI, to identify who is affected, and what the consequences of WHI may be. To answer these questions, four separate studies were conducted. As the research questions of these studies are discussed in detail in the included papers, the overarching aims are discussed with reference to these papers in the following section. The discussion will focus on main findings related to the general aims and their theoretical and practical implications.

The nature of WHI

Paper I supports the validity of Frone’s (2003) fourfold taxonomy in terms of the direction of influence (work-to-home vs. home-to-work) and type of effect (conflict vs. facilitation).

With regard to the issue of how conflict and facilitation are related, Paper II and Paper III support Frone’s (2003) conception that conflict and facilitation are independent constructs, as their correlations were small and in line with previous findings (for an
overview, see Greenhaus & Powell, 2006). Their independence is further supported by their relationships with different control variables. For example, Paper III indicates that whereas job performance-based self-esteem is positively related to work/home conflict, the analogous association with work/home facilitation is weak. Although more theoretical and empirical work is needed, findings from this thesis indicate that conflict and facilitation are conceptually distinct and orthogonal constructs, as suggested by Grzywacz and Butler (2005).

The respondents reported higher levels of conflict from work to home than the other way around (Papers I, II, III and IV). This is consistent with previous findings indicating that it is more “socially acceptable” to allow work to interfere with home functioning and to report this (Brotheridge & Lee, 2005; Rothbard & Edwards, 2003). Kinnunen et al., (2006) hold that this reflects the “male” model of work (e.g. full-time job, preferring work to family, overwork) – or, the central position of work in an individual’s life. They further indicate that as long as this remains the norm, home-to-work conflict is likely to be seldomly reported. Livingston and Judge (2008) state that this is most likely to happen in egalitarian societies like the Western ones.

Whereas work had a more negative impact on home life than home on work, the present study revealed, in line with other studies (e.g. Grzywacz & Marks, 2000), that facilitation from home to work tends to be more prevalent than the opposite (Papers I, II, III and IV). This indicates that the processes underlying work/home facilitation may be different from the processes underlying work/home conflict (Frone, 2003). The highest mean level of the four factors was reported on the home-to-work facilitation (Papers I, II, III and IV). The average facilitation score was higher than the corresponding conflict scores across gender, family structure, and occupational groups. The predominance of facilitation coincides with previous findings, as summarized by Greenhaus and Powell (2006), and highlights the need to include positive states in WHI research.

**The process of WHI – who is affected and what are the consequences?**

One central question frequently posed in WHI literature deals with the way WHI is embedded in the classical stressor-strain-relationship (Peeters, de Jonge, Janssen, & van der Linden, 2004). A number of antecedents as well as outcomes of WHI have been suggested (for reviews, see Allen et al., 2000; Byron, 2005). However, as these findings are mainly based on
cross-sectional data, they cannot identify causal relationships (Taris & Kompier, 2003). Recently, Steinmetz, Frese, and Schmidt (2008) located only 11 longitudinal studies on WHI and among these, only one (Demerouti et al., 2004) study which examined reversed causation with latent variable modeling. Both Demerouti et al., (2004) and Steinmetz et al. (2008) found support for a spiral model of stress, work/home conflict, and strain (e.g. depression, burnout). However, both studies are limited in that they restricted WHI to incompatibilities between work and home life. Building upon COR theory (Hobfoll, 1989, 2001), the present thesis aimed to test a resource-based model of work/home conflict and facilitation.

As indicated by the proposed model depicted in Figure 1 (page 7), there may be individual differences in the experience of WHI. As previously stated, the basic tenet of COR theory is that people have a deeply-rooted motivation to obtain, retain, and protect what they value, labeled resources (i.e. objects, personal characteristics, conditions, or energies). Paper III indicates that people whose self-esteem is strongly contingent on their performance at work are more vulnerable to work/home conflict. Thus, when self-esteem strongly depends upon performance at work, time and energy available for home life tend to be depleted, increasing the risk of work/home conflict. Moreover, in line with the COR theory, these variables are reciprocally related, thus ensuing in spirals of loss. As previously noted, work life is much more important to men and women in Western societies than is indicated by the mere financial aspects (Hoppe, 1998; Lund & Skjåk, 1997; Roos et al., 2006). If the feeling of personal worth is basically contingent upon accomplishments, appearance, and deeds (Crocker, 2002; Hallsten, 1993; Leary, 2007), job performance-based self-esteem may become a core variable in future WHI research. If its predictive value is further supported, conflict between the two domains is not likely to be reduced by mere statutory work-family arrangements. Further research should generally focus more on the meaning people attach to different domains and its implication for work-home interaction.

Gender is another personal characteristic which may relate to resources. In line with previous findings (i.e. Duxbury & Higgins, 2001; Duxbury et al., 1999) Paper I indicates that women in Norway find the juggling of work and home life less flexible than do men. Thus, even though the gap between genders in Norway is among the smallest in the world when it comes to economic participation and opportunity, educational attainment, and political empowerment (Hausmann et al., 2008), the present thesis indicates that gender differences in the experience of WHI are prevalent. As suggested in Paper I, these differences do not necessarily constitute an argument against the existence of gender equality, since they may be based on the very same equality as well. Schwatz and Ruel (2005) suggest that the increased
independence and equality of women in the labour force encourage them to express distinctive values rather than to accommodate their values to those of their husbands, resulting in strong gender differences in their self-construal consistent with gender stereotypes (Guimond et al., 2007). Whereas a strong work-related identity accords with the male-breadwinner role, it is not consistent with the female-homemaker role (Simon, 1995), thus possibly producing more guilt and conflict in women (Elvin-Nowak, 1999; Livingston & Judge, 2008). Inside the COR framework, this means that salient gender roles or social identities may be threatened in the juggling of work and home life.

Nevertheless, although women reported more conflict, they also reported more facilitation. A similar finding was recently reported by van Steenbergen, Ellemers, and Mooijjaart (2007), who argue that combining the work role with other roles in life might have different psychological meanings for women and men. Simon (1997) demonstrated that parenthood simultaneously involved benefits and costs and was a source of positive and negative emotions, especially among mothers. Thus, it could be argued that despite the cost of juggling work and home life, multiple roles imply that more resources are disposed of, with positive consequences particularly for women.

However, resources are not distributed equally, and COR theory postulates that those who lack strong resource pools are more likely to experience spirals of resource loss; initial losses beget further losses. Papers II, III and IV support this conception. Whereas it has previously been assumed that work/home conflict may have adverse effects on health (for a review, see Allen et al., 2000), this thesis indicates that impaired health may also exacerbate work/home conflict (Paper II). The initial experience of emotional exhaustion is associated with increased work/home conflict two years later. Paper III indicates that work/home conflict and job performance-based self-esteem are reciprocally and positively related. Similarly, in Paper IV workload was positively related to work/home conflict, suggesting that initial losses beget further losses. Moreover, the effect of workload on work-to-home conflict was even stronger with singles, indicating that they may lack social support when stress occurs, as proposed by the COR theory. Conversely, the positive association between autonomy and work/home facilitation found in Paper IV support the COR proposition that those with a strong resource pool are more likely to experience spirals of resource gain (Hobfoll, 1998). This result is also in line with previous research findings (Byron, 2005; Geurts & Demerouti, 2003; Voydanoff, 2005). The effect of autonomy did not differ across family structures.

The COR model expands upon previous stress theories in that it not only states what individuals do when confronted with stress, but also in the absence of threats. Specifically,
when confronted with stress, individuals are predicted by the model to strive to minimize net loss of resources. Significant and ongoing drain of resources may produce a state of chronic strain, such as burnout (Hobfoll & Shirom, 2001). Conversely, when not currently confronted with threats, people strive to develop resource surpluses to offset the possibility of future loss. When people develop resource surpluses, they are likely to experience positive well-being and health. Paper II empirically supports these proposals; work/home conflict seems to be a resource depletion ensuing in burnout. Moreover, an initial loss seems to beget further losses as exhaustion seems to provide even more conflict between work and home, providing a spiral of resource loss as suggested by the COR theory. On the other hand, a positive interaction between work and home may in itself be regarded as a resource surplus, as a high initial level of work/home facilitation seems to buffer against burnout, providing spirals of resource gain. Moreover, Paper II indicates that a strong sense of disengagement predicts less work-to-home conflict. Psychological disengagement may be an active attempt to separate work and home life in order to deal with work-related stress (Kahn et al., 1964 in Lambert, 1990).

Altogether, this thesis suggests that the COR theory is a productive theoretical framework, particularly by its focus on the gain of resources in the exchange of resources between work and home. Thereby, the theory departs from classical perspectives that tend to downplay the positive aspect of the interaction. By explaining the motivational processes behind WHI, it suggests vulnerability and resilience factors of WHI. Specifically, having a strong sense of job performance-based self-esteem, being female, emotionally exhausted, experiencing excessive workload and being a parent are associated with more risk of work/home conflict. Conversely, being female, having a sense of work autonomy, and being married/cohabiting without children are associated with more work/home facilitation. Disengagement, although a problem in itself, may prevent work-to-home conflict. The findings of this thesis also empirically support the COR theory’s propositions of spirals of resource gain and loss (Hobfoll, 1989, 2001) and suggest that WHI may be a precursor as well as an outcome variable. Clearly, if the findings of spirals of gain and loss in the present study are replicated in future empirical research, the practical utility for organizations would be significant.
Implications

This thesis supports a four-factorial structure of WHI comprising both the bi-directional dimension (work-to-home, home-to-work) and its effect (conflict and facilitation). Moreover, our findings suggest that different processes may underlie these components. This has both practical and theoretical implications.

In terms of theoretical implications, the findings highlight the importance of exploring the whole WHI nexus to understand the work-home balance. For example, our understanding of work-home interaction is incomplete without consideration of facilitation, since facilitation contributes to an understanding of work-home dynamics above and beyond conflict. As different processes seem to underlie the different components, it is unlikely that models of work/home conflict will effectively inform attempts to enhance work/home facilitation and vice versa.

In terms of practical implications, the results suggest that organizations cannot preserve or develop the health and well-being of employees without considering non-work influences. For example, approximately 20% of the variance of burnout was explained by the work-family interaction model. Thus, employers should, for instance, in the regular dialogues on employee development and job satisfaction, systematically evaluate the interaction between work and home, as conflict between the two life arenas negatively impacts the health and well-being of the employee. A facilitating relationship, however, may buffer against adverse organizational outcomes like burnout. Hence, increased attention needs to be given to how facilitation can be developed and cultivated. As demonstrated, the different WHI components have different antecedents, and may therefore require different interventions (i.e. see Innstrand, Espnes, & Mykletun, 2004). By examining both the pros and cons of work-home interface, empirical findings may emerge that are obvious targets of health promotion and risk prevention programs, respectively.

In sum, scholars and organizations must recognize that integrating work and home life is not simply a matter of reducing work/home conflict; taking proactive steps to encourage the beneficial effects of the home and work life on each other is also desirable.
Reliability and validity

Reliability is inversely related to the amount of random error in the measurement process and has two main aspects: internal consistency and repeatability. The internal consistency of a measure can be estimated in a variety of ways. The most widely used coefficient is Cronbach’s alpha (Henson, 2001), which is equal to the average of all possible split-half correlations for a composite scale, and which increases by the average correlations among the items and by the number of items (Nunnally & Bernstein, 1994). A Cronbach’s alpha coefficient above .70 is normally considered an indication of acceptable internal consistency (Nunnally & Bernstein, 1994). All the scales used in this thesis had alphas ≥ .70, except for the “family-to-work-facilitation” scale measured at Time 1 (reported in Paper II), the alpha of which was α = .69. Overall, the psychometric properties (internal consistencies and scale inter-correlations) of the modified, Norwegian version of the work/home interaction scale are quite similar to those found in other studies (Aryee et al., 2005; Grzywacz & Butler, 2005; Grzywacz & Marks, 2000; Wayne et al., 2004).

Validity concerns how well a variable measures what it is supposed to measure (Nunnally & Bernstein, 1994). It thus primarily relates to the amount of non-random or systematic error in the measurement process, but also indirectly to the amount of random error, since to have a valid measure, one must have a reliable one. However, a reliable measure does not mean that it is valid as well, i.e. reliability is a necessary, but not sufficient, condition for validity. Although the four dimensions of the work-home interaction put forward in this thesis are consistent with theoretical and empirical discussions as well as everyday parlance, the results need to be re-examined. Even though the four-factorial structure of WHI was supported in Paper I, there is also a question of model-reality consistency (Bollen, 1989). We can reject a model, but we can never prove a model to be valid. A good model-to-data fit does not mean that we have identified the true model. Alternative models may capture the reality of work-home interaction better than the present model. Due to unexpected properties of some of the items in the original WHI instrument revealed in Paper I, a modified scale was used in the following analysis and papers. Although the modifications were substantively meaningful and in line with previous findings, the resulting model is in part data driven, and preferably should have been cross-validated against an independent sample, as suggested by MacCallum and Austin (2000). Instead, the WHI scale was validated by multi-group analysis and separate CFAs in different occupational
groups. Moreover, with only two items representing the home-to-work facilitation in the modified model of WHI, the construct validity may have been weakened (Messick, 1995). A suggestion for future research is to use a broader set of items to represent this dimension.

Limitations

Although the results of the present thesis provide new insight into the nature of WHI and its associations, the findings and conclusions should be considered with some methodological and theoretical issues in mind:

Methodological issues

Our design addresses the individual perceptions of WHI, as does most of the work-home research (Casper et al., 2007), i.e. it does not address the understanding of how WHI influences families or other members of the organization. Moreover, all data used were self-reported, which implies a certain risk that findings are based on common-method variance (Podsakoff, MacKenzie, Jeong-Yeon Lee, & Podsakoff, 2003). Parallel data from family members, peers, and supervisors are therefore warranted as recently noted by Bakker and colleagues (2009). Furthermore, all papers in this thesis are based on quantitative data. Qualitative, in-depth studies could contribute important information, especially because the area of facilitation is in its relative infancy, and there is a need for further hypotheses and theory building (Eby et al., 2005).

Although superior to cross-sectional studies, longitudinal designs have drawbacks as well (Taris & Kompier, 2003). There is an issue of selective attrition and testing effects. The former may be particularly related to Paper II, which examines the relationship between WHI and burnout. As only healthy workers remained in the analysis, the strength of the associations among these variables may have been underestimated. Also, testing effects (i.e. the respondents lose interest or are more sensitive the second time) may be present in the longitudinal studies (Paper II and Paper III).

Although we have not proved the existence of causal relationships (Taris & Kompier, 2003), the test of alternative models (normal, reversed, and reciprocal), the strength of some of the associations found, as well as the use of analyses (cross-lagged SEM analyses) which control for stability and error terms, indicate that such relationships are plausible. Nevertheless, the longitudinal associations found in the present thesis may still partly rely on possible unmeasured third variables.
Even though the evaluation of the demographic characteristics of the samples of each occupational group indicates that the deviations from population means do not constitute major threats to representativity (Wedde et al., 2004), generalization of findings and the conclusion is limited to the particular sample, variables, and the time frame represented by the design of the study (MacCallum & Austin, 2000). In Paper II and Paper III, the analyses were performed on the total sample, a fact that may have concealed effects of gender or occupation. Although Demerouti et al. (2004) did not demonstrate gender differences in the effect of WHI on burnout, plausible sub-group effects of gender should be considered. Selection effects may also result from the choice of variables in a given study. The elimination of some of the items in the modified model may have limited comparisons with other studies using the original scale.

Whereas the cross-sectional design in Paper I and Paper IV restricts any findings to the time of the analysis, the two-year interval of the longitudinal studies (Paper II and Paper III) imply that we can only generalize our results in relation to this measurement interval (Taris, 2000). Even though Dorman and Zapf (2002) found a two-year interval to be the most optimal time lag between social stressors and depression, we have little evidence regarding the corresponding interval between WHI and its associates. Ideally, in a study with different time lags, a more complete understanding of the nature of such effects could have been explored.

Strictly speaking, our findings can only be generalized in regards to the men and women in the eight occupational groups used in the present study, the latent variables, and scale measurement utilized, and the time frame represented by the design. Further research is needed to verify the findings.

**Theoretical issues**

Although the COR theory provides a heuristic framework of WHI, the empirical evidence of the model depicted in Figure 1 has to be considered with some limitations in mind. It should be noted that each part of this model is tested separately. In order to confirm the model, all relationships should be tested simultaneously. Moreover, in the COR theoretical framework, WHI is proposed to be caused by the exchange of valued resources. However, the exact values of these resources are only assumed. More research is needed on the value or meaning individuals attach to different roles. Similarly, as resource priorities are assumed to be largely culturally determined (Hobfoll, 1998), the generalizability of the analytical model studied in this thesis may be limited to Norway. It should be studied in other Western societies before
firm conclusions can be made. Nevertheless, the theoretical model is founded on empirical evidence established in a variety of countries supporting a broader, more general validity. Finally, COR theory may in itself contain some limitations and biases (for a discussion, see Hobfoll, 2001). It has been argued that it underestimates the impact of resource gain (Freund & Riediger, 2001), that it contains semantic inconsistencies (Thompson & Cooper, 2001), and that it is old wine in new bottles (Lazarus, 2001). The COR theory should not be considered as the only theoretical framework, as several other theoretical frameworks linking work and home life have recently proved to be promising, i.e. the “work/family border theory” (Clark, 2000), the “ecological system theory” (Grzywacz & Marks, 2000), and the “job demands-resources model” (Demerouti et al., 2001). Nevertheless, COR theory is found to be a valid and robust contribution to the stream of stress scholarship (Quick & Gavin, 2001), providing a new standard in the field (Schwarzer, 2001) and enhancing contemporary understanding of stress and coping (Thompson & Cooper, 2001). COR theory is also found to be the best explanatory model of burnout (Lee & Ashforth, 1996), and recent studies have proved its applicability to work-home interaction as well (i.e. Grandey & Cropanzano, 1999; Premeaux et al., 2007).

**Contribution to the understanding of work-home interaction**

Regardless of the described limitations, this thesis contributes to the understanding of work-home interaction by

- corroborating previous findings (e.g. Aryee et al., 2005) and supporting the four-factorial structure of WHI
- demonstrating that work/home conflict and facilitation are likely to be orthogonal constructs
- demonstrating the importance of facilitation in work-home interaction
- providing empirical evidence of gender differences in the four dimensions of WHI
- demonstrating that WHI is predicted by both organizational and individual vulnerability factors
- demonstrating health (burnout) outcomes of WHI
- demonstrating the buffering effect of work/home facilitation on burnout
- examining the effect of WHI across different family structures
- demonstrating the applicability of COR theory to WHI
Conclusions

This thesis underscores the relevance and applicability of a resource-oriented framework in research on work-home interaction. By considering both negative and positive aspects of the interaction, a more complete picture of the balance between work and home life is described. In general, the findings indicate that it is important to examine the whole nexus of WHI to understand the dynamics of work and home life more deeply. Moreover, individual vulnerability and resilience factors should be taken into consideration more systematically, as should different family structures. The thesis also demonstrates the relevance of WHI in studies of work-related outcomes like burnout. As long as work and family/home are the two most important life domains in contemporary societies, a more profound understanding of the factors that affect health and well-being needs to be found in the interaction of work and home and its core relations.

We shall have to evolve
problem-solvers galore -
since each problem they solve
creates ten problems more.                  Piet Hein
References


ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology, 5,* 111 - 126.


invariance across genders in sociotropy and autonomy using a non-western sample.


Paper I
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Paper II
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Paper III
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Paper IV
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Appendix I: Descriptions of the different occupational groups
Appendix II: Description of sampling procedures
Appendix III: Letters to the respondents in the second survey and questionnaire
Appendix IV: Letters to the respondents in the second survey
Appendix V: Statistics Norway’s evaluation of sample deviations in each occupation
Appendix VI: Tests for measurement invariance across gender.
APPENDIX I

Descriptions of the different occupational groups included in this thesis
Descriptions of the different occupational groups included in this thesis

**Advertisement:** The advertisement group consists of decorators, designers, art directors, distributors of commercial advertisement and others doing different work tasks within the advertisement industry. Because of the overlapping use of different titles, people having work tasks not necessarily associated with the advertisement business may have been included in this group.

**Bus drivers:** Included bus drivers and tram conductors. The work tasks included mainly the transport of passengers, but also of mail or cargo. The bus driver may be responsible for keeping the vehicle in approved form and selling/controlling tickets. Ambulance personnel and long distance transportation drivers of goods or passengers were not included in this group.

**Church ministers:** This group mainly consists of church ministers, but also includes other people employed in clergy positions, such as catechists and missionaries.

**Information technology workers:** This occupational group includes workers doing a wide variety of tasks such as programming, research, development of new data tools for administrative, communication and information purposes, testing of data programs, designing and implementing new systems, user assistance, installation of new programs and the like. Competence levels, work tasks and titles are diverse in this occupational group.

**Lawyers:** Lawyers in this investigation include people doing all kinds of work tasks within law such as giving advice, helping private and business clients in court, formulating contracts and deals, formulating wills and providing advice in the bank, industry and insurance businesses.

**Nurses:** This group includes ordinary nurses, midwives and nurses with some sort of specialization. Tasks are treatment, caring and guidance of sick or wounded individuals.

**Physicians:** Includes public and private practitioners (specialists and non-specialists) doing clinical, administrative or scientific work within the medical field.

**Teachers:** This occupational group consists of teachers working within the Norwegian school system, in both public and private schools, and with children between six and 19 years of age (from the first grade through high school).

(Langballe, 2008, p. 24.)
APPENDIX II:

Descriptive by Statistics Norway of the Norwegian registers of employees and employment used to select potential respondents for this survey

From: http://www.ssb.no/emner/06/90/notat_200448/notat_200448.pdf
Utvalgsdokumentasjon

14 Om Arbeidstakerregisteret og andre sysselsettingsregistre i forbindelse med trekking av utvalg til spørreundersøkelse for Den norske lægeforening


14.1 Bakgrunn for Arbeidstakerregisterdata

14.2 Omfang
Arbeidstakerstatistikken omfatter de arbeidstakere som står registrert med aktivt arbeidsforhold i Arbeidstakerregisteret ved et gitt tidspunkt. For arbeidstakere med flere registrede arbeidsforhold, blir et av disse ("hovedarbeidsforholdet") valgt ut som tellende i statistikken. Se pkt. 4.2 for krav til arbeidsforhold for at det skal være meldepliktig til A/A-registeret. Vernepliktige og selvstendig næringsdrivende er ikke med i datagrunnlaget.

14.3 Datakilder
A/A-registeret danner grunnlaget for arbeidstakerstatistikken. I tillegg benyttes også Enhetsregisteret og Bedrifts- og Foretaksregisteret (BoF) i SSB for å bestemme næring. For enkelte grupper arbeidstakere som mangler data om relevant arbeidsstedskommune brukes bostedskommune fra Det sentrale personregisteret. Dette gir en mer korrekt geografisk fordeling av arbeidstakerne.

14.4 Kontroll og revisjon
Statistisk sentralbyrå (SSB) mottar fra Rikstrygdeverket (RTV) ukentlig filer over endringsmeldinger til A/A-registeret. I tillegg tas det årlig et totaluttak fra A/A-registeret.
Omfattende kontroll og revisjon av A/A-registeret. Feil som oppdages rettes i statistikken, samtidig som det sendes melding til RTV og Enhetsregisteret, for at feilen skal bli rettet opp i selve registeret også. Av typer feil kan en nevne næringskode, arbeidsstedskommune og mangelfull oppdeling av bedrifter. Korrigeringene i statistikken gjøres på bedriftsnivå og ikke på person. Det er
derfor ikke mulig å gi konsistente tall som bygger på grupperinger etter personbaserte kjennemarker.

For sjøfolk, ansatte i forsvaret og avisbud settes arbeidsstedskommune lik bosteds kommune.

Bosteds kommune hentes fra Det sentrale personregister.

14.5 Definisjon av arbeidstaker
En arbeidstaker er en person som arbeider i en annens tjeneste for lønn eller annen godtgjørelse.


14.6 Feilkilder og usikkerhet
Effaring viser at en del meldinger til arbeidstakerregisteret kommer for sent inn. Det gjør at den utviklingen statistikken viser, ligger noe etter den faktiske utviklingen (3-6 måneder). Av samme grunn gjøres datauttaket fra registeret første 16 uker etter referansedato for statistikken. Dette sikrer at de fleste meldinger som gjelder referansedatoen kommer med i statistikken. Under revisjonen av registeret rettes mangelfull fordeling av ansatte, feil arbeidsstedskommune og næring. Dette gir ingen garanti for at det blir riktig, men det er vår mening at det er mer korrekt enn utgangspunktet i registeret.

15 Bakgrunn for registerbasert sysselsettingsstatistikk

15.1 Datakilder
Data for den registerbaserte sysselsettingsstatistikken er basert på flere ulike registre. De viktigste er Rikstrygdeverkets (RTV) arbeidstakerregister, lønns- og trekkoppgaveregisteret og
15.2 Datainnsamling

15.2.1 Arbeidstakerregisteret:
Statistisk sentralbyrå (SSB) mottar fra RTV ukentlig filer over endringsmeldinger til arbeidstakerregisteret. I tillegg tas det årlig et totaluttak.

15.2.2 Lønns og trekkoppgavevergeregisteret:
Når det gjelder opplysninger fra Skattedirektoratets lønns- og trekkoppgaveregister gjøres det to uttrekk; et foreløpig uttrekk i mars, og et uttrekk i mai/juni som danner grunnlaget for tallene i denne statistikken.

15.2.3 Selvangivelsesregisteret:
Alle likningskontorene gjør bruk av IT i behandlingen av likningen, og opplysninger fra den personlige selvangivelsen er tilgjengelig på elektronisk form. SSB inhenter årlig et uttrekk av datamaterialet fra Skattedirektoratet.

15.2.4 Registeret over sivilarbeidere og vernepliktige:
SSB mottar kvartalsvisse filer fra Vernepliktverket og Siviltjenesteadministrasjonen på Hustad og Dillingøy. Dataene bearbeides og settes sammen til et register med årlig informasjon.

15.2.5 Enhetsregisteret/ Bedrifts- og foretaksregisteret:
Bedriftsrelaterte variable som arbeidsstedskommune og næring innhentes fra SSB’s Bedrifts- og foretaksregister.
15.3 Kontroll og revisjon

For de tre mest sentrale registrene som ligger til grunn for produksjonen, skjer kontroll og revisjon på følgende måte:


15.4 Definisjon av sysselsattes

Sysselsattes er definert som personer som utførte inntektsgivende arbeid av minst én times varighet i referanseuen, samt personer som har et slikt arbeid, men som var midlertidig fraværende pga. sykdom, ferie, lønned permisjon e.l. Personer som er inne til førstegangs militær- eller sivilteneste regnes som sysselsatte. Personer på sysselsettingstiltak med lønn fra arbeidsgiver klassifiseres også som sysselsatte. For sysselsatte med flere arbeidsforhold i referanseuen, fastsettes ett som det viktigste. Opplysninger om personenes jobb- og bedriftsrelaterte kjennemerker gjelder det viktigste arbeidsforholdet. Utdanning er arbeidstakernes høyest fullførte utdanning, som er kodet etter Standard for utdanningsgruppering (NOS C 617).

15.5 Standard grupperinger

Standard for næringsgruppering (SN94) (NOS C 182).
Standard for utdanningsgruppering (NUS2000) (NOS C617)

15.6 Ikke-utvalgsfeil

For personer som er definert som sysselsatte og lønnstakere kun på grunnlag av opplysninger fra lønns- og trekkoppgaveregisteret (omkring 10 prosent av lønnstakerne), er arbeidsforholdet ikke
datert. For rundt halvparten av denne massen innhentes informasjon fra andre administrative kilder, som er med på å tidfeste arbeidsforholdet. For de resterende legges informasjon om lønn til grunn for om en person anses som sysselsatt. Det er dermed knyttet en viss usikkerhet om arbeidsforholdet faktisk var aktivt i referanseperioden. Selvstendig næringsdrivende identifiseres ved hjelp av informasjon fra Selvvangivelsesregisteret. Grunnet lang produksjonstid ligger opplysninger om næringsvirksomhet fra året før til grunn for utarbeidelse av statistikken. Som følge av denne tidsforskjellen kan personer dermed feilaktig bli klassifisert som sysselsatte, hvis de avsluttet virksomheten det foregående året. For personer som er definert som sysselsatte og lønnstakere kun på grunnlag av opplysninger fra lønns- og trekkoppgaveresisteret er arbeidsforholdet knyttet til et foretak. Her er det utarbeidet en rutiné for på best mulig måte å identifisere bedriften. I de tilfeller hvor personen er ansatt i et flerbedriftsforetak, kan det være usikkert om arbeidsforholdet faktisk blir knyttet til riktig bedrift, og dermed får korrekte opplysninger om nærings og arbeidsssted. For store foretak med mange bedrifter under seg, er fordelingen av ansatte i arbedstakerregisteret til tider mangelfull. Det kan gi merkbare utslag på kommunenivå når slike feil oppstår og når de rettes.
APPENDIX III:

Letters to the samples in the first survey and the questionnaire

From: http://www.ssb.no/emner/06/90/notat_200448/notat_200448.pdf
Undersøkelse om belastninger, mestring og helse innenfor utsatte yrker

De fleste spørsmålene i dette skjemaet besvarer du ved å sette ett kryss i ruten ved det svaret du vil gi. Når du sender inn ferdig utfylt spørreskjema er du med i trekningen av et gavekort på 10 000 kroner,- og ti gavekort på 1 000 kroner. Gavekortene kan brukes i et utvalg butikker.

Lykke til med utfyllingen!
TIDSPRESS OG DIN INNFLYTELSE PÅ DIN ARBEIDSSITUASJON

Utvalget i denne undersøkelsen er trukket fra Statistisk sentralbyrås yrkesregister, men fordi registeret kan inneholde feil, ønsker vi likevel å spørre deg om yrket ditt.

1. Hvilket yrke har du:__________

2. Hva går arbeidet ditt i hovedsak ut på:________________________________________

3. Arbeider du i privat eller offentlig virksomhet?
   1 □ Privat
   2 □ Offentlig

4. Hva er din avtalte arbeidstid i gjennomsnitt per uke? _____ timer

5. Hva er din faktiske arbeidstid i gjennomsnitt per uke? _____ timer

6. Dersom du har mindre enn 100% stilling, skyldes det:
   1 □ Omsorgsoppgaver
   2 □ For stor arbeidsbyrde ved full stilling
   3 □ Helsemessige årsaker
   4 □ Kombinasjon med uføretrygd
   5 □ Annet

7. Hender det at du har så mye å gjøre at arbeidssituasjonen din blir oppjaget og masete, og i tilfelle hvor ofte?
   1 □ Sjelden eller aldri
   2 □ I perioder, men ikke daglig
   3 □ Daglig, mindre enn halvparten av arbeidstiden
   4 □ Daglig, mer enn halvparten av arbeidstiden

8. I hvilken grad kan du selv bestemme ditt arbeidstempo?
   1 □ I høy grad
   2 □ I noen grad
   3 □ I liten grad

9. I hvilken grad kan du vanligvis selv bestemme eller planlegge rekkefølgen i dine arbeidsoppgaver i løpet av dagen?
   1 □ I høy grad
   2 □ I noen grad
   3 □ I liten grad
10. Angi hvor ofte du synes at
(Sett ett kryss på hver linje)

<table>
<thead>
<tr>
<th>Stemmer</th>
<th>Stemmer</th>
<th>Stemmer</th>
<th>Stemmer</th>
<th>Stemmer</th>
<th>Stemmer</th>
<th>Aldri</th>
<th>Sjelden</th>
<th>Iblandt</th>
<th>Ganske</th>
<th>Ofte</th>
<th>Uaktuelt</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>1</td>
<td>du har tilstrekkelig mulighet til å diskutere organiseringen av ditt eget arbeid.</td>
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<tr>
<td>2</td>
<td>du har tilstrekkelig innflytelse på avgjørelser som gjelder din arbeidsplan.</td>
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<tr>
<td>3</td>
<td>du har så mye innflytelse på arbeidet ditt at du kan utsette saker som var planlagt, f.eks. når du får for mye å gjøre.</td>
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<tr>
<td>4</td>
<td>du arbeider under et uakseptabelt arbeidspress.</td>
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<tr>
<td>5</td>
<td>du har så mange arbeidsoppgaver at det hindrer deg i å arbeide effektivt.</td>
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</tr>
<tr>
<td>6</td>
<td>du har problemer med å kunne gjøre spesial oppgaver uten å bli forstyrret.</td>
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</tr>
<tr>
<td>7</td>
<td>du har mulighet for på kort varsel å ta deg fri eller avspasere en halv eller en hel dag.</td>
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</tbody>
</table>

11. I hvilken grad stemmer følgende utsagn for ditt forhold til overordnete
(Sett ett kryss på hver linje)

| Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|          |         |         |         |         |         |         |         |         |         |         |         |         |
| 1        | Jeg har mulighet til å snakke med min nærmeste overordnete om vanskeligheter i arbeidet. |         |         |         |         |       |         |         |        |      |          |
| 2        | Jeg får oppmuntring og støtte jeg trenger av min nærmeste overordnete. |         |         |         |         |       |         |         |        |      |          |
| 3        | Min nærmeste overordnete pleier å informere meg om forandringer av betydning for arbeidet mitt. |         |         |         |         |       |         |         |        |      |          |
| 4        | Min nærmeste overordnete har samme syn som meg på hva min kompetanse består i. |         |         |         |         |       |         |         |        |      |          |
| 5        | Min nærmeste overordnete legger til rette for at jeg skal kunne utvikle meg i jobben. |         |         |         |         |       |         |         |        |      |          |

12. Anerkjennelse av arbeidsinnsats. I hvilken grad opplever du at følgende utsagn stemmer for deg?
(Sett ett kryss på hver linje)

| Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer | Stemmer |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|          |         |         |         |         |         |         |         |         |         |         |         |         |
| 1        | Der jeg arbeider har ledelsen store muligheter for å belønne god arbeidsinnsats. |         |         |         |         |       |         |         |        |      |          |
| 2        | Jeg får ofte ros og anerkjennelse fra mine overordnete. |         |         |         |         |       |         |         |        |      |          |
| 3        | Jeg får ofte ros og anerkjennelse fra kolleger og arbeidskamerater. |         |         |         |         |       |         |         |        |      |          |
| 4        | Jeg får ofte ros og anerkjennelse fra andre som jeg har med å gjøre i jobben (kunder, klienter, elever, samarbeidspartnere, etc.) |         |         |         |         |       |         |         |        |      |          |
| 5        | Jeg synes lønnen min står i rimelig forhold til mitt ansvar og innsats på jobben. |         |         |         |         |       |         |         |        |      |          |
1. Jeg føler at arbeidet tømmer meg følelsesmessig. .................................................................
2. Jeg føler meg full av kraft og energi. ..................................................................................
3. Jeg føler meg sliten når jeg står opp om morgenen og vet at jeg må på jobb. ........................................................................................................
4. Jeg føler at jeg har positiv innflytelse på andre menneskers liv gjennom det jeg gjør i jobben. ........................................................................................................
5. Jeg føler meg oppbrukt når arbeidsdagen er over. ................................................................
6. Jeg synes ikke jeg strekker meg for langt for å klare kravene i jobben. ...........................................................
7. Jeg føler meg frustrert i jobben. ......................................................................................
8. Jeg får ikke brukt ressursene mine så godt som jeg burde i jobben. .................................
9. Jeg har gjort mye som er verdt innsatsen i denne jobben. ......................................................
10. Jeg føler meg utbrent i denne jobben. ............................................................................
11. Jeg føler meg som regel kvikk og opplagt i jobben. ...........................................................
12. Jeg får ikke utrettet stort i denne jobben. ........................................................................
13. Det som før var utfordrende i jobben er nå mest en plage. ..............................................
14. Jeg føler at jeg ikke orker stor mer i denne jobben. ........................................................
15. I jobben har jeg en god følelse av å være til nytte. ..............................................................
17. Jeg føler at mye av det jeg gjør i jobben er ganske bortkastet. .............................................
18. Jeg føler ikke at jeg arbeider for hardt i jobben. ...............................................................
Spørsmål om **TILKNYTNING TIL ARBEIDET** fortsetter:

I hvilken grad stemmer beskrivelsene nedenfor med dine egne opplevelser den siste måneden?

*Sett ett kryss på hver linje*

<table>
<thead>
<tr>
<th></th>
<th>Stemmer ikke</th>
<th>Stemmer ganske dårlig</th>
<th>Stemmer delvis</th>
<th>Stemmer ganske godt</th>
<th>Stemmer helt</th>
<th>Uaktuelt</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>Det hender stadig oftere at jeg snakker nedsettende om jobben</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>29</td>
<td>Jeg trenger mer tid nå enn tidligere for å hente meg inn etter jobben</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>30</td>
<td>I det siste har jeg arbeidet stadig mer mekanisk og tenkt mindre gjennom oppgavene</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>31</td>
<td>Jeg ser på jobben min som en utfordring</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>32</td>
<td>Med tiden har jeg mistet den dype interessen for arbeidet mitt</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>33</td>
<td>Av og til byr arbeidsoppgavene meg rett og slett i mot</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>34</td>
<td>Jeg har glede av arbeidet jeg gjør</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>35</td>
<td>Jobben min engasjerer meg</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**SOSIAL DELTAKELSE**


1 ☐ Sjeldnere enn en gang i året
2 ☐ En eller flere ganger i året, men ikke hver måned
3 ☐ Omtrent hver måned, men ikke hver uke
4 ☐ Omtrent hver uke, men ikke daglig
5 ☐ Flere ganger i uka eller daglig

15. Har du noen personer du kan snakke helt fortrolig med?

1 ☐ Nei
2 ☐ Ja, en
3 ☐ Ja, flere

**ULIKE HELESEPLAGER**

16. Har du i løpet av den siste måneden vært plaget av: *Sett ett kryss på hver linje*

<table>
<thead>
<tr>
<th></th>
<th>Ikke plaget</th>
<th>Litt plaget</th>
<th>Ganske mye plaget</th>
<th>Veldig mye plaget</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nakkesmerter</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2</td>
<td>Smerter øverst i ryggen</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3</td>
<td>Smerter i korsrygg</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4</td>
<td>Smerter i armen</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>5</td>
<td>Smerter i skuldre</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>6</td>
<td>Smerter i fotene</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7</td>
<td>Fordøyelsesproblemer</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8</td>
<td>Brystsmerter</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>9</td>
<td>Andre plager</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
17. **Nedenfor finner du en liste med plager og problemer som man av og til kan ha**

Angi hvor mye hvert enkelt problem har plaget deg eller vært til besvær i løpet av den siste måneden.

*Sett ett kryss på hver linje*

<table>
<thead>
<tr>
<th>Ikke plaget</th>
<th>Litt plaget</th>
<th>Ganske mye plaget</th>
<th>Veldig mye plaget</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

1. Hodepine
2. Skjelving
3. Matthet eller svimmelhet
4. Nervøsitet, indre uro
5. Plutselig frykt uten grunn
6. Stadig redd eller engstelig
7. Hjertebank, hjerteslag som løper av gårde
8. Følelse av å være anspent, oppjaget
9. Anfall av angst eller panikk
10. Så rastløs at det er vanskelig å sitte stille
11. Mangel på energi, alt går langsommere enn vanlig
12. Lett for å klandre deg selv
13. Lett for å gråte
14. Tanker om å ta ditt liv
15. Dårlig matlyst
16. Søvnproblemer
17. Følelse av håpløshet med tanke på fremtiden
18. Nedtrykt, tungsidig
19. Følelse av ensomhet
20. Tap av seksuell lyst og interesse
21. Følelse av å være lurt i en felle eller fanget
22. Mye bekymret eller urolig
23. Uten interesse for noe
24. Følelse av at alt er et slit
25. Følelse av å være unyttig

18. **Hvor mange dager har du vært borte fra jobb de siste 6 måneder grunnet egen sykdom?**

Antall dager:

Dersom du ikke har hatt sykefravær de siste 6 måneder, gå direkte videre til spørsømål 20

19. **Hvis du har hatt sykefravær de siste 6 månedene, i hvilken grad skyldes det**

*Sett ett kryss på a) og ett på b)*

<table>
<thead>
<tr>
<th>a) fysisk arbeidspress?</th>
<th>b) psykisk arbeidspress?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I høy grad</td>
<td>1 I høy grad</td>
</tr>
<tr>
<td>2 I noen grad</td>
<td>2 I noen grad</td>
</tr>
<tr>
<td>3 I liten grad</td>
<td>3 I liten grad</td>
</tr>
<tr>
<td>4 Ikke i det hele tatt</td>
<td>4 Ikke i det hele tatt</td>
</tr>
</tbody>
</table>

20. **Fører du at du får nok søvn?**

1. Ja
2. Nei

21. **Hvor mange timer antar du at du i gjennomsnitt har sovet per natt den siste måneden?**

Antall timer:

Per natt
**PERSONLIGE KJENNETEGN OG INNSTILLINGER**

22. Nedenfor følger noen utsagn om personlige kjennetegn og innstillinger  

Marker for hvert av utsagnene om du synes disse stemmer eller ikke stemmer for deg.

<table>
<thead>
<tr>
<th>Utsagn</th>
<th>Stemmer ikke</th>
<th>Stemmer ganske dårlig</th>
<th>Stemmer delvis</th>
<th>Stemmer ganske godt</th>
<th>Stemmer helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Jeg er svært var for hva andre mennesker tenker og mener om meg.</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>2  Tiltro til meg selv mangler jeg heidigvis ikke.</td>
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<tr>
<td>3  Ofte synes det som andre gjør allting mye bedre enn jeg selv.</td>
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<tr>
<td>4  Jeg er svært nærtagende for kritikk.</td>
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<tr>
<td>5  Jeg mister lett motet når tingene går galt.</td>
<td></td>
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</tr>
<tr>
<td>6  Skjer det brått uventede ting, kan jeg bli fullstendig forvirret.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>7  Min sinnsstemning forander seg lett alt etter hva som skjer rundt meg.</td>
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</tr>
<tr>
<td>8  Min mangel på selvtilit kan av og til være en plage for meg.</td>
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</tr>
<tr>
<td>9  Folk kan skjelle meg ut ganske kraftig før det går særlig inn på meg.</td>
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<td></td>
</tr>
<tr>
<td>10 Jeg kunne sannsynligvis oppnå mer enn jeg gjør, men jeg ser ikke poenget med</td>
<td></td>
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</tr>
<tr>
<td>11 Jeg er vanligvis så målbevisst at jeg fortsetter å arbeide lenge etter at andre har gitt opp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Jeg arbeider hardere enn de fleste.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Vanligvis driver jeg meg hardere enn de fleste fordi jeg vil gjøre det så bra som mulig.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Jeg driver ofte meg selv til jeg stuper eller prøver å gjøre mer enn jeg virkelig makter.</td>
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</tbody>
</table>

23. Hvordan stemmer disse påstandene for deg?  

Sett ett kryss på hver linje.

<table>
<thead>
<tr>
<th>Utsagn</th>
<th>Stemmer ikke</th>
<th>Stemmer ganske dårlig</th>
<th>Stemmer delvis</th>
<th>Stemmer ganske godt</th>
<th>Stemmer helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Det er svært viktig for meg å yte mitt aller beste i jobben.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2  Jeg jobber først og fremst for å tjene penger.</td>
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<td>3  Hvis jeg mislykkes i jobben, er jeg en mislykket person.</td>
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<td>4  Hvis jeg ikke gjør det virkelig bra i jobben, vil jeg miste andres respekt.</td>
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<td>5  Forpliktelsene i jobben må gå foran andre forpliktelser og behov.</td>
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<td>6  Jeg er nødt til å lykkes i arbeidet for å føle meg verdifull.</td>
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<td>7  Med mine ressurser vil jeg lett kunne påvirke verdier og strategier i en arbeidsorganisasjon.</td>
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<td>8  Jeg har vanligvis hatt store ambisjoner i arbeidet mitt.</td>
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<td>9  Jeg setter meg vanligvis høye og langsiktige mål, i arbeidet og ellers.</td>
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<td>10 Jeg har alltid hatt tro på egne krefter.</td>
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<td>11 Hva jeg selv gjør til enhver tid, betyr ikke så mye for hva som skjer.</td>
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### Spørsmål 23. fortsetter:
#### Hvordan stemmer disse påstandene for deg?

**Sett ett kryss på hver linje**

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<th>Stemmer</th>
<th>Ikke belastende</th>
<th>Uttelastende</th>
<th>En del belastende</th>
<th>Ganske belastende</th>
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12. Det er godt samsvar mellom mine egne yrkesverdier og verdiene i arbeidsorganisasjonen...

13. Jeg identifiserer meg sterkt med organisasjonens mål og rammer for arbeidet...

14. Jeg føler ofte at jeg må gå på akkord med mine verdier for å mestre kravene i arbeidet.

15. Samsvaret mellom organisasjonens og mine egne mål gir en god følelse av fellesskap.


---

### Spørsmål 24.
#### Hvilke av følgende situasjoner/faktorer på jobb har du opplevd som belastende det siste året?

Med belastende mener vi opplevelse av stress og negative følelser, for eksempel i form av usikkerhet, irritasjon og anspørring.

**Sett ett kryss på hver linje**

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<th>Stemmer</th>
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1. Ansvaret jeg har i jobben...

2. Konflikt med kolleger/medarbeidere...

3. Urettferdig fordeling av stillinger, oppgaver, lønn eller fordeler...

4. Andres urealistiske forventninger til meg i min rolle...

5. Krav om effektivisering...

6. Krav om å holde meg faglig å jour...

7. Stadige forandringer i jobbens rammevilkår (reformer, lovendringer, etc)...

8. Konflikt mellom yrkesetiske verdier og krav om produksjon og effektivitet...

9. Kontakt med mennesker (pasienter, elever, klienter, kunder)...

10. Uregelmessig arbeidstid...

11. Å få til balanse mellom arbeid og privatliv...

12. Å stadig måte ta med seg arbeidsoppgaver hjem...

13. Jobben går ut over sosialt liv...

14. Mangel på støtte hjemme fra, særlig fra ektefelle/samboer...

15. Bekymring for egen økonomi...
MESTRINGSSTRATEGIER

25. Nedenfor står en rekke utsagn som beskriver hvordan man kan mestre situasjoner når det røyner på og man virkelig opplever stress eller påkjenning. Hvor godt passer hvert av disse utsagnene for ditt vedkommende?

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**ARBEID OG FRITID**

26. I hvilken grad opplever du at følgene utsagn stemmer for deg?

Sett ett kryss på hver linje:

<table>
<thead>
<tr>
<th>Stemmer ganske godt</th>
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### UTFORDRINGER I KONTAKT MED ANDRE Mennesker

27. Her er en liste med problemer folk angir å ha i omgang med andre mennesker. Vennligst les listen under og marker i hvilken grad disse situasjonene oppleves som vanskelige for deg.

**Sett ett kryss på hver linje**

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<tr>
<th></th>
<th>Ikke vanskelig</th>
<th>Litt vanskelig</th>
<th>Både og</th>
<th>Ganske vanskelig</th>
<th>Veldig vanskelig</th>
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**I. Det er vanskelig for meg å**

1. stole på andre mennesker
2. delta i gruppe
3. holde ting hemmelig for andre mennesker
4. be en person om å slutte å plage meg
5. presentere meg for nye mennesker
6. være uenig med andre mennesker
7. fortelle personlige ting til andre mennesker
8. være bestemt når jeg trenger å være det
9. sette grenser overfor andre mennesker
10. føle nærhet til andre
11. virkelig bry meg om problemer andre mennesker har
12. slappe av og kose meg når jeg går ut med andre
13. tillate meg å kjenne meg sint på noen jeg liker
14. ta imot råd og ordrer fra folk som har myndighet over meg
15. glede meg over et annet menneskes lykke
16. la andre få vite når jeg er sint
17. gi konstruktiv kritikk til andre
18. åpne meg og snakke om følelsene mine til andre
19. ta hensyn til mitt eget beste når en annen blir krevende
20. være trygg på meg selv når jeg er sammen med andre

**II. Følgende er ting du gjør mye:**

21. jeg krangler for mye med andre mennesker
22. jeg føler meg for ofte ansvarlig for å løse andres problemer
23. jeg er for åpen overfor andre mennesker
24. jeg er for aggressiv mot andre mennesker
25. jeg prøver for sterkt å tekkes andre mennesker
26. jeg lar for ofte andres behov gå foran mine egne
27. jeg mister beherskelsen for lett
28. jeg beskylder meg selv for ofte for å være skyld i andres problemer
29. jeg holder folk for mye på avstand
30. jeg lar andre mennesker i for høy grad utnytte meg
31. jeg føler meg for ofte flau overfor andre mennesker
32. jeg bekymrer meg for mye for hvordan andre skal reagere på meg
LIVSHENDELSER

28a. Nedenfor følger en liste over hendelser en kan oppleve i løpet av livet. Hvis du har erfart noe av dette, sett kryss i ruten

1 □ Partners død
2 □ Barns død
3 □ Andre nære personers død
4 □ Alvorlig sykdom hos et nærstående familiemedlem
5 □ Store økonomiske problemer
6 □ En opprivende separasjon/skilsmiss
7 □ Alvorlig fysisk sykdom (egen)
8 □ Vært utsatt for en alvorlig ulykke (trafikkulykke, brann, osv.)
9 □ Langvarige samlivsproblemer/familieproblemer

28b. Har du eventuelt hatt noen du kunne dele dine tanker med, søke råd hos og få støtte og oppmuntring hos i disse situasjonene?

1 □ Ja
2 □ Nei

29. Omtrent hvor ofte drikker du alkohol?

0 □ Hver dag eller nesten hver dag
1 □ 2-4 ganger i uken
2 □ Omtrent en gang i uken
3 □ 2-3 ganger i måneden
4 □ Omtrent en gang i måneden
5 □ Sjeldnere enn en gang i måneden
6 □ Aldri i løpet av siste år

30. Hvilke røykevaner har du?

1 □ Røyker daglig
2 □ Røyker av og til
3 □ Har røykt, men sluttet for mer enn 6 måneder siden
4 □ Røyker ikke

31. Driver du vanligvis med noen form for mosjon eller trening?

1 □ Drev regelmessig med mosjon/trening før, men sluttet for mindre enn 2 år siden
2 □ Nei, driver ingen form for mosjon eller trening
3 □ Ja, 1-2 ganger i uken
4 □ Ja, 3-4 ganger i uken
5 □ Ja, 5-7 ganger i uken

32. Hva er din sivilstand?

1 □ Gift/registrert partner
2 □ Samboende
3 □ Separert
4 □ Skilt
5 □ Enke/enkemann
6 □ Ugift

33. Har du barn?

1 □ Ja  Hvor mange? _________  Hvor gammelt er ditt yngste barn? _____ år
                        Hvor gammelt er ditt eldste barn? _____ år
2 □ Nei

Takk for at du tok deg tid til å delta i denne spørreundersøkelsen!
Oslo, oktober 2003  
Saksbehandlere: Sven Skaare og Elise Wedde  
Seksjon for intervjuundersøkelser

9 Undersøkelse om belastninger, mestring og helse innenfor utsatte yrker

Statistisk sentralbyrå gjennomfører i høst en undersøkelse om belastninger, mestring og helse i åtte utvalgte yrkesgrupper, der i blant [navn på gruppe]. Formålet med undersøkelsen er å belyse hvordan personer i antatt utsatte yrkesgrupper opplever forholdet mellom utfordringer og belastninger i arbeidet og sin egen fysiske, og særlig psykiske helse. Hensikten er blant annet å få bedre forståelse for den såkalte utbrenningsprosessen, som de senere årene har vært mye omtalt i media. Undersøkelsen gjennomføres på oppdrag fra Den norske lægeforening. Vi tar sikte på å følge opp med et nytt intervju om to år.

Du er en av 1 000 [navn på gruppe]som er trukket ut fra Statistisk sentralbyrås sysselsettingsregister. Til sammen er 8 000 personer trukket ut. Alle som deltar i årets undersøkelse blir med i trekkingen av ett gavekort til en verdi av 10 000 kroner og ti gavekort til en verdi av 1000 kroner. Det er frivillig å delta, men for at vi skal få så gode resultater som mulig, er det viktig at alle som er trukket ut blir med. Vi kan ikke erstatte deg med en annen. Du kan når som helst trekke deg fra undersøkelsen og kreve opplysningene slettet.

Alle som arbeider i Statistisk sentralbyrå har taushetsplikt. Undersøkelsen gjennomføres etter lovpålagte regler og Statistisk sentralbyrå er underlagt kontroll både fra Datatilsynet og vårt eget personvernombud. Det vil aldri bli kjent utenfor Statistisk sentralbyrå hva enkeltpersoner har svart på undersøkelsen. For å få bedre utbytte av informasjonen vi samler inn, vil vi hente inn opplysninger fra Statistisk sentralbyrås inntekts- og utdanningsregister. Innen utgangen av 2006 vil vi anonymisere datamaterialet slik at identifisering av den enkelte ikke er mulig. Den norske lægeforening vil kun få tilgang til anonymiserte data.

Vi ber deg vennligst svare på spørsmålene i spørreskjemaet og returnere det til Statistisk sentralbyrå i den vedlagt frankerte svarkonvolutten så snart som mulig. Har du spørsmål om undersøkelsen kan du gjerne ringe oss gratis på telefonnummer 800 83 028, eller sende en e-post til sven.skaare@ssb.no eller elise.wedde@ssb.no. Spørsmål vedrørende personvern kan rettes til Statistisk sentralbyrås personvernombud, tel 21 09 00 00 eller e-post personvernombud@ssb.no.

På forhånd takk!  
Vennlig hilsen

Svein Longva  
administrerende direktør

Ole Sandvik  
seksjonssjef
Oslo, oktober 2003
Saksbehandlarar: Sven Skaare og Elise Wedde
Seksjon for intervjuundersøkingar

10 Undersøking om belastningar, meistring og helse innanfor utsette yrke
Statistisk sentralbyrå gjennomfører i haust ei undersøking om belastningar, meistring og helse i åtte utvalde yrkesgrupper, mellom anna [navn på gruppe]. Formålet med undersøkinga er å sjå næare på korleis personar i sannsynleg utsette yrkesgrupper opplever forholdet mellom utfordringar og belastningar i arbeidet og si eiga fysiske, og særleg psykiske helse. Formålet er mellom anna å få betre forståing for den såkalla utbrenningsprosessen, som dei seinare åra har vore mykje omtala i media. Undersøkinga blir gjennomført på oppdrag frå Den norske lægeforening. Vi tek sikte på å følgje opp med eit nytt intervju om to år.

Du er ein av 1 000 [navn på gruppe] som er trekt ut frå sysselsetjingsregisteret i Statistisk sentralbyrå. Til saman er 8 000 personar tretke ut. Alle som har vært med i undersøkinga i år blir med i trekninga av eitt gávekort til ein verdi av 10 000 kroner og ti gávekort til ein verdi av 1 000 kroner. Det er frivillig å vere med, men for at vi skal få så gode resultat som råd er, er det viktig at alle som er trekte ut blir med. Vi kan ikkje erstatte deg med ein annan. Du kan når som helst trekke deg frå undersøkinga og krevje opplysningane sletta.


Vi ber deg vere vennlæg å svare på spørsmåla i spørjeskjemaet og returnere det til Statistisk sentralbyrå. Spørsmålet om undersøkinga kan du gjerne ringe oss gratis på telefonnummer 800 83 028, eller sende ein e-post til sven.skaare@ssb.no eller elise.wedde@ssb.no. Spørsmål om personvern kan rettast til personvernombodet i Statistisk sentralbyrå, tlf. 21 09 00 00 eller e-post: personvernombud@ssb.no.

På førehand takk!
Vennleg helsing

Svein Longva
administerande direktør

Ole Sandvik
seksjonssjef
Takkebrev

Oslo, november 2003
Saksbehandler: Elise Wedde
Seksjon for intervjuundersøkelser

11 Takk for hjelpen!
Vi ønsker å takke alle som har sendt inn svar på skjemaet til undersøkelsen om belastninger, mestring og helse innenfor utsatte yrker. Til nå har vi fått inn mange svar.

Dersom du ennå ikke har rukket å fulle ut skjemaet, vil vi sette stor pris på om du tok deg tid til det i nærmeste fremtid. Det er selvfølgelig frivillig å delta, men det er svært viktig at så mange som mulig deltar. Da blir resultatene bedre og mer pålitelige.

Alle som fyller ut og returnerer skjemaet er med i trekkingen av en premie til en verdi av 10 000,- kroner og ti premier til en verdi av 1 000,- kroner.

Som vi har nevnt tidligere har alle som arbeider i Statistisk sentralbyrå taushetsplikt, og undersøkelsen er i tråd med retningslinjer gitt av Datatilsynet. Ingen opplysninger om hva enkelpersoner har svart på undersøkelsen vil noensinne bli offentliggjort.

Skulle du ha spørsmål om undersøkelsen, eller dersom du trenger et nytt spørreskjema (bokmål eller nynorsk), kan du ringe oss gratis på telefon 800 83 028, eller sende en e-post til wed@ssb.no eller svs@ssb.no.

Med vennlig hilsen,

Ole Sandvik
seksjonssjef
12 Har du sendt inn spørreskjemaet?
For en tid tilbake fikk du tilsendt et spørreskjema i forbindelse med en undersøkelse om belastning, mestring og helse innenfor utsatte yrker. Da vi ikke kan se å ha mottatt noe skjema fra deg, tillater vi oss å minne om undersøkelsen. Det er frivillig å delta, men resultatet av undersøkelsen avhenger av at så mange som mulig av de som ble trukket ut deltar.

Har du allerede sendt inn skjemaet, ber vi deg se bort fra denne henvendelsen og takker for et verdifullt bidrag til undersøkelsen.

Dersom du ennå ikke har svart, vil vi vare veldig takknemlige om du kunne fylle ut skjemaet og returnere det til oss i den frankerte svarkonvolutten så snart som mulig.

Alle som besvarer og returnerer spørreskjemaet er med i trekkingen av et gavekort på kr 10 000,- og ti gavekort til en verdi av kr 1 000,-.

Undersøkelsen gjennomføres etter lovpålagte regler, og SSB er underlagt kontroll både fra Datatilsynet og vårt eget personvernombud. Det vil aldri bli kjent utenfor Statistisk sentralbyrå hva enkeltpersoner har svart på undersøkelsen.

Har du spørsmål om selve undersøkelsen kan du gjerne ringe oss gratis på telefonnummer 800 83 028, eller sende en e-post til wed@ssb.no eller svs@ssb.no. Vi viser også til informasjon i tidligere brev. Ta kontakt dersom du ønsker spørreskjema på nynorsk.

Generelle spørsmål vedrørende personvern i SSB kan rettes til SSBs personvernombud, telefonnummer 21 09 00 00 eller e-post personvernombud@ssb.no.

Vi ser fram til å motta ditt skjema!

Med vennlig hilsen

Ole Sandvik
seksjonssjef
Oslo, november 2003
Sakshandsamar: Elise Wedde
Seksjon for intervjuundersøkelser

13 Har du sendt inn spørjeskjemaet?
For ei tid sidan fekk du tilsendt eit spørjeskjema i samband med ei undersøking om belastning, meistring og helse innanfor utsette yrker. Då vi ikkje kan sjå at vi har motteke skjema frå deg, tillet vi oss å minne om undersøkinga. Det er frivillig å delta, men resultatet av undersøkinga avhenger av at så mange som mogleg av dei som vart trekt ut deltek.

Har du allereie sendt inn skjemaet, ber vi deg om å sjå vekk frå dette brevet og takker for eit verdifullt bidrag til undersøkinga.

Dersom du ennå ikkje har svart, vil vi vere svært takksame om du kunne fylle ut skjemaet og returnere det til oss i den frankerte svarkonvolutten snarast.

Alle som svarer på og returnerer spørjeskjemaet er med i trekkinga av eit gåvekort på kr 10 000,- og ti gåvekort til ein verdi av kr 1 000,-.

Undersøkinga vert gjennomført etter lovpålagde reglar, og SSB er underlagt kontroll både frå Datatilsynet og vårt eige personvernombod. Det vil aldri verte kjent utanfor Statistisk sentralbyrå kva enkeltpersonar har svart på undersøkinga. Vi viser også til informasjon i tidlegare brev. Ta kontakt dersom du ønskjer spørjeskjema på nynorsk.

Har du spørsmål om sjølve undersøkinga kan du ringje oss gratis på telefonnummer 800 83 028, eller sende ein e-post til wed@ssb.no eller svs@ssb.no. Vi viser også til informasjon i tidlegare brev. Ta kontakt dersom du ønskjer spørjeskjema på nynorsk.

Generelle spørsmål om personvern i SSB kan rettast til SSB sitt personvernombod, telefonnummer 21 09 00 00 eller e-post personvernombud@ssb.no.

Vi ser fram til å motta skjemaet ditt!

Med venleg helsing

Ole Sandvik
seksjonssjef
APPENDIX IV:

Letters to the samples in the second survey
From: http://www.ssb.no/emner/06/90/notat_200636/notat_200636.pdf
Undersøkelse om belastninger, mestring og helse innenfor utsatte yrker

Statistisk sentralbyrå gjennomfører i høst en ny runde av undersøkelsen om belastninger, mestring og helse i åtte utvalgte yrkesgrupper. Du deltok for to år siden, og vi kontaktede deg nå for å oppdatere opplysningene. Vi er svært takknemlige for at du deltok sist, og håper du også blir med denne gangen. Formålet med undersøkelsen er å belyse hvordan personer i antatt utsatte yrkesgrupper opplever forholdet mellom utfordringer og belastninger i arbeidet og sin egen fysiske, og særlig psykiske helse. Hensikten er blant annet å få bedre forståelse for den såkalte utbrenningsprosessen som de senere årene har vært mye omtalt i media. Undersøkelsen gjennomføres på oppdrag fra Den norske lægeforening. Det kan bli aktuelt med enda en oppfølgelse av denne undersøkelsen. Vi vil i så fall kontakte deg i løpet av de neste tre årene.

Du er en av rundt 600 [yrke] som opprinnelig var trukket ut fra Statistisk sentralbyrås sysselsettingsregister. Til sammen er rundt 5000 personer trukket ut. Alle som deltar i årets undersøkelse blir med i trekkingen av et gaverkort til en verdi av 10 000 kroner og ti gaverkort til en verdi av 1000 kroner. Det er frivillig å delta, men for at vi skal få så gode resultater som mulig, er det viktig at alle som er trukket ut blir med. Vi kan ikke erstatte deg med en annen. Du kan når som helst trekke deg fra undersøkelsen og kreve opplysningene slettet.


Vi ber deg vennligst svare på spørsmålene i spørreskjemaet og returnere det til Statistisk sentralbyrå i den vedlagt frankerte svarkonvolullen så snart som mulig. Har du spørsmål om undersøkelsen kan du gjerne ringe oss gratis på telefonnummer 800 83 028, eller sende en e-post til sven.skaare@ssb.no. Spørsmål vedrørende personvern kan rettes til Statistisk sentralbyrås personvernombud, tel 21 09 00 00 eller e-post personvernombud@ssb.no.

På forhånd takk!
Vennlig hilsen

Øystein Olsen

Ole Sandvik

Ole Sandvik
sekssjonsjef

Øystein Olsen
administrerende direktør
Oslo, 20.10.2005
Saksbehandler: Sven Skaare
Seksjon for intervjuundersøkelser, Telefon: 800 83 028

Undersøkelse om belastninger, mestring og helse innenfor utsatte yrker

Vi beklager trykkfeil i spørreskjema
Du mottok for kort tid siden et spørreskjema fra Statistisk sentralbyrå i forbindelse med Undersøkelse om belastninger, mestring og helse innenfor utsatte yrker. I enkelte spørreskjema har det beklageligvis oppstått en trykkfeil, slik at side 2 og 11 i skjemaet mangler, mens side 1 og 10 opptrer to steder.


På forhånd takk!

Med vennlig hilsen

Ole Sandvik
sekjsjonssjef

Sven O. Skaare
planlegger
Takk for hjelpen!

Vi ønsker å takke alle som har sendt inn svar på skjemaet til undersøkelsen om belastninger, mestring og helse innenfor utsatte yrker. Til nå har vi fått inn mange svar. Vi vil nok en gang beklage det bryderiet dere har fått som følge av trykkfeil i enkelte skjema, men håper dere likevel vil besvare undersøkelsen.

Dersom du ennå ikke har rukket å fulle ut skjemaet, vil vi sette stor pris på om du tok deg tid til det i nærmeste fremtid. Det er selvfølgelig frivillig å delta, men det er svært viktig at så mange som mulig deltar. Da blir resultatene bedre og mer pålitelige.

Alle som fyller ut og returnerer skjemaet er med i trekkingen av en premie til en verdi av 10 000 kroner og til premier til en verdi av 1 000 kroner.

Som vi har nevnt tidligere har alle som arbeider i Statistisk sentralbyrå taushetsplikt, og undersøkelsen er i tråd med retningslinjer gitt av Datatilsynet. Ingen opplyssninger om hva enkelpersoner har svart på undersøkelsen vil noen sinne bli offentliggjort.

Skulle du ha spørsmål om undersøkelsen, eller dersom du trenger et nytt spørreskjema (bokmål eller nynorsk), kan du ringe oss gratis på telefon 800 83 028, eller sende en e-post til svs@sbs.no.

Med vennlig hilsen,

Ole Sandvik
seksjonssjef
Oslo, november 2005
Saksbehandler: Sven Skaare
Seksjon for intervjuundersøkelser

Har du sendt inn spørreskjemaet?

For en tid tilbake fikk du tilsendt et spørreskjema i forbindelse med en undersøkelse om belastning, mestringer og helse innenfor utsatte yrker. Da vi ikke kan se å ha mottatt noe skjema fra deg, tillater vi oss å minne om undersøkelsen. Det er frivillig å delta, men resultatet av undersøkelsen avhenger av at så mange som mulig av de som ble trukket ut deltager.

Har du allerede sendt inn skjemaet, ber vi deg se bort fra denne henvendelsen og takker for et verdifullt bidrag til undersøkelsen.

Dersom du ennå ikke har svart, vil vi være veldig takknemlige om du kunne fylle ut skjemaet og returnere det til oss i den frankerte svarkonvolutten så snart som mulig.

Alle som besvarer og returnerer spørreskjemaet er med i trekkingen av et gavekort på kr 10 000,- og ti gavekort til en verdi av kr 1 000,-.

Undersøkelsen gjennomføres etter lovpålagte regler, og SSB er underlagt kontroll både fra Datatilsynet og vårt eget personvernombud. Det vil aldri bli kjent utenfor Statistisk sentralbyrå hva enkeltpersoner har svart på undersøkelsen.

Har du spørsmål om selve undersøkelsen kan du gjøre ringe oss gratis på telefonnummer 800 83 028, eller sende en e-post til sva@ssb.no. Vi viser også til informasjon i tidligere brev. Ta kontakt dersom du ønsker spørreskjema på nynorsk.

Generelle spørsmål vedrørende personvern i SSB kan rettes til SSBs personvernombud, telefonnummer 21 09 00 00 eller e-post personvernombud@ssb.no.

Vi ser fram til å motta ditt skjema!

Med vennlig hilsen

Ole Sandvik
seksjonsjef
APPENDIX V:

English summary of Statistics Norway’s evaluation of sample deviations in each occupation.
From: http://www.ssb.no/emner/06/90/notat_200448/notat_200448.pdf
Response deviations.

<table>
<thead>
<tr>
<th></th>
<th>First wave</th>
<th>Second wave</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lawyers</strong></td>
<td>Females are overrepresented with 3.7 pp. and the age group 40 - 49 underrepresented with 2.0 pp.</td>
<td>Only small deviations that are not considered to influence the estimates</td>
<td>Females are overrepresented with 3.1 pp. and the age group 40 - 49 underrepresented with 1.9 pp. People from Oslo and Akershus are underrepresented by 3.2 pp.</td>
</tr>
<tr>
<td><strong>Bus drivers</strong></td>
<td>The age group 50 - 59 overrepresented with 3.3 pp.</td>
<td>The age group 50 - 59 overrepresented with 2 pp. and the age group 30 - 39 are underrepresented with 1.8 pp.</td>
<td>The age groups under 30 and 30 - 39 are underrepresented with 3.3 pp. and 4.7 pp. The age group 40 - 49 and 50 - 59 overrepresented with 3.7 pp. and 4.7 pp. Oslo and Akershus are underrepresented with 3.5 pp.</td>
</tr>
<tr>
<td><strong>IT workers</strong></td>
<td>Females are overrepresented with 3 pp., the age group under 30 is underrepresented with 3.5 pp. and the age group 40 - 49 is overrepresented with 2.1 pp.</td>
<td>The age group 30 - 39 is underrepresented with 1.8 pp. and the age group 40 - 49 is overrepresented with 2.7 pp.</td>
<td>Females are overrepresented with 2.4 pp. The age group under 30 is underrepresented with 6.3 pp. The age group 40-49 is overrepresented with 4.9 pp.</td>
</tr>
<tr>
<td><strong>Teachers</strong></td>
<td>The age group under 30 is underrepresented with 2.1 pp.</td>
<td>The age group under 30 - 39 is underrepresented with 2.5 pp.</td>
<td>The age group under 30 and 30-39 is underrepresented with 3.4 and 1.9 pp. The age group 40 - 49 and 50 - 59 overrepresented with 1.9 and 3.3 pp. Nord-Norge is underrepresented with 1.5 pp. Vestlandet is overrepresented with 1.5 pp.</td>
</tr>
</tbody>
</table>

*Note: pp, percentage points.*
Deviations in the responses of the randomly selected samples in the first and second wave, and totally.

<table>
<thead>
<tr>
<th></th>
<th>First wave</th>
<th>Second wave</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physicians</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females are overrepresented with 3.8 pp.</td>
<td></td>
<td>Females are overrepresented with 2.5 pp.</td>
<td>Females are overrepresented with 9.8 pp. Agder and Rogaland are overrepresented with 1.9 pp. and Nord-Norge is underrepresented with 3.8 pp.</td>
</tr>
<tr>
<td><strong>Church ministers</strong></td>
<td>Only small deviations that are not considered to influence the estimates.</td>
<td>Males are overrepresented with 1.6 pp. Oslo and Akershus county are overrepresented with 1.5 pp. Hedemark, Oppland, Østfold, Agder and Rogaland are underrepresented with 1.5 – 1.9 pp.</td>
<td>Trendelag county is overrepresented with 2.1 pp. and Østlandet is underrepresented with 2.2 pp.</td>
</tr>
<tr>
<td><strong>Advertisement</strong></td>
<td>Females are overrepresented with 5.5 pp. The age group under 30 is underrepresented with 2.2 pp. The age groups 30 - 39 and 40 - 49 are overrepresented with 2.3 pp. and 2.1 pp.</td>
<td>The age group 30 - 39 is underrepresented with 2.2 pp. and the age group 40 - 49 is overrepresented with 2.7 pp. Oslo and Akershus county are overrepresented with 1.8 pp.</td>
<td>Females are overrepresented with 4.4 pp. The age groups under 30, 50 – 59, and over 60 are underrepresented with 5 pp., 1.8 pp., and 1.5 pp. respectively. The age group 30 - 39 and 40 - 49 is overrepresented with 2.9 pp. and 5.4 pp.</td>
</tr>
<tr>
<td><strong>Nurses</strong></td>
<td>Only small deviations that are not considered to influence the estimates.</td>
<td>Only small deviations that are not considered to influence the estimates.</td>
<td>Females are overrepresented with 6.2 pp. The age group under 30 is underrepresented with 1.9 pp. Hedmark and Oppland are overrepresented with 2.2 pp. whereas Oslo and Akershus are underrepresented with 1.8 pp.</td>
</tr>
</tbody>
</table>

*Note: pp, percentage points.*
APPENDIX VI:

Tests for measurement invariance across gender.
Table A. Tests for measurement invariance across gender.

<table>
<thead>
<tr>
<th>Condition</th>
<th>$\chi^2$</th>
<th>df</th>
<th>RMSEA (90%CI)</th>
<th>NNFI</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>No common parameters</td>
<td>613.45</td>
<td>96</td>
<td>.058 (.054 - .063)</td>
<td>.95</td>
<td>.96</td>
</tr>
<tr>
<td>Invariant factor loadings</td>
<td>624.59</td>
<td>104</td>
<td>.056 (.052 - .061)</td>
<td>.95</td>
<td>.96</td>
</tr>
<tr>
<td>Invariant indicator intercepts</td>
<td>834.38</td>
<td>104</td>
<td>.067 (.062 - .071)</td>
<td>.93</td>
<td>.95</td>
</tr>
<tr>
<td>Invariant factor loadings and</td>
<td>863.09</td>
<td>112</td>
<td>.065 (.061 - .069)</td>
<td>.94</td>
<td>.94</td>
</tr>
<tr>
<td>indicator intercepts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note:* $\chi^2$, Chi-square; df, degrees of freedom; RMSEA, Root Mean Square Error of Approximation; the Non-Normed Fit Index (NNFI) and the Comparative Fit Index (CFI).