

Anette Bach Haugen

The Relations Between Job Demands, Basic Psychological Needs and Work- to-Life Conflict:

A Cross-Sectional Study Within the Norwegian
Retail Industry

Master's thesis in Work and Organizational Psychology
Supervisor: Ingvild Saksvik-Lehouillier and Torhild Anita
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Preface

This Master's thesis is in the format of a scientific article and while it is written fully by the candidate, there are a few people I would like to thank as they have been of invaluable help and support throughout this process.

Firstly, a large thank you to my two advisors Ingvild Saksvik-Lehouillier (main advisor) and Torhild Anita Sørengaard. Together they have been of great assistance regarding the formulation of the research question and in my academic writing. Their guidance has also included reading through the different parts of this thesis and commenting on what has been good, unnecessary and could have been written better. Most importantly, they have challenged me to make my own decisions, which has helped me to better understand the complexity and nuances of a research process.

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Lastly, I would like to thank my brother and parents for supporting me throughout this process.

Trondheim, April 23rd 2019

Anette Bach Haugen

Sammendrag

Målet med denne studien var å undersøke relasjoner mellom arbeids-til-fritid konflikt, jobbkrav og tre basale psykologiske behovene blant ansatte i den norske butikk- og varehandelen. Da denne yrkesgruppen er utsatt for hyppig kontakt fra arbeid utenom arbeidstid, og arbeid-fritid balanse og konflikt er tett knyttet til arbeids- og generell helse, er det nødvendig med mer kunnskap om deres arbeid-fritid konflikt og de arbeidsfaktorer som påvirker den. I denne studien svarte 216 norske butikk- og varehandelansatte på en nettdistribuert spørreundersøkelse som inneholdt måleinstrumenter om arbeid-til-fritid konflikt, jobbkrav og basale psykologiske behovene. Resultatene indikerte at alle jobbkravene og behovene var relatert til arbeid-til-fritid konflikt, men at kun kvantitative- og beslutningskrav, og fornøydhet med behovet for autonomi var direkte bidragsytere til variasjonen i arbeid-til-fritid konflikt. Mer forskning trengs for å få en bredere og dypere forståelse av relasjonene mellom arbeid-til-fritid konflikt, jobbkrav og de basale behovene, samt arbeid-til-fritid konflikts relasjoner til andre arbeidsfaktorer og inn i en større arbeidspsykologisk sammenheng. Longitudinelle studier trengs for å bedre kunne undersøke de mulige prediktive egenskapene til jobbkrav og de basale behovene på arbeid-til-fritid konflikt blant populasjonen av butikk- og varehandelansatte.

Nøkkelord: Arbeid-fritid balanse, arbeids-fritid konflikt, basale psykologiske behov, jobbkrav-ressursmodellen, jobbkrav, varehandel.

Abstract

The aim of this study was to examine relations between work-to-life conflict, job demands and satisfaction of basic psychological needs among employees in the Norwegian retail industry. As this group is exposed to frequent contact from the workplace outside working hours and conflict is connected to occupational- and general health, it is necessary to gain knowledge about their work-life conflict and the occupational factors which affect this conflict. In this study, 216 Norwegian retail workers replied to a survey distributed online containing instruments of work-to-life conflict, job demands and basic psychological needs. The results indicated that the demands and needs were related to work-to-life conflict, while quantitative- and decision demands, and satisfaction of the need for autonomy were unique contributors of the variance in work-to-life conflict. More research is needed to deepen the understanding of the relation between work-to-life conflict, job demands and basic needs, as well as work-to-life conflict's relation to alternative occupational factors and within a larger psychological perspective. Longitudinal studies are needed to examine possible predictive powers of job demands and basic needs on work-to-life conflict among the population of retail workers.

Keywords: Work-life balance, work-life conflict, basic psychological needs, job demands, Job Demands-Resource model, retail.

An individual's experience of work-life balance is found to represent an important predictor for outcomes of both psychological and physical health (Greenhaus, Allen, & Spector, 2006; Grzywacz, Almeida, & McDonald, 2002; Kalliath & Brough, 2008; Marks, Huston, Johnson, & MacDermid, 2001; Pleck, 1995). It is among other things associated to key concepts like psychological well-being (Lunau, Bambra, Eikemo, van der Wel, & Dragano, 2014), life satisfaction (Haar, Russo, Suñe, & Ollier-Malaterre, 2014) and self-rated physical health (Lunau et al., 2014), where experiencing balance is consistently related to more preferable health outcomes than experiencing imbalance. Simultaneously, one's experience of work-life balance is found to influence behavior related to work performance (Haar et al., 2014; Kirchmeyer, 1992) (Pradhan, Jena, & Kumari, 2016), organizational stress level (Hammer, Saksvik, Nytrø, Torvatn, & Bayazit, 2004) and marital satisfaction in both partners (Voydanoff, 2005). Thus, indicating that the affecting range of one's work life balance surpasses an individual beyond his or her health, and beyond an individual (Greenhaus & Allen, 2014).

Scandinavian employees have reported high experience of work-life balance, compared to employees in other European countries (Lunau et al., 2014; OECD, 2011, 2013, 2015). However, the Norwegian Survey on Living Conditions from 2016 shows that when compared with numbers from the survey run in 2013, Norwegian employees report that work increasingly infiltrate private life (SSB, 2017). Thus, it seems as the work force is exposed to challenges that affect the relationship between work and leisure time. Among these challenges is the continual change and widespread use of technological tools and information- and communication technology, for improving efficiency and information flow (Barber & Santuzzi, 2015; Boswell & Olson-Buchanan, 2007). This includes among other things an increased popularity regarding smartphones for job purposes, both the use of private phones at work and work phones at home (Yun, Kettinger, & Lee, 2012), and utilization of job-related email outside working hours, often through smartphones (Derks, Duin, Tims, & Bakker, 2015), which is also reflected in the Norwegian working population (SSB, 2017).

The previously mentioned use of information- and communication technology leaves the employee free to choose whether to interact. However, the Norwegian Survey on Living Conditions from 2016 shows that nearly one third of the workforce are directly contacted by the workplace outside of regular working hours, at least once a week (NOA, 2016f; SSB, 2017). These types of technological trends are found to result in an increased spillover from work to leisure (Boswell & Olson-Buchanan, 2007; Schieman & Young, 2013; Yun et al., 2012).

When taking into consideration the changes in the Norwegian society and working life seen within the last decade alone, new empirical evidence is needed to incorporate today's new or altered challenges within the field of work-life balance. This includes a need to revisit established relations between organizational factors and work-life conflict.

Using the Job Demands-Resource model as its theoretical framework, this study will include job demands and basic psychological needs, both of which are previously found connected to work-life conflict (Van den Broeck, Ferris, Chang, & Rosen, 2016; Voydanoff, 2004). The aim of the current study is to provide new empirical evidence of the relations between job demands, basic psychological needs and work-to-life conflict among a sample of retail workers representing Norway's second largest industry (SSB, 2019).

Theory

Work-Life Balance

The field of the work- and non-work domains, and their influence on each other has been well explored (Grawitch, Barber, & Justice, 2010; Kalliath & Brough, 2008). Previous research has mostly focused on the negative aspects and thus the antecedents and consequences of a more problematic relationship between work and life (Grawitch et al., 2010). Historically, much of the research and literature refer to the concept of work and life as "work-family balance" (Byron, 2005; Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Keeney, Boyd, Sinha, Westring, & Ryan, 2013). However, there has been suggested that "work-family" should be replaced with "work-life balance" as this phrase represents a broader and more inclusive conceptualization of the phenomena (Keeney et al., 2013).

Despite its long-lasting popularity within research, a universal conceptualization of the balance between work and life domains remains allusive (Kalliath & Brough, 2008). In their review of the work-life balance literature, Kalliath and Brough (2008) presented six different conceptualizations of the balance concept. Firstly, is the thought that work-life balance is an inter-role phenomenon, which occurs between an individual's multiple life roles (Greenhaus, Collins, & Shaw, 2003). This initial conceptualization has been further extended by recognizing the importance of individuals' thoughts and feelings on balance and imbalance. Greenhaus and colleagues (2003) defined balance as equity across several roles, with a focus on time-, involvement- and satisfaction balance between one's work role and family role. Similarly, work-life balance has been defined both as an individual's satisfaction between multiple roles, achieved through successful personal resource allocation across domains (Grawitch et al., 2010; Kirchmeyer, 2000), and as when an individual's satisfaction with work- and life roles, is compatible with his or her role priorities and/or expectations (Eby et

al., 2005; Greenhaus & Allen, 2006). Work-life balance has also been defined as an individual's perceived control over his or her multiple roles, where balance reflects a high degree of autonomy within the roles which are important to the individual (Fleetwood, 2007).

Spillover effects. Lastly, Kalliath and Brough (2008) presented work-life balance as a relationship between the two separate processes: facilitation and conflict (Frone, 2003). Work-life facilitation and conflict are also called spillover effects, where spillover refers to an individual's transmission of experiences from one domain of life to another (Bakker & Demerouti, 2013; Rodríguez-Muñoz, Sanz-Vergel, Demerouti, & Bakker, 2014).

Work-life facilitation. Work-life facilitation occurs when experiences in one domain, for example positive affect or resources, are transferred and thus improve aspects within another domain (Greenhaus & Powell, 2006). It is suggested that the antecedents of work-to-life and life-to-work facilitation are resources acquired from the originating domain (Frone, 2003; Greenhaus & Powell, 2006). This appears to be empirically substantiated as factors related to leisure, like psychological engagement in family role, are found to predict life-to-work facilitation (Allis & O'Driscoll, 2008; Graves, Ohlott, & Ruderman, 2007). Additionally, Kirckmeyer (1992) and Voydanoff (2005) have discovered that participation and involvement in activities outside work (also outside the family domain) is not only related to increased satisfaction with one's marriage, but also work-related factors like increased performance and engagement (Kirckmeyer, 1992; Voydanoff, 2005).

Similarly, work-related factors are generally associated with work-to-life facilitation, rather than life-to-work facilitation. Work engagement is found to be related with overall work-to-life facilitation (Aryee, Srinivas, & Tan, 2005), as well as to have direct effects on one's own and indirect effects on one's partner's daily happiness (Rodríguez-Muñoz et al., 2014). Also, employees' experienced job decision latitude, task variation, complexity (Grzywacz & Butler, 2005), skill level and control are associated to increased work-to-life facilitation (Butler, Grzywacz, Bass, & Linney, 2005).

Work-life conflict. Work-life conflict occurs when demands of different domains are mutually incompatible to such a degree that participation in one domain interfere or hinder participation in another, or when negative affect acquired in one domain transfers and worsen aspects of another (Greenhaus & Beutell, 1985). As with work-life facilitation, empirical evidence indicates that factors at work generally predict work-to-life conflict, whereas life-to-work conflict are mainly predicted by factors originating from the family and leisure domains (Byron, 2005; Frone, 2003; Greenhaus & Allen, 2014). However, in a meta analytic review,

Byron (2005) found that a few factors, among them job stress, are associated with both work-to-life and life-to-work conflict.

The concept of work-life conflict has been and still is of interest of researchers due to its connections with physical and psychological health outcomes (Greenhaus et al., 2006). Empirical evidence indicates that employees who report more work-life conflict have a higher risk of experiencing symptoms of anxiety and depression, than employees who report less or no conflict (Frone, Russell, & Cooper, 1992; Haar et al., 2014). Similar findings have been found in relation to fatigue (Jansen, Kant, Kristensen, & Nijhuis, 2003), and psychological well-being (Lunau et al., 2014), where more work-life conflict is associated to less preferable outcomes than less conflict. Regarding physical health, employees who report higher work-life conflict are found to have a higher risk of serious backache, headache and sleep issues, than those who experience less conflict (Hämmig, Gutzwiller, & Bauer, 2009). Work-life conflict is also repeatedly linked to health-related behaviors associated with exercise and food (Allen & Armstrong, 2006; Roos, Sarlio-Lähteenkorva, Lallukka, & Lahelma, 2007), as well as the use of food as a strategy of dealing with conflicting demands from work and leisure (Devine et al., 2009). However, the interest of work-life conflict is mainly due to its associations with increased levels of experienced psychological strain and stress (Grzywacz et al., 2002; Pleck, 1995).

As work-life conflict represents a continuous threat to employee health and function to deteriorate health independently of work-life facilitation (Frone, 2003), focusing on reducing the amount of experienced conflict seems a crucial first step to improve employee health. While several theoretical frameworks have been used to uncover knowledge which can be used to achieve this, among them Conservation of Resources (de Jonge, Spoor, Sonnentag, Dormann, & van den Tooren, 2012; Fisher, Bulger, & Smith, 2009) and Job Demands-Control (-Support) model (Mayo, Pastor, Cooper, & Sanz-Vergel, 2011), the Job Demands-Resource model is utilized in the current study.

The Job Demands-Resources Model

The Job Demands-Resource model (JD-R) is an occupational stress model which theoretical framework originates from the balance perspective of organizational psychology (Bakker & Demerouti, 2007). The balance perspective focuses on whether occupational factors results in an experience of balance or imbalance. As different jobs are associated with specific occupational factors, the JD-R model classifies them within two general categories: job demands and resources (Bakker, Demerouti, de Boer, & Schaufeli, 2003; Bakker,

Demerouti, Taris, Schaufeli, & Schreurs, 2003; Demerouti, Bakker, de Jonge, Janssen, & Schaufeli, 2001; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001).

Job demands. Job demands refer to psychological, social, physical or organizational aspects of a job which require a continued use of physical and/or psychological effort (Demerouti, Bakker, Nachreiner, et al., 2001). Hence, job demands are associated with psychological and/or physical costs and will disturb the equilibrium of demands and resources. Occupational factors like work overload, emotionally demanding interactions, time pressure and inconvenient physical environment have been identified as common sources of high job demands (Bakker & Demerouti, 2007; Bakker, Demerouti, Taris, et al., 2003).

Since job demands are important for the health of employees, much research has been done in order to identify and explore the influencing range of experiencing high job demands (Bakker & Demerouti, 2007; Bakker, Demerouti, Taris, et al., 2003). This also includes examining job demands in a context of work-life balance, particularly work-life conflict. The overarching empirical evidence imply that high job demands increase employees' experience of work-life conflict, when compared to low job demands (e.g. Cortese, Colombo, & Ghislieri, 2010; Voydanoff, 2004).

Job resources. Job resources contribute to either a reduced amount of job demands and hence the related cost, achievement of job-related goals, and/or incitement of personal growth, development and learning (Bakker & Demerouti, 2007). When available, factors like colleague- and leader support, performance feedback and autonomy have been identified as among the more influential job-related resources (Demerouti, Bakker, de Jonge, et al., 2001; Demerouti, Bakker, Nachreiner, et al., 2001; Salanova, Agut, & Peiró, 2005; Taris & Feij, 2004).

The JD-R model and work-life conflict. Because of its divide of factors as either job demands or resources, the JD-R model is applicable to a wide selection of job sectors and occupations, as well as to most psychological fields (Bakker & Demerouti, 2007). Among these are work-life balance (Bakker & Demerouti, 2007; Greenhaus et al., 2003). The JD-R model is particularly relevant when the focus is on work-to-life conflict. This because conflict refers to incompatible demands from multiple domains (Greenhaus & Beutell, 1985), and because the demands connected to employment fits with the notion of job demands. Thus, when there exists an imbalance between experienced job demands and available resources, and occupational strain occurs (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, et al., 2001), it represents possibilities for strain to spill over into private life (Bakker & Demerouti, 2013; Keeney et al., 2013; Rodríguez-Muñoz et al., 2014).

Within the JD-R framework both a combination of high job demands and low resources, and low job demands and high resources will result in experienced psychological strain (Demerouti, Bakker, de Jonge, et al., 2001). Prolonged exposure to demand and resource imbalance, and sustained psychological strain is associated with deterioration of employee health (Dhabhar & McEwen, 1999; Groër, Meagher, & Kendall-Tackett, 2010; Holmgren, Dahlin-Ivanoff, Björkelund, & Hensing, 2009; Moreau et al., 2004). Empirical evidence indicates that experiencing high job demands and low resources is particularly health damaging (de Jonge & Kompier, 1997; Landsbergis, 1988).

Thus, following the JD-R model and the empirical evidence which support it, lowering the amount of experienced job demands is an important measure to reestablish a balance and reduce psychological strain in situations where employees lack available resources. However, as job demands might be inseparable from the occupation and prove difficult to control, a focus on the availability of resources is also needed to achieve balance and lower the amount of experienced strain, and thus minimize the possibilities for occupational strain to transfer to other areas of life.

Basic Psychological Needs

The notion of basic needs builds on Self-Determination Theory (SDT) (Ryan & Deci, 2000). SDT has an approach to motivation and personality, which focus is humans' intrinsic tendencies of growth and psychological needs, and environmental factors that hinder or facilitate these needs (Ryan, Kuhl, & Deci, 1997). Internal motivation is the innate force which drives people to pursue new experiences and challenges, to develop their skills, to explore and to learn (Ryan & Deci, 2000). Self-Determination Theory suggests that there are three environmental conditions which must be present to facilitate humans' internal motivation. These are -autonomy, competence and relatedness. Autonomy is defined as the need to experience choice and to be the originator of one's own actions (deCharms, 1968). Competence is defined as the need to successfully finish challenging tasks and accomplish desired outcomes (White, 1959). Relatedness is defined as the need to feel connected to and understood by one's surroundings, or a sense of belongingness to those within one's environment (Baumeister & Leary, 1995).

Basic psychological needs at work. Self-Determination Theory suggests that whether an individual is motivated and experience well-being within an organization depends on whether the person's basic psychological needs are satisfied by the organization (Deci et al., 2001). The theory further states that satisfaction of basic needs is crucial to have positive and ideal work experiences (Deci & Ryan, 2000). Hence, research on basic needs at work has

been popular within organizational psychology and has resulted in focus on several topics. Among them the field of flow as Deci and Ryan (2000) hypothesized that satisfaction of needs at work might cause experiencing flow (Csikszentmihalyi, 1997; Deci & Ryan, 2000; Ilies et al., 2017; Petrou, Demerouti, Peeters, Schaufeli, & Hetland, 2012), and leadership related to authentic-, transformational and transactional leadership behavior (Hetland, Hetland, Andreassen, Pallesen, & Notelaers, 2011; Leroy, Anseel, Gardner, & Sels, 2015).

Antecedences of satisfaction of basic psychological needs at work. Another focus of research has been to explore antecedences of experiencing satisfaction of the basic needs at work. In a recent meta-analytic review, Van den Broeck and colleagues (2016) aimed to summarize these findings. They included 99 papers containing 119 separate samples and examined the relations between satisfaction of the three basic psychological needs and an array of demographic, personality-related, organizational variables found in the included empirical studies. In their review, they found that women reported overall higher satisfaction of the need for relatedness than men, and that satisfaction of the need autonomy and competence increased with age. Regarding education they found that employees with higher completed educational level were more satisfied with the need for autonomy than those with a lower educational level (Van den Broeck et al., 2016). Additionally, some of the Big Five personality traits (Costa & McCrae, 1992) were found related to basic needs. The analysis showed that higher scores on extroversion, agreeableness and conscientiousness were associated with higher satisfaction of all the basic psychological needs, than lower personality scores.

Van den Broeck and colleagues (2016) also examined which organizational factors that affect employees' satisfaction of the basic psychological needs, categorizing the factors as either job demands or job resources. Experiencing high rather than low role stressors and job insecurity was found to thwart satisfaction of all the basic needs. While being exposed to high rather than low workload and emotional demands thwarted the satisfaction of the need for autonomy and competence. However, experiencing high cognitive demands was related to increased satisfaction of the need for competence and relatedness, compared to experiencing lower cognitive demands, and was therefore the only job demand that was not found to thwart one or more of the satisfaction of needs (Van den Broeck et al., 2016).

Self-Determination Theory suggests that job resources function to fulfill basic needs (Ryan & Deci, 2000), an assumption that was supported by the findings in the meta-analytic review (Van den Broeck et al., 2016). All the included resources, feedback, job autonomy and social support were found significantly and positively related to satisfaction of the need for

autonomy, competence and relatedness. However, job autonomy was particularly highly related to satisfaction of the need for autonomy, and social support was particularly highly related to satisfaction of the need for relatedness (Van den Broeck et al., 2016). Thus, the empirical evidence indicates that both job demands and resources are important influential factors of satisfaction of the basic psychological needs at work.

Outcomes of satisfaction of the basic psychological needs. As mentioned, the Self-Determination Theory states that satisfaction of basic needs at work is important for employees' work experiences (Deci & Ryan, 2000). Thus, there has also been considerable interest in the possible beneficial and disadvantageous outcomes of needs satisfaction. Satisfaction of basic needs has been found to increase employees' work performance and effort, as well as to thwart amotivation (Van den Broeck et al., 2016). Autonomy and competence satisfaction has shown a negative association external motivation, whilst all three basic needs have been discovered positively related to employees' experience of internal motivation, which is in line with Self-Determination Theory (Ryan & Deci, 2000; Van den Broeck et al., 2016). Being satisfied with one's basic needs at work has been found related to increased enjoyment of work and decreased experience of drive (tasks are not enjoyable, but one feels obliged to do them), which are components found to decrease and increase the risk of workaholism respectively (Andreassen, Hetland, & Pallesen, 2010). On the other hand, dissatisfaction of the basic needs has been found to represent a contributing factor of burnout (Trépanier, Fernet, & Austin, 2013, 2015), and absenteeism (Van den Broeck et al., 2016).

Lastly, basic needs satisfaction has been found to be an important predictor of employees' general psychological well-being (Deci et al., 2001; Van den Broeck et al., 2016). More specifically, they have been shown positively related to job satisfaction and affective commitment, and negatively to turnover intentions, all crucial indicators of well-being (Van den Broeck et al., 2016). Satisfaction of the basic needs is found to be particularly related to well-being when employees experience balanced need satisfaction, rather than imbalanced satisfaction (Sheldon & Niemiec, 2006).

Satisfaction of basic psychological needs as a resource. As satisfaction of the basic needs is influenced by job resources and has outcomes similar to those of job resources (e.g. Bakker, Demerouti, & Euwema, 2005; Mauno, Kinnunen, & Ruokolainen, 2007), one could question whether satisfaction of basic psychological needs is simply an intermediate factor of job resources and their psychological outcomes. That is, whether satisfaction of basic needs for autonomy, competence and relatedness are not conceptually different from the job resources that predict satisfaction.

Self-Determination Theory states that satisfaction of the basic needs at work facilitates well-being and strengthens personal resources which contributes to increased resilience, while dissatisfaction fosters ill-being and increases vulnerability to stressful situations (Ryan & Deci, 2000). The theory therefore assumes that it is not entirely the same as its antecedent job resources. When comparing conceptualizations, satisfaction with the need for relatedness is conceptually similar to social support (Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010; Viswesvaran, Sanchez, & Fisher, 1999). However, both satisfaction with the need for autonomy and competence are conceptually different from several other concepts of job autonomy (Karasek, 1979; Morgeson & Humphrey, 2006) and concepts related to self-efficacy (Bandura, 1997), respectively (Van den Broeck, Vansteenkiste, et al., 2010). While the basic needs are found positively related to and dependent of job resources (Van den Broeck et al., 2016; Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008), both the theoretical and empirical evidence indicate that satisfaction of basic psychological needs is a conceptually unique resource (Demerouti, Bakker, Nachreiner, et al., 2001).

Work-life balance and basic psychological needs at work. A few studies have suggested that satisfaction of basic needs is connected to work-life balance. Fulfillment of the three basic needs is associated with experienced balance through mechanisms of work-life facilitation (Warner & Hausdorf, 2009; Westman, Brough, & Kalliath, 2009). Additionally, the mentioned meta-analytic review found in their analysis of just nine effect sizes, that satisfaction of all the basic psychological needs at work was negatively related to work-family (not work-life) conflict (Van den Broeck et al., 2016).

Job autonomy. While not conceptually identical to satisfaction of the basic need for autonomy at work, job autonomy is strongly related to satisfaction. Job autonomy is found to be the organizational factor most often associated with elements of work-life balance (Clark, 2001). It is found to be an important resource (Demerouti, Peeters, & van der Heijden, 2012) in regards to individuals' experienced work-life balance within several types of employment (Annink & den Dulk, 2012; Voydanoff, 2004) and to have a stable, negative relation to conflict within a population over time (Thompson & Prottas, 2006; Voydanoff, 2004).

However, some studies show a more nuanced relationship between job autonomy and work-life balance. While, Schieman and Young (2010) discovered that autonomy of when to start and end the work day was negatively related to work-life conflict, their results also indicated that this form of autonomy might not reduce or buffer against work-life conflict because it increases the exposure to role blurring (Schieman & Young, 2010). In a Canadian sample, Lapierre and Allen (2012) found no significant relation between control of work

(which they argue measures the same as autonomy) and work-to-life conflict. However, when including individual planning behavior into the model, a moderating effect occurred. While there remained a non-significant relation among those who scored lower in planning behavior, they found that among employees who scored higher there appeared a negative association between control of work and work-to-life conflict. The empirical evidence regarding the relation between job autonomy and work-to-life conflict is therefore somewhat divided.

Work-Life Conflict, Job Demands and Satisfaction of Basic Psychological Needs Among Norwegian Employees

A substantial amount of research has been conducted on work-life conflict over a long period of time, however little has been done in Norway (Andreassen, Hetland, & Pallesen, 2013; Innstrand, Langballe, Espnes, Aasland, & Falkum, 2010; Seierstad & Kirton, 2015). This despite what seems as an increasing risk of experiencing work-life conflict in the Norwegian working population (SSB, 2017).

While both theoretical and empirical evidence indicate that high job demands increase work-life conflict (Bakker & Demerouti, 2007; Cortese et al., 2010; Demerouti, Bakker, Nachreiner, et al., 2001; Voydanoff, 2004), no one has examined these relations among Norwegian employees. Even when the Norwegian Survey on Living Conditions (2016) shows that 60% of the workforce, about 1 600 000 persons, report experiencing high job demands, defined as high time pressure and too much to do (NOA, 2016e; SSB, 2017). Only a few studies have included both job demands and work-family conflict (Hammer et al., 2004; Pal & Saksvik, 2008), however, there are no quantitative Norwegian studies where work-life conflict is the main focus and is positioned as the dependent variable.

Similarly, while satisfaction of the basic psychological needs at work as a conceptually unique job resource is found negatively related to work-family conflict (Van den Broeck et al., 2016), there is a lack of empirical studies examining the relation between basic needs and the newer conceptualization of work-life conflict (Keeney et al., 2013) among Norwegian workers. As the empirical evidence is divided and alludes to there being complex relation between job autonomy and conflict, there is also a need for more research regarding satisfaction of the need for autonomy and its possible outcomes, like work-life conflict.

There is both theoretical and empirical evidence which show the importance of job demands and basic needs for work-life conflict, but no Norwegian studies which has examined the relations of either of them to work-life conflict. Thus, follows that there is no empirical evidence which displays how satisfaction of the basic psychological needs as a

collective unit (Sheldon & Niemiec, 2006), affects the relations between job demands and work-life conflict.

Work-life conflict in the Norwegian retail industry. The Norwegian retail industry employs over 300 000 individuals which makes it the country's second largest industry (SSB, 2019). The industry is predominantly found within the private sector and despite employing a large portion of the workforce, the businesses within it are characterized by their small size. Nearly 80% of those with retail occupations work in businesses of less than 50 employees (NOA, 2016g; SSB, 2017).

Research done in regard to this industry has largely focused on customers (Berg, 2008), prizes (Mirza & Bergland, 2012) and competition (Foros & Kind, 2008). Thus, little attention has been paid to the over 300 000 individuals employed within retail jobs. Only a few studies have looked on retail employees and their work conditions (Brøgger, 2010) and work commitment (Biong, Nygaard, & Silkoset, 2010), but through a lens of organizational performance and gain, rather than psychological and physiological health outcomes. The only other numbers that exist are those from Survey on Living Condition (NOA, 2016f; SSB, 2017) which shows that 41% of employees found within the Norwegian retail industry experience being contacted by someone at work, outside one's working hours, with requests or questions regarding work at least once a week. This makes its workers the second most contacted employees in Norway (NOA, 2016f; SSB, 2017).

There is therefore a lack of knowledge and empirical studies regarding the occupational health of Norwegian retail employees, and none which have sought to explore their work-life balance or work-life conflict. Knowing the importance of balance and conflict for physical and psychological health, and that this group has an elevated risk of experiencing uncontrollable requests from work when not working, a greater effort should be made to explore these aspects within the population of Norwegian retail workers.

The Aim of the Current Study

The current study will narrow down its focus to the process of work-to-life conflict, and quantitative-, decision- and learning demands and the basic psychological needs at work as possible antecedents of increased and decreased work-to-life conflict among retail workers. As the study will look at both strain inducing and reducing occupational factors, it will utilize the concepts of job demands and resources and the extended JD-R model as its theoretical framework.

The aim of this thesis is to provide new empirical evidence based on the current work life by looking at relations between work-to-life conflict, basic needs and job demands among

Norwegian retail employees. The current study will therefore explore and answer the following research question: “Are there any relations between work-to-life conflict, job demands and the basic psychological needs among Norwegian retail employees?”

Based on the literature presented in the introduction, the following hypotheses are proposed:

1. Employees who report having higher job demands experience higher work-to-life conflict than those who report having less job demands.
2. Employees who experience higher degree of satisfaction of the need for autonomy experience lower levels of work-to-life conflict than employees who experience less satisfaction of the need for autonomy.
3. Employees who experience higher degree of satisfaction of the need for competence experience lower levels of work-to-life conflict than employees who experience less satisfaction of the need for competence.
4. Employees who experience higher degree of satisfaction of the need for relatedness experience lower levels of work-to-life conflict than employees who experience less satisfaction of the need for relatedness.

Method

Sample

The participants in this study were Norwegian speaking women and men over the age of 18, from all over Norway, employed within the retail industry, and were organized through The Norwegian Union of Commerce and Office Employees. The total sample size was 225 and consisted of 32 (15%) men and 186 (85%) women, with an age ranging from 18 to 65 ($M = 38.6$, $SD = 11.8$). Twenty-eight percent ($n = 62$) of the sample were not in a romantic relationship, 5% ($n = 10$) reported having a romantic partner, 32% ($n = 71$) lived with a romantic partner, 27% ($n = 59$) were married, 7% ($n = 16$) were divorced and one employee (0.5%) had lost their marital partner. Sixty-two (28%) reported having one or more children under the age of 18 within the household, whilst the remaining 157 (72%) reported that they did not. The highest level of finished education varied. Ten percent ($n = 22$) had finished elementary and secondary school, nearly 73% ($n = 159$) had finished high school, whilst 15% ($n = 32$) and 3% ($n = 6$) had finished three years of higher education (Bachelor's degree) and five years of higher education (Master's degree) respectively. In total, 9% ($n = 19$) of the employee's reported being students, while 91% ($n = 200$) reported not being students.

The participants reported that they work from 5 to 60 hours a week ($M = 31.7$, $SD = 9.6$). Thirty-two percent of the sample reported being in manager ($n = 13$) or middle manager

(n = 57) positions, while the rest were ordinary employees (n = 149). Twenty-nine percent (n = 61) of the participants worked only day shifts, 10% (n = 21) worked only evening shifts, 56% (n = 120) worked similar amount of day and evening shifts, whilst nearly 6% (n = 12) reported having rotating shifts including day, evening and night.

Ethics

The research project was reported to and approved by the Regional Committees for Medical and Health Research Ethics (2018/299) in the spring of 2018. The participants were informed that they consented to participation in the study by answering the questions in the electronic survey. The participants were also informed that they at any time could retract their information, as long as their individual response was possible to identify in the dataset and not been included in any analyses or publications.

Design/Procedure

This project was constructed with a cross-sectional design and the questionnaire was distributed as an electronic survey using the program SelectSurvey, which is NTNU and the Faculty of Social and Educational Sciences' system for conducting online surveys. An agreement with the Norwegian Union of Commerce and Office Employees was made in advance, and the link to the survey was distributed through the unions official Facebook and Twitter accounts. The survey was administered in June 2018 and was open for 4 weeks. A reminder was given after 2 weeks. Since the questionnaire was distributed through social media, it is not possible to estimate a valid response rate.

Instruments

In addition to background and demographic variables, e.g. sex, age, education, children and work time schedule, the questionnaire also included Norwegian versions of instruments measuring sleep, stress, physical and mental health, affect, personality and work environment. The General Nordic Questionnaire for Psychological and Social Factors at Work (Lindstrom et al., 2000) and Basic Need Satisfaction at Work (Deci et al., 2001) measured work environmental factors.

QPS Nordic. The General Nordic Questionnaire for Psychological and Social Factors at Work (QPS Nordic) was constructed by (Lindstrom et al., 2000) and looks on basic social and psychological factors found within the work environment. The QPS Nordic was designed so it could be used universally as an intervention tool and for research purposes and has been repeatedly validated (Dallner et al., 2000; Wännström, Peterson, Åsberg, Nygren, & Gustavsson, 2009).

Work-to-life conflict. Work-to-life conflict was measured by a single item question from QPS Nordic, used by among others Voss, Marklund, and Lidwall (2009), and Gamperiene, Nygård, Sandanger, Wærsted, and Bruusgaard (2006). The item “Do the demands of your work interfere with your home and family life?” was measured using a 5-point Likert scale ranging from 1 (“very seldom or never”) to 5 (“very often or always”).

Job demands. Job demands, were measured by mean scores calculated from quantitative-, decision-, and learning demands from the QPS Nordic. These scales have previously been used by Christensen and Knardahl (2010), and Testad, Mikkelsen, Ballard, and Aarsland (2010). All three types of demands were measured on a 5-point Likert scale with a range from “very seldom or never” (1) to very often or always (5). Quantitative demands captures employees’ amount of work and time pressure (Lindstrom et al., 2000). The scale consists of four items, among them “Do you have too much to do?” and “Do you have to work overtime?”. The quantitative demands scale ($\alpha = .74$) had an internal consistency over the satisfactory level of $\alpha > .70$ (Cortina, 1993) and was consistent with the level in the QPS Nordic manual ($\alpha = .73$) (Lindstrom et al., 2000). Decision demands are demands at work for attention and decision-making (Lindstrom et al., 2000) and were measured by the three items “Does your work require quick decisions?”, “Does your work require maximum attention?” and “Does your work require complex decisions?”. This scale had an internal consistency of $\alpha = .57$, which is under $\alpha > .70$ and the QPS Nordic level ($\alpha = .68$). Learning demands concerns whether an employee’s need for developing skills to be able to do one’s job to a satisfactory degree (Lindstrom et al., 2000). The scale consists of the three items “Are your work tasks too difficult for you?”, “Do you perform work tasks for which you need more training?” and “Does your job require that you acquire new knowledge and new skills?”. The learning demand items showed an internal consistency of $\alpha = .64$. This is under the level of $\alpha > .70$, however, over the alpha level reported in the QPS Nordic manual ($\alpha = .61$).

Basic Needs Satisfaction at Work. The Basic Needs Satisfaction at Work measures individuals’ fulfillment of the three components of internal motivation proposed by self-determination theory; autonomy, competence and relatedness (Deci et al., 2001; Ryan & Deci, 2000). The BNSW was developed (Deci et al., 2001; Ilardi, Leone, Kasser, & Ryan, 1993) to capture the degree to which the work environment fulfills employees’ satisfaction of the basic needs. Although it is frequently used (e.g. (Andreassen et al., 2010; Hetland et al., 2011)), the Norwegian version of the instrument is still not formally validated. However, the English version has been validated multiple times (e.g. Van den Broeck, Vansteenkiste, et al. (2010)).

The BNSW consists of 21 items formed as statements, measured on two 7-point Likert scales ranging from “does not match at all” (1) to “match very well” (7) and “not at all true” (1) to “very true” (7), for items 1 to 15 and 16 to 21 respectively. Satisfaction of the need for autonomy was measured by 7 of the 21 items. Among them are “I am free to express my ideas and opinions on the job.” and “When I am at work, I have to do what I am told.”. Satisfaction of the need for competence was measured by 6 items, from which are “I do not feel very competent when I am at work.” and “When I am working I often do not feel very capable.”. The last of the basic needs, satisfaction of the need for relatedness, was measured by the remaining 8 items. E.g. “I really like the people I work with.” and “People at work care about me.” As the BNSW instructs, mean scores of the needs were calculated and used in the statistical analysis. Reliability analysis’ showed that autonomy ($\alpha = .82$), competence ($\alpha = .75$), and relatedness ($\alpha = .86$) had satisfactory alpha levels (Cortina, 1993).

Statistical Analysis

The statistical analyzes were conducted using STATA, version 15.1. A Pearson’s correlation analysis was conducted to examine correlations between the demographic variables sex, age and education, the independent variables quantitative demands, decision demands, learning demands, satisfaction of the need for autonomy, competence and relatedness, and the dependent variable work-to-life conflict. Three one-sample two-tailed student t-tests were run to compare if the job demands experienced by the sample in the present study were significantly different from the averages of the QPS Nordic norm sample (Lindstrom et al., 2000). These were also included to provide insight regarding under which conditions the possible relations between the job demands and WLC where found. That is whether the possible relations were found even among a sample which experienced significantly lower or higher quantitative, decision- and learning demands than the Nordic norm sample.

A three-step hierarchical regression was conducted to further examine how sex, age, education, quantitative-, decision- and learning demands, satisfaction of the need for autonomy, competence and relatedness were related to work-to-life conflict. The first model included the demographic variables sex, age and education. They were placed in the first model as there was a wish to see the relations in the following models, when they were controlled for theses demographic variables. The second model included quantitative-, decision- and learning demands, and represented job demands within the JD-R framework. These were included to see how they would relate to and affect work-to-life conflict. The third and final model included the three basic needs for autonomy, competence and

relatedness, and represented job resources within the JD-R framework. These were included to see how they related to work-to-life conflict and added after the job demands to examine how they affected the relations between the three job demands and the dependent variable.

Assumptions for the hierarchical regression was examined using the Regcheck command (Mehmetoglu, 2014). This is a user developed package which can be installed within STATA to run and evaluate whether assumptions of regressions are met or not. The assumptions of heteroscedasticity, multicollinearity, normally-distributed residuals, correctly specified model, appropriate functional form, and influential observations were met, and no alteration of the data was needed.

Cohens guidelines for interpretation of effect sizes within behavioral sciences were used in the following results (Cohen, 1992).

Results

Descriptive statistics and correlations of the demographic, independent and dependent variables are displayed in Table 1. Quantitative demands were significantly and positively correlated with the two other job demands variables, showing a moderate correlation with decision demands ($r = .39, p < .01$) and a weak correlation with learning demands ($r = .27, p < .01$). Quantitative demands had a moderate negative correlation with autonomy ($r = -.43, p < .01$) and relatedness ($r = -.31, p < .01$), whilst a weak to moderate negative correlation with competence ($r = -.27, p < .01$). Decision demands showed a moderate positive correlation with learning demands ($r = .38, p < .01$), and a weak positive correlation with competence ($r = .13, p < .05$). Satisfaction of the need for autonomy had a weak negative correlation with learning demands ($r = -.17, p < .05$), and showed strong positive correlations with competence ($r = .72, p < .01$) and relatedness ($r = .60, p < .01$). Also, satisfaction of the need for competence and relatedness showed a strong positive correlation ($r = .61, p < .01$).

Work-to-life conflict (WLC) was significantly correlated with all other variables, except sex and education. WLC showed a weak correlation with age ($r = -.22, p < .01$). Work-to-life conflict showed positive correlations with quantitative demands ($r = .53, p < .01$), decision demands ($r = .45, p < .01$) and learning demands ($r = .32, p < .01$), which were strong, moderate and moderate respectively. WLC also showed significant correlations with the basics needs. These were a moderate negative correlation with satisfaction of the need for autonomy ($r = -.45, p < .01$), a weak negative correlation with satisfaction of the need for competence ($r = -.27, p < .01$), and a moderate negative correlation with satisfaction of the need for relatedness ($r = -.35, p < .01$).

Table 1
Descriptive Statistics and Correlations (N = 216 - 219)

	Standard												
	Mean	Standard deviation	1	2	3	4	5	6	7	8	9	10	
1. Sex ^a	1.85	.35	-										
2. Age	38.58	11.79	.13*	-									
3. Education ^b	2.10	.59	.09	-.24**	-								
4. Quantitative demands	3.07	.78	.03	-.24**	.09	-							
5. Decision demands	3.25	.71	.05	.03	.08	.39**	-						
6. Learning demands	2.25	.78	.06	-.08	.09	.27**	.38**	-					
7. Autonomy	4.25	1.30	.03	.10	.06	-.43**	-.10	-.17*	-				
8. Competence	4.99	1.16	-.07	.10	.01	-.27**	.13*	-.03	.72**	-			
9. Relatedness	5.24	1.13	-.04	.05	.11	-.31**	-.09	-.12	.60**	.61**	-		
10. Work-to-life conflict	2.72	1.15	.07	-.22**	.09	.53**	.45**	.32**	-.45**	-.27**	-.35**	-	

* $p < .05$, ** $p < .01$ (Two-tailed). Sex^a (1 = male, 2 = female). Education^b (completed) (1 = secondary school, 2 = high school, 3 = 3 years higher education, 4 = 5 years higher education).

Table 2

Job Demands Scales - Sample Scores and Norm Scores

	Sample Score		QPS Norm Score	
	Mean	Standard deviation	Mean	Standard deviation
Work-to-life conflict	2.72	1.15	2.59	1.12
Quantitative demands	3.07*	0.78	3.26	0.77
Decision demands	3.25*	0.71	3.55	0.77
Learnings demands	2.25*	0.78	2.63	0.71

* $p < .05$ (One-sample, two-tailed)

Table 2 displays sample- and norm scores of the job demands scales, and the results of the one-sample t-tests run between them. There was no significant difference between the sample and the standardized sample in the QPS Nordic manual regarding experienced work-to-life conflict ($t(216) = 1.66, p > .05, d = 0.12$). However, the one-sample t-tests indicated that the retail sample's job demands scores were significantly different from the QPS norm scores. The sample experienced significantly less quantitative demands than what was found in the QPS manual ($t(217) = -3.61, p < .01, d = 0.25$). The sample also experienced significantly less decision demands ($t(217) = -6.23, p < .01, d = 0.39$) and learning demands ($t(217) = -7.24, p < .01, d = 0.53$) than the QPS norm sample.

Table 3 shows the results of the three-step hierarchical regression analysis. Model 1 consisted of the demographic variables sex, age and education. These variables significantly accounted for 6% of the variance in work-to-life conflict ($\Delta R^2 = .06, F(3, 212) = 4.16, p = .007$). Age ($\beta = -.22, p < .01$) showed a weak significant negative relation to the dependent variable.

Model 2 included the job demands quantitative-, decision- and learning demands into the model. The second model significantly accounted for an additional 33% of the variance in work-to-life conflict ($\Delta R^2 = .33, F(6, 208) = 21.59, p = .001$). Age ($\beta = -.14, p < .05$) still displayed a significant weak negative relation to the dependent variable. Quantitative demands ($\beta = .37, p < .01$) showed a weak significant positive relation to work-to-life conflict, whilst decision demands ($\beta = .27, p < .01$) showed a moderate significant positive

Table 3

Hierarchical Regression Analysis for Variables Related to Work-to-Life Conflict (N = 215 - 216)

	Work-to-Life Conflict					ΔR^2
	B	SE B	β	CI		
Model 1						.06**
Sex ^a	.31	.22	.10	[-.12	.74]	
Age	-.02	.01	-.22**	[-.03	-.01]	
Education ^b	.04	.14	.02	[-.22	.31]	
Model 2						.33**
Sex ^a	.20	.18	.06	[-.15	.55]	
Age	-.01	.01	-.14*	[-.02	-.002]	
Education ^b	-.03	.11	-.02	[-.25	.19]	
Quantitative demands	.54	.09	.37**	[.36	.72]	
Decision demands	.44	.10	.27**	[.24	.62]	
Learning demands	.15	.09	.10	[-.03	.32]	
Model 3						.08**
Sex ^a	.23	.17	.07	[-.11	.57]	
Age	-.01	.01	-.14*	[-.02	-.003]	
Education ^b	.05	.11	.02	[-.16	.26]	
Quantitative demands	.33	.09	.23**	[.15	.52]	
Decision demands	.48	.10	.30**	[.28	.67]	
Learning demands	.10	.08	.07	[-.07	.27]	
Autonomy	-.24	.07	-.27**	[-.38	-.09]	
Competence	.04	.08	.04	[-.13	.20]	
Relatedness	-.10	.07	-.10	[-.24	.04]	

* $p < .05$. ** $p < .01$. Sex^a (1 = male, 2 = female). Education^b (completed) (1 = secondary school, 2 = high school, 3 = 3 years higher education, 4 = 5 years higher education).

relation to WLC. Learning demands ($\beta = .10$, $p > .05$) displayed a weak positive relation to the dependent variable, however this result was non-significant.

The final model included the three basic needs into the model. This model significantly accounted for further 8% of the variance in the dependent variable ($\Delta R^2 = .08$, $F(9, 205) = 19.54$, $p = .001$). Age ($\beta = -.14$, $p < .05$) displayed an identical significant weak negative relation to work-to-life conflict as in the second model. Quantitative demands ($\beta = .23$, $p < .01$) showed a weak significant positive relation to work-to-life conflict. Decision

demands ($\beta = .30, p < .01$) displayed a moderate significant positive relation to the dependent variable. Satisfaction of the need for autonomy ($\beta = -.27, p < .01$) showed a significant weak negative relation to WLC. Neither learning demands ($\beta = .07, p > .05$), satisfaction of the need for competence ($\beta = .04, p > .05$) or satisfaction of the need for relatedness ($\beta = -.10, p > .05$) showed significant relations to work-to-life conflict.

Discussion

The results of the current study displayed that there were relations between work-to-life conflict, job demands and satisfaction of basic psychological needs among the sample of Norwegian retail employees. The first hypothesis, stating that employees who report having higher job demands experience higher work-to-life conflict than those who report having less job demands, was partly supported. While all three demands were related to conflict, only quantitative demands and decision demands were found directly related to work-to-life conflict. Satisfaction of the need for autonomy had a negative relation to work-to-life conflict, which supports the second hypothesis stating that employees who experience higher degree of satisfaction of the need for autonomy experience lower levels of work-to-life conflict than employees who experience less satisfaction of autonomy. This study found a weak relation between the satisfaction of the need for competence and work-to-life conflict. However, it was not found directly between competence and work-to-life conflict, yielding only partial support to the third hypothesis stating that employees who experience higher degree of satisfaction of the need for competence experience lower levels of work-to-life conflict than employees who experience less satisfaction of competence. The third hypothesis stating that employees who experience higher degree of satisfaction of the need for relatedness experience lower levels of work-to-life conflict than employees who experience less satisfaction of relatedness, was partially supported. There was found a negative relation between satisfaction of the need for relatedness and work-to-life conflict, but that were not directly linked. Neither sex nor education were significantly related to work-to-life conflict. However, age showed a significant, weak relation to work-to-life conflict, which reflects findings of previous empirical studies (Allen & Finkelstein, 2014; DiRenzo, Greenhaus, & Weer, 2011).

Job Demands and Work-to-Life Conflict

The results indicated that experiencing higher quantitative demands was associated with increased work-to-life conflict. Quantitative demands had an overall moderate effect on work-to-life conflict, compared to the demographic variables, decision demands and learning

demands. These findings substantiate quantitative demands' position as an influential job demand related to overall employee well-being (Bakker & Demerouti, 2007; Bakker, Demerouti, Taris, et al., 2003), and as a strong predictor of work-to-life conflict (Simon, Kümmerling, & Hasselhorn, 2004).

The analysis also demonstrated that experiencing higher decision demands was associated to increased work-to-life conflict. Decision demands was moderately related to work-to-life conflict and displayed the second largest relation to WLC when compared to the demographic variables, quantitative demands and learning demands. This gives further support to decision demands being considered as a well-established job demand and risk factor (Finne, Christensen, & Knardahl, 2014) which affects work-to-life conflict as well as other negative health outcomes like troubled sleep (Knardahl, Vleeshouwers, & Christensen, 2016) and sickness absence (Indregard, Knardahl, & Nielsen, 2017).

Contrary to the first hypothesis and the result of the initial correlation, learning demands was not found to be a unique contributor of the change in WLC. Thus, the current study did not provide empirical evidence to support that experiencing higher learning demands is directly associated with increased work-to-life conflict among retail employees. A possible explanation for this finding lies within an extension of the Job Demands-Resource model, where job demands are perceived as created unequal (Van den Broeck, De Cuyper, De Witte, & Vansteenkiste, 2010). This was first investigated by McCauley, Ruderman, Ohlott, and Morrow (1994), and differentiates between hindrance demands and challenge demands. Hindrance demands are demands or situations at work which tend to limit or disturb an employee's achievement at work, and challenge demands, despite being potentially stressful, is associated to benefits or possibilities of personal growth (Cavanaugh, Boswell, Roehling, & Boudreau, 2000). While learning demands have not been directly investigated in regard to these types of demands, having a high level of responsibility (as a situation for learning) is found to represent a challenge demand (McCauley et al., 1994). Since the Norwegian retail industry is particularly characterized by learning through responsibility (Reegård, 2015), it is possible that learning demands provoke different employee experiences than quantitative- and decision demands, and therefore do not result in negative spillover.

Low job demands within retail. The present study found that the retail sample generally reported experiencing less quantitative-, decision- and learning demands than the Nordic norm sample in the QPS User Manual (Lindstrom et al., 2000). This indicates that there is a significant relationship between job demands and work-to-life conflict, even among employees who experience significantly less demands.

Complexity and structural aspects of retail work. Norwegian retail jobs include both components of manual labor and higher than average amount of repetitive tasks (NOA, 2016c; SSB, 2017). A certain degree of the executed tasks within retail could therefore be considered as of lower complexity (Campbell & Gingrich, 1986). Such tasks are associated with lower cognitive demands and require less job- or personal resources to be completed (Bakker & Demerouti, 2007).

Another explanatory factor might be differing manager and ordinary employee responsibility. While having too much responsibility is discovered to be a key job demand among retail managers (Broadbridge, 2002), empirical evidence indicate that it is not the case among ordinary retail workers due to their nonmanagerial positions and little influence (Tuckey et al., 2017). As the Norwegian retail industry mostly consists of smaller businesses with few employees (NOA, 2016g; SSB, 2017), this might provide an opportunity for retail managers to be more actively involved in the day-to-day running, then if the businesses were larger. If more complex tasks are done in conjunction with someone in a managerial position or transcend the responsibility of the ordinary employees altogether, they might experience even less decision- and learning demands than what is to be expected by the nature of the work.

Age. The sample of the current study has an average age close to 39 years and the group aged 18 to 24 is underrepresented when compared to its size within the retail population (NOA, 2016g; SSB, 2017). As the sample consists of more experienced employees who might have worked longer within retail, it is possible that they have acquired resources to cope with the existing job demands. For example, as shift work is prominent within retail (NOA, 2016b; SSB, 2017), older retail employees could be biased towards having more shift work tolerance (Saksvik-Lehouillier et al., 2012; Saksvik, Bjorvatn, Hetland, Sandal, & Pallesen, 2011) and therefore perceive working hours and work pace as less challenging.

Age has also been repeatedly connected to decision-making competence (the ability to follow normative principles in his or her decision making) (Parker, Bruine de Bruin, Fischhoff, & Weller, 2018). Empirical evidence indicates that decision-making competence increases with working age, particularly between 19 and 50 years (Geisler & Allwood, 2018). Thus, the sample is heavily represented by a group of employees who are likely to experience more decision-making competence and might perceive decision demands as less challenging than younger retail employees. Closely linked to this is that those who have worked a longer time within an organization have learned what is to be learned. Norwegian retail workers tend to experience higher learning demands early in their retail careers, as it is common to learn

through received responsibility (Reegård, 2015). When an employee is considered fully trained there might be a considerable drop in experienced learning demands due to the mentioned manual and repetitive components of the work (NOA, 2016c; SSB, 2017).

Alternative job demands among retail workers that affect WLC. While the retail sample reported experiencing less quantitative-, decision- and learning demands than the QPS Nordic norm sample, they experienced a similar amount of work-to-life conflict. Although the three job demands explains a large amount of the change in work-to-life conflict, it is possible that other job demands are equally or more relevant for negative spillover and WLC among retail employees.

Emotional demands. Retail jobs are characterized by their high degree of customer interactions. With such interactions come a higher risk of exposure to emotional demands, which are found equally influential for employee well-being and work-to-life conflict as for example quantitative demands (Bakker & Geurts, 2004; Taris & Schreurs, 2009). Retail workers are found to perceive customer- related emotional demands differently than for example role-conflict and work pace, and to represent a possible threat to employees' sense of capability and self-esteem (Tuckey et al., 2017). In line with the definition of work-to-life conflict, experiencing costumer-related emotional demands might result in increased negative spillover into privet life.

Unpredictability. Unpredictability is found to be another job demand among retail workers. Zeytinoglu, Lillevik, Seaton, and Moruz (2004) discovered that unpredictable work hours were sources of stress among their Canadian part-time and casual retail sample. The retail workers explained that scheduling problems and frequent changes made it difficult to manage their responsibilities of work and life. While unpredictability seems especially problematic for part-time and casual workers, it is also found to negatively affect work-life balance among full-time retail employees (Henly & Lambert, 2014; Tuckey et al., 2017). Receiving one's work schedule with a short notice and experiencing last-minute changes of the schedule have been identified as significant contributing factors of work-to-life conflict (Henly & Lambert, 2014). Similarly, getting last-minute requests to work additional shifts has been connected to work-life conflict (Tuckey et al., 2017; Zeytinoglu et al., 2004). Indeed, getting such requests caused by unpredictability may be the primary explanation for why Norwegian retail employees are more frequently contacted outside working hours compared to employees within other industries. Retail workers have repeatedly described that they feel they must accept these requests, resulting in extra working hours (Tuckey et al., 2017;

Zeytinoglu et al., 2004) which reduce employees time to restore one's resources and handle life-related demands (de Jonge et al., 2012).

Not only does unpredictability seem to be a job demand which affects work-to-life conflict, there exists evidence which implies that experiencing unpredictability from several sources increases retail workers' vulnerability to work-to-life conflict (Henly & Lambert, 2014). Thus, unpredictability might contribute to increased negative spillover from other job demands, regardless of their original size. While the sample in the current study reported experiencing lower quantitative-, decision- and learning demands compared to the QPS norm sample, job demands not accounted for might explain why they experience similar levels of work-to-life conflict and how two of the three included job demands were found significantly and directly related to conflict.

Satisfaction of the Basic Psychological Needs and Work-to-Life Conflict

Satisfaction of the need for autonomy and work-to-life conflict. The results from the present study supported the second hypothesis as it was found that the retail workers who reported experiencing higher degree of satisfaction of the need for autonomy reported experiencing lower levels of work-to-life conflict. An indirect relation between the two is to be expected and is in line with previous research on autonomy's relation to work-life conflict (Thompson & Prottas, 2006; Van den Broeck et al., 2016; Voydanoff, 2004). Such a relation demonstrates how satisfaction of the need for autonomy as a resource performs to reduce the amount of job demands and through that the related psychological strain (Bakker & Demerouti, 2007) and decreases the risk for negative spillover and work-to-life conflict (Bakker & Demerouti, 2013; Keeney et al., 2013; Rodríguez-Muñoz et al., 2014). The discovered relation hence substantiates autonomy's position as an influential employee resource (Demerouti et al., 2012; Salanova et al., 2005).

Why is autonomy uniquely related to work-to-life conflict? Interestingly, in addition to being related to work-to-life conflict, satisfaction of the need for autonomy was discovered to be a unique contributor to the variance of WLC. While there are established both valid and reliable theoretical and empirical evidence linking satisfaction of the need for autonomy directly to work-to-life facilitation (Bakker & Demerouti, 2007; Greenhaus & Powell, 2006; Voydanoff, 2004; Warner & Hausdorf, 2009; Westman et al., 2009), the empirical evidence connecting the related concept of job autonomy and work-life conflict is as mentioned somewhat more nuanced. Some studies have not been able to find autonomy directly related to work-to-life conflict (Batt & Valcour, 2003; Clark, 2001; Lapierre & Allen, 2012; Parasuraman, Purohit, Godshalk, & Beutell, 1996), while others, more in line with the

findings of the current study, have found a negative relation (Butler et al., 2005; Grzywacz & Marks, 2000; Maume & Houston, 2001; Schieman & Young, 2010). Voydanoff (2004) concluded that these differing findings showed that autonomy might reduce work-to-life conflict, but only under some conditions.

Thus, it becomes interesting to consider which conditions within retail that allows job autonomy and one's satisfaction with it to reduce work-to-life conflict. A condition of the retail work might be that most of the tasks of ordinary employees are inseparable from the physical location of the work. Hence, experienced autonomy within retail function to ease the process of meeting demands at work but cannot be used to bring work-related tasks home. Additionally, as the current study found evidence for that retail workers experience less job demands than the Nordic norm sample of the QPS Nordic, autonomy might be enough to meet the demands at work, meaning that the workers do not need to use the autonomy to transfer the demands outside work and lose valuable time to recover resources (de Jonge et al., 2012).

Whether autonomy is related to work-to-life conflict might also be influenced by one's position. While the tasks of ordinary employees may be more connected to the physical workplace, those of the managers might be less so (Broadbridge, 2002; Tuckey et al., 2017). Autonomy among retail managers can therefore be used in a way which prolongs the exposure to their job demands and inflict increased instead of decreased strain.

Satisfaction of the need for competence and relatedness, and work-to-life conflict.

The results yielded partial support for the third and fourth hypotheses. There was an initial negative relation between satisfaction of the need for competence and work-to-life conflict and similarly, a negative relation was found between satisfaction of the need for relatedness and work-to-life conflict. While satisfaction of competence and relatedness were weakly and moderately related to work-to-life conflict, the study found no empirical evidence to support that neither satisfaction with the need for competence nor relatedness were unique contributors of the variance of work-to-life conflict. The results therefore display how satisfaction of the need for competence and relatedness as resources perform to reduce the amount of job demands and through that the related psychological strain (Bakker & Demerouti, 2007), and decrease the risk for negative spillover and work-to-life conflict (Bakker & Demerouti, 2013; Keeney et al., 2013; Rodríguez-Muñoz et al., 2014), rather than affect work-to-life conflict directly.

While the result is explainable within a framework of job demands and resources, it is worth mentioning that satisfaction of the need for autonomy, competence and relatedness

displayed strong relations with each other. The relation between satisfaction of autonomy and competence was found to be particularly strong. A few have claimed that the satisfaction of the need for autonomy and competence might be reducible to each other (Bandura, 1989), while others have found that the two are empirically distinguishable (Sheldon, Ryan, & Reis, 1996). Even if the assumption of no multicollinearity was met in the current study, it is possible that satisfaction of the need for competence and autonomy overlap too much for both to end up as significantly and directly related to work-to-life conflict. This further highlights the importance of officially validating the Norwegian translation of the Basic Needs Satisfaction at Work (Deci et al., 2001; Ilardi et al., 1993), to be able to more fully understand the satisfaction of the basic needs' relations to other organizational factors.

The Relations Between Basic Psychological Needs, Job Demands and Work-to-Life Conflict

While quantitative demands and decision demands stood for the largest amount of explained change in work-to-life conflict, including satisfaction of the need for autonomy, competence and relatedness provided interesting nuances regarding how these resources affected the relations between the job demands and conflict.

Decreasing the effect of quantitative demands on WLC. The inclusion of satisfaction of the need for autonomy, competence and relatedness lowered the effect of quantitative demands on work-to-life conflict. The previously large effect became more moderate and quantitative demands went from being the most influential to the third most influential occupational factor. This finding is in line with the explanatory framework of the JD-R model where resources not only is considered to buffer against job demands, but reduce their intensity (Demerouti, Bakker, Nachreiner, et al., 2001). According to Tuckey and colleagues (2017), the process can be explained by that the resources provided an opportunity for job demands to be perceived less as a threat and more as a challenge, thus inducing different emotional responses and experiences.

There are several possible explanations for how satisfaction of the basic psychological needs might reduce the effect of workload and time pressure on work-to-life conflict. Satisfaction of the need of autonomy might give the employees the chance they need to take a more active role when they face higher workload and time pressure. This might be done through distributing workload across time, or through prioritizing the most urgent demand to effectively lower the amount of quantitative demands.

While satisfaction of the need for autonomy might influence one's chance to actively handle quantitative demands, being satisfied with one's level of competence might be more

connected to how one chooses to handle them. Having a satisfactory level of competence might implicate that one has a larger knowledge and skill of when and what to do to best meet the demands of workload and time pressure. This might be particularly important as it is found that not having enough competence to execute one's work adds to the existing workload (Paulsson, Ivergård, & Hunt, 2005).

Being satisfied with one's need for relatedness might also reduce the impact of quantitative and demands, as this need is connected to one's relationships with colleagues and managers. It is found that relationship quality increases the chance for receiving help when in need of assistance (Poile, 2017; Settoon & Mossholder, 2002). Thus, experiencing satisfaction of the need for relatedness might indicate having a higher the possibility for a colleague or manager to share their resources to meet the work load and time pressure of another (Settoon & Mossholder, 2002).

Following this, experiencing satisfaction of the need for autonomy, competence and relatedness provides a better possibility for retail workers to manage their workload and time pressure which in turn diminishes the risk of negative spillover and work-to-life conflict.

Increasing the effect of decision demands on WLC. The effect size of decision demands on work-to-life conflict also changed somewhat when basic psychological needs were included as independent variables. Although the change was minor and the effect remained moderate, the effect size increased. Compared to the demographic variables, quantitative demands, learning demands and satisfaction of the basic needs, decision demands explained the largest amount of the change in work-to-life conflict. This finding does not fit with the theoretical framework of the JD-R model, as the inclusions of job resources should have resulted in a reduced intensity of decision demands for the employees (Demerouti, Bakker, Nachreiner, et al., 2001) and thus a weaker association to work-to-life conflict. While, there are empirical findings indicating instances where resources are less likely, even unlikely, to moderate the relation between a job demand and psychological strain due to a lack of match between either two or all the components (de Jonge & Dormann, 2006), there might be another explanation for this result.

There is a possibility that decision demands are conceptually connected to satisfaction of the need for autonomy, the only unique contributor, and/or satisfaction of the need for competence. Decision demands include demands at work for attention and decision-making (Lindstrom et al., 2000), which can imply that an exposure to decision demands requires a certain degree of autonomy or competence. Therefore, there might exist a suppression effect between decision demands and satisfaction of the need for autonomy or competence, which is

revealed through the increased relation between decision demands and work-to-life conflict (MacKinnon, Krull, & Lockwood, 2000).

Strengths and Limitations

Due to the cross-sectional design of the study, the collected data limits the predictive value of the results and only allows for interpretations of prevalence and associations. Thus, while the relations of work-life conflict, job demands and satisfaction of the basic psychological needs among retail workers are well depicted, no assumptions of causality can be made.

The study was conducted using a sample of 216 Norwegian retail employees. Although the sample size is sufficient for the statistical analyses conducted in the present study (Field, 2014), a larger sample would be preferable to strengthen the statistical power (Cohen, 1992) and generalizability of the study. The distribution method is another limitation of this study. The survey was distributed through the Norwegian Union of Commerce and Office Employees' official Facebook and Twitter accounts. This it made it impossible to estimate a response rate. Additionally, the survey only reached retail employees who at the time of distribution followed one or both accounts. As numbers from 2016 indicates that only 25% of Norwegian retail employees were unionized (NOA, 2016d; SSB, 2017), the sample might not represent the intended population. Similarly, as the percentage of unionized employees increases with age (NOA, 2016d), there might be artificially few respondents under the age of 25 years. In 2016, nearly 25% of retail workers were from 17 to 24 years (NOA, 2016g), however in this sample the same age group accounts for less than 9% of the respondents. As this group is associated with different job demands and resources than older employees (NOA, 2016a; SSB, 2017), insightful data might be lost. While the age distribution is problematic, the age range seems satisfactory and representative for the retail population (NOA, 2016g; SSB, 2017).

Among those who finished the entire questionnaire and represent this survey's sample, there were 186 (85%) women and 32 (15%) men. Although it is not uncommon that women have a higher response rate than men (Sax, Gilmartin, & Bryant, 2003; Smith, 2008), and not unexpected as over 70% of the unionized retail workers are women (Handel og Kontor, 2017), it serves as a limitation since there are equally as many men as women hired within the industry (NOA, 2016g; SSB, 2017). A better gender distribution would thus be preferable and necessary to better represent the retail population and increase generalizability of this study. While the results are less generalizable regarding the retail average and male dominated

occupations, positions and organizations, they have a higher generalizability within retail jobs or similar occupations with a higher percentage of women.

The use of the QPS Nordic is a strength of this study. It is constructed by and with the Nordic countries in mind and is therefore customized to the Nordic work life. It is also repeatedly validated and frequently used, which give rise to a large basis for comparison. Still, the low internal consistency of the decision demands scale from the QPS Nordic is a limitation. Some have argued that a low alpha value of psychological constructs may be expected (Kline, 1999; Nunnally, 1978), as seen in instruments of for example well-being (Crouch, Mack, Wilson, & Kwan, 2017). However, it is problematic and should be discussed. There are several possible causes of low alpha values. The most influential of these are a poor interrelatedness between the items, dimensionality in the form of heterogeneous constructs, and a low number of items (Nunnally, 1978). While the composite scores vary among the items, they are found within the same range of those of the two other scales from the QPS Nordic, and all three items positively correlate with the overall scale score.

Lastly, Cronbach's alpha is affected by the scale's number of items (Nunnally, Bernstein, & Berge, 1967; Streiner, 2003). Especially, alpha values rapidly increase between two and ten items (Nunnally, 1978). The decision demands scale consists of only three items (of which excluding either one of them would lead to an even lower alpha value) and it is not unlikely that this influenced the alpha value. Based on this information a decision was made to keep the scale in the study. The learning demands scale also displayed a lower than satisfactory alpha, however it is higher than that which is reported in the QPS Manual (Lindstrom et al., 2000). It is therefore not considered a limitation equal to the previously mentioned. However, the results regarding these variables should be interpreted with caution.

The English version of the Basic Needs Satisfaction at Work is validated (Van den Broeck, Vansteenkiste, et al., 2010), however, a formal Norwegian validation has not been conducted. Although the translation is based on a standardized translation-back-translation method (Andreassen et al., 2010), using a validated questionnaire would allow for greater confidence in the results and the subsequent interpretations. Despite being unvalidated, satisfaction of the need for autonomy, competence and relatedness displayed satisfactory internal consistency which strengthen the results and discussion.

Suggestions for Future Research and Practical Implications

Future research. The current study provides overall support for the chosen theoretical framework. The results endorse that the interactions of job demands and resources have considerable meaning for retail workers' experience of work-life conflict. It also shows that

both job demands and job resources are influential for work-to-life conflict, but in different ways. While job demands are directly related to conflict, satisfaction of the basic psychological needs is in a position to lower the effects of certain demands on work-to-life conflict. Thus, the results are not contradicting that the two spillover processes of work-to-life conflict and facilitation are separate. The study also adds empirical evidence to the already established complexity of experiencing autonomy at work, by showing that satisfaction of the need for autonomy seems important for lowering the effects of demands related to work pace and working time on work-to-life conflict.

While there is a well-established theoretical and empirical foundation of knowledge regarding work-life balance, more research is needed to keep it updated so it can better reflect the challenges of our current working life. There is a need for research which focus on both the health damaging and health promoting aspects of work-to-life and life-to-work conflict and facilitation, whilst positioning them within the larger picture of work-life balance to achieve a more complete understanding of employee health and unhealth.

More studies are also needed to examine the Norwegian retail industry to reach a larger portion of the retail population and through that increase the generalizability of the results of the current and future studies. These should include studies to map which job demands they are exposed to and which resources are available, how to efficiently reduce job demands and increase resources, what increases and decreases the risk for experiencing spillover, and studies that examines the relations between work-to-life conflict and retail workers' health. This research should also include studies on younger employees and retail managers as separate groups to examine if they differ from more experienced or ordinary retail workers and what this might mean for their experience of demands, resources, conflict and organizational health.

Even if the field of satisfaction of basic needs is thoroughly explored, more studies are needed, in Norway and abroad, to expand and deepen our knowledge on how to successfully increase satisfaction of the needs within various working populations.

Overall, there is a need for studies with longitudinal designs. These would be able to better obtain knowledge regarding the long-term effects of balance and imbalance on employee health, how to most efficiently implement restorative and promoting health measures, as well as measures to lower the risks of experiencing work-life imbalance and increasing the possibility for work-life facilitation and balance.

For practice. The results of the current study indicate that organizations within the Norwegian retail industry would benefit from having a larger focus on job demands, resources

and facilitating a health promoting work environment to reduce the risk of experiencing work-to-life conflict. While the results show that retail workers experience lower quantitative-, decision- and learning demands, and theory states that too little demands at work is not necessarily preferable (Demerouti, Bakker, Nachreiner, et al., 2001), a focus on lowering job demands when needed would still serve a purpose. A day-to-day focus on lowering quantitative demands, with a special emphasis on measures to tackle higher work pace when it occurs and decision demands, will likely have positive effects on the employees' work-to-life conflict. Such measures could include identifying periods of the day in which the work pace picks up to avoid understaffing (Mani, Kesavan, & Swaminathan, 2015), and providing opportunities for employees to have enough daily breaks to maintain higher levels of attention throughout the workday (Fritz, Ellis, Demsky, Lin, & Guros, 2013). However, focusing on other alternative job demands would also serve as an important action for retail workers' work-to-life conflict and overall health, and should be taken just as seriously.

A continuous focus on satisfaction of the basic psychological needs would also be beneficial for employees' experienced work-to-life conflict, as they provide a base for employees to successfully handle job demands. Employees' satisfaction of the need for autonomy is found connected to leadership (Hetland et al., 2011; Leroy et al., 2015). To increase the satisfaction of need for autonomy, a leader could focus on exerting daily procedural justice and autonomy-supportive behavior (Gillet, Colombat, Michinov, Pronost, & Fouquereau, 2013), that is to create a meaningful rationale for task performance, emphasize choice, not control, and acknowledge employees' opinions (Deci, Connell, & Ryan, 1989). This could be particularly important for smaller organizations like those dominating the Norwegian retail industry, as there might be more frequent interactions between the ordinary employees and the closest manager. Exerting the mentioned behavior provides a larger possibility for employees to experience control in their work and thereby satisfy their need for autonomy (Ryan & Frederick, 1997)

While the result of the current study did not indicate that satisfaction of the need for competence and relatedness were not directly related to a reduction of work-to-life conflict, empirical evidence indicated that having a balanced level of satisfaction of the basic needs is beneficial (Sheldon & Niemiec, 2006). Thus, a focus on increased satisfaction of the need for autonomy should be complemented with a focus on competence and relatedness, and whether employees experience such a balance might be a topic to include in appraisal interviews. Measures for increased satisfaction of the need for competence could include having a continuous focus on training both new and old employees and making sure the employees

acquire skills before they are put in a situation where they might feel a lack of competence. Additionally, information on how to correctly perform tasks should be easily available to everyone so employees should have knowledge of how to acquire the skills or knowledge they are in need of, and thereby increase the possibility to overcome unforeseen challenges and feel competent (Sheldon & Elliot, 1999). Lastly, employees' satisfaction of the need for competence would benefit from getting regular feedback from both manager and colleagues (Ryan & Frederick, 1997; Van den Broeck, Vansteenkiste, et al., 2010). To increase employees' satisfaction of the need for relatedness, organizations within the Norwegian retail industry would benefit from facilitating socially supportive (Ryan & Frederick, 1997) work environments in which the employees have common as well as socially oriented goals (Sheldon & Elliot, 1999).

While strengthening employees' satisfaction of the basic psychological needs is beneficial for the reduction of work-to-life conflict, it might be an idea to also focus on stress management. Thus, providing the employees with more effective strategies to better handle their job demands in stressful situations, and thereby lower the risk of experiencing negative spillover and work-to-life conflict.

Conclusion

The aim of the current study was to examine the relations between work-to-life conflict, job demands and the three basic psychological needs among Norwegian retail workers. There was found relations between work-to-life conflict and both the three job demands and basic psychological needs, and age. The results also indicated that quantitative demands, decision demands and satisfaction of the need for autonomy were unique contributors of work-to-life conflict. It is therefore important to look at both job demands and resources in order to tackle the challenge regarding work-to-life conflict, enrichment and overall work-life balance of employees within the retail industry. While this study provides useful insight regarding the Norwegian retail industry, it can be viewed as pilot study as no other has previously examined these organizational factors and work-to-life conflict among Norwegian retail workers. Thus, more research is needed to further explore these concepts within this population, as well as more comprehensive and longitudinal research to establish their predictive powers regarding work-to-life conflict, work-life balance and occupational health. More knowledge is required to better understand the relations between the antecedents of and work-life balance, and for these aspects to be integrated to existing work-life balance theory and to establish useable practices for interventional measures seeking to improve retail workers' work environment and health.

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