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Gender And Participation In Training: A New Model

Refereed paper

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Based on an extensive literature search a new model of (home and work) factors influencing time spend by women in training will be presented. Theoretically the new model is based on the job demands-resources model (JD-R model). Further the first results of an empirical study based on this new model will be presented. For this study 154 women filled out a questionnaire. By means of multiple regression analysis a number of hypotheses concerning the factors that influence the time women participate in training have been tested. The results show that support of colleagues and stress in the family have a positive and part-time work and job control have a negative significant relationship with time spend on training of women.

1. Introduction

Women lag behind their male counterparts in rates of pay, promotion, benefits and other economic rewards (Kirchmeyer, 2002, 2006; Vinkenburg, 1997). There is evidence about the existence of a gender gap in participation in training (Knoke & Ishio, 1998, Streumer et al 2002, Veum, 1993). For example a smaller fraction of career women get company or managerial training than man (Lillard & Tan, 1992). And women with only intermitted labour market experiences obtain little training (Lynch, 1991). Further Lynch found that women are much less likely to receive training within a firm either through an apprenticeship or other form of on-the-job training. Explanations are given by human capital theory (Jonker & Grip, 1999), theories of job segregation and segmentation, theories of organizational behaviour that accentuate social power inequalities and public opinion about the expectations concerning the household and child-rearing responsibilities of women (Dijkers, 2008; Duncan & Hoffman, 1979; Eby et al. 2005; Geurts & Demerouti, 2003; Knoke & Ishio, 1998; Lynch, 1991; Nelen & Grip, 2008, Veum, 1993).

Explanations are for example that women participate less in training because, they have less school education, they work more often in occupations that need less skill improvement training such as clerical occupations, retailing or personal services industries, they work more often part time, they continue to shoulder the household and child-rearing responsibilities in the family sphere and they need time off to give birth to their children (Knoke & Ishio, 1998). The relative strength of women's preferences for work and subjective attachment to careers seems to vary over the life course, being weaker during family formation and children's preschool years but strengthening in later stages. Resulting in sporadically leaving the labour force during childbearing years, seeking part-time employment, and following less competitive "mommy track" careers. This makes employers reluctant to invest in skills improvement of women workers and this reduces the chances of training for women, but not for men (Duncan & Hoffman, 1979).

2. Theory

Job Demands and Resources model

The job demands and resources (JD-R) model of burnout originally developed by Bakker et al. (1999, 2004) is an extension of the Demand-Control (DC) model of Karasek (Karasek, 1979; Karasek & Theorell, 1990) The DC model of Karasek assumes job demands and the possibilities an individual has to take adequate decisions to cope with these demands (control). The JD-R model of burnout originates in the need to hypothesize the influence of job characteristics (Job demands and Job resources) on employees' stress levels. This model adds resources. Job demands and resources are important because they coincide with two specific (parallel) processes: an energetic process and a motivational process (Fig. 1). The first process presumes that high work demands cause *work pressure* that leads to stress that can impair (mental and physical) energy reserves which can lead to chronic exhaustion, an impaired well-being (Bakker & Demerouti, 2007). The second process assumes that the presence of job resources can increase an employee's willingness to work and perform. These two processes influence each other, as an imbalance produces either stress or inspiration to an employee. Van Ruysseveldt (2006: 329) entitles

this phenomenon the buffer hypothesis; the presence of resources reduces the effect of demands on employee stress and contrary, job demands can undermine the facilitating role of job resources. As illustrated in figure 1, the JD-R model consists of *job demands* and *job resources*. Job demands refer to those physical, social or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs. *Job demands are those aspects in work which can lead to stress* (Demerouti et al., 2001). Examples of these demands are: workload and task uncertainty. Subsequently job resources refer to those physical, social or organizational aspects of the job that may do any of the following: a) be functional in achieving work goals; b) reduce job demands at the associated physiological and psychological costs; c) stimulate personal growth and development (Bakker & Geurts, 2004). *Job resources are those aspects in work which can facilitate these demands* (Demerouti et al., 2001). Important job resources are autonomy and social support (Van der Doef & Maes, 1999). In line with the theory on job demands and resources, a parallel can be drawn toward the home situation (Hubertus, 2009).

Research indicates that specific home demands and resources can have a significant effect on a person's well-being (Peeters et al., 2005; Demerouti et al., 2004). In line with Hubertus (2009), we define home demands as: those physical, social or organizational aspects of the home that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs. For example stress in the family. Home demands are: *those aspects in the home situation which can lead to stress*. Examples of these demands are: the presence of (young) children and household activities (Hubertus, 2009). Further we define home resources as: those physical, social or organizational aspects of the home that may do any of the following: a) be functional in achieving home goals; b) reduce home demands at the associated physiological and psychological costs; c) stimulate personal growth and development. For example emotional support from the spouse.

Home resources then are: *those aspects in the home situation which can facilitate the home demands*. An example of home resources would be the presence of support by family members. In addition to the job specific demands and resources, these factors together can produce conflict or enrichment in balancing the work and the home situation.

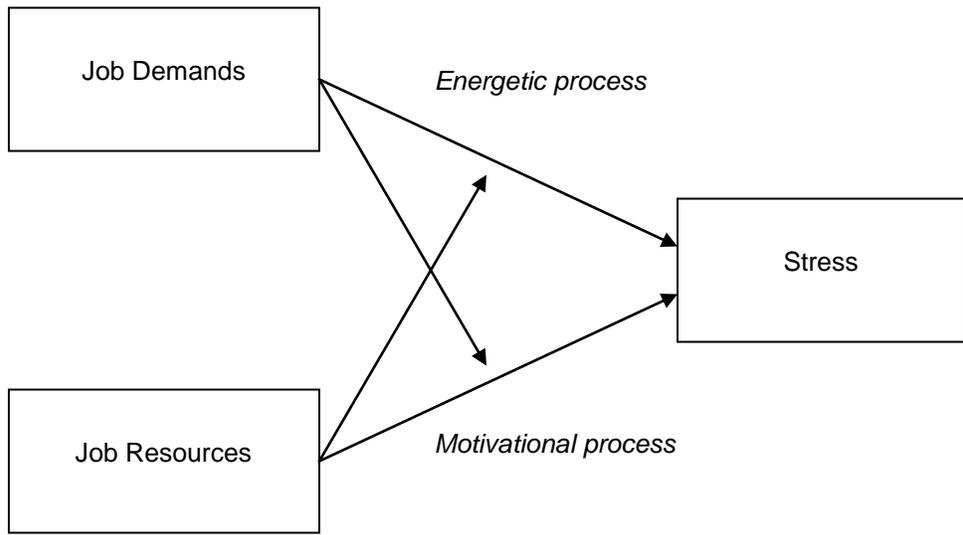


Figure 1: Job demands and resources model of Burnout (after Van Ruyseveldt, 2006: 331).

2.1 Job demands and home demands

Work-home conflict

One element of the work-home interface is the conflict a person may experience between the work role and other life roles. This so-called work-family conflict has been identified as a significant source of strain and an impaired health. Greenhaus & Beutell (1985: 77) define work-family conflict as "a form of inter role conflict in which the role pressures from work and family domains are mutually incompatible in some respect".

In an extensive literature review of sources of conflict between work and family roles Greenhaus & Beutell (1985) have identified three domains of conflict: 1) time-based, 2) strain-based and 3) behaviour based. For every domain several job and home demands are described according to the type of conflict a person may experience.

1) Time-based conflict is about multiple roles competing for a person's time. Time spent on activities within one role makes it impossible to spend time on activities in another role. Time-based conflict can take two forms: time pressures with membership in one role may make it physically impossible to comply with expectations arising from another role and 2) pressures also may produce a preoccupation with one role even when one is physically attempting to meet demands of another role. Work related sources of conflict in this sense are mostly concerned with the number of *hours worked per week*, the inflexibility of the work schedule, the amount and frequency of overtime and with *irregular work* (Greenhaus & Beutell, 1985). Bakker & Geurts (2004) indeed find a positive relationship between conflicting work and home roles on the one side and exhaustion and mental distraction in the other side. Greenhaus & Beutell (1985) report in their review that family related sources of time-conflict mostly are associated with *young children* (<16 years), the number of children and *spouse employment*. They argue that mothers with young or many children face higher family-work conflict because these women spend more time on family activities. On the one hand this conflict is deepened in large families when the husband is a highly career involved man. On the other hand this conflict is deepened when the mother has a high commitment to her family in other words if the mother wants to spend a lot of time and energy on her family (Frone, Russel & Cooper, 1992). Furthermore, Greenhaus & Beutell (1985) argue that women (in the position of manager) who are highly involved in their own careers face a higher work-family conflict with their husbands. In this respect, it is interesting to note that Greenhaus & Beutell (1985) suggest that women working in *part-time jobs* may experience role overload, because they work outside the home and are full-time housewives. It may be that part-time employment does not lighten family time demands, and might even increase the total array of pressures to which part-time working women are exposed. Altogether time-based conflict is characterised by home demands such as: young children, housekeeping, stress in the family and work demands such as spouse employment attitude, irregular work, and part-time work that may diminish participation of women in training.

2) A second domain of work-family conflict involves role-produced strain. Greenhaus & Beutell (1985) report that work stressors (*work pressure*) can produce strain symptoms as tension and fatigue. Strain in one role affects one's performance in another role. This has been mentioned as negative spill over (Grzywacz & Marks, 2000). An important work-related source of this strain conflict is a (high) workload. *Workload* refers to the degree an employee experiences physical exertion and intensive contact with consumers in his or her job (Demerouti et al., 2001). A (high) work load may cause employees to overdo themselves risking a burnout. This job demand thus may have serious consequences for the well-being of employees and subsequently more specific for the time women spend in training. Family related sources of role produced strain are for example family issues (*stress between spouses*), and the (uneven) *division of household chores*. According to Demerouti, Taris and Bakker, (2007) this home-work interference influences performance at work negatively. And it seems not farfetched to expect that the home demands stress between spouses and housekeeping will diminish the motivation of women to participate in training.

3) A third form of work-family conflict is behaviour-based conflict and is concerned with expectations within roles (Greenhaus & Beutell, 1985). In the workplace, the managerial stereotype emphasizes self-reliance, emotional stability, aggressiveness and objectivity, while family members (spouse but especially

children) may expect a person to be warm, nurturing, emotional and vulnerable in his or her interactions with them (Greenhaus & Beutell, 1985: 82).

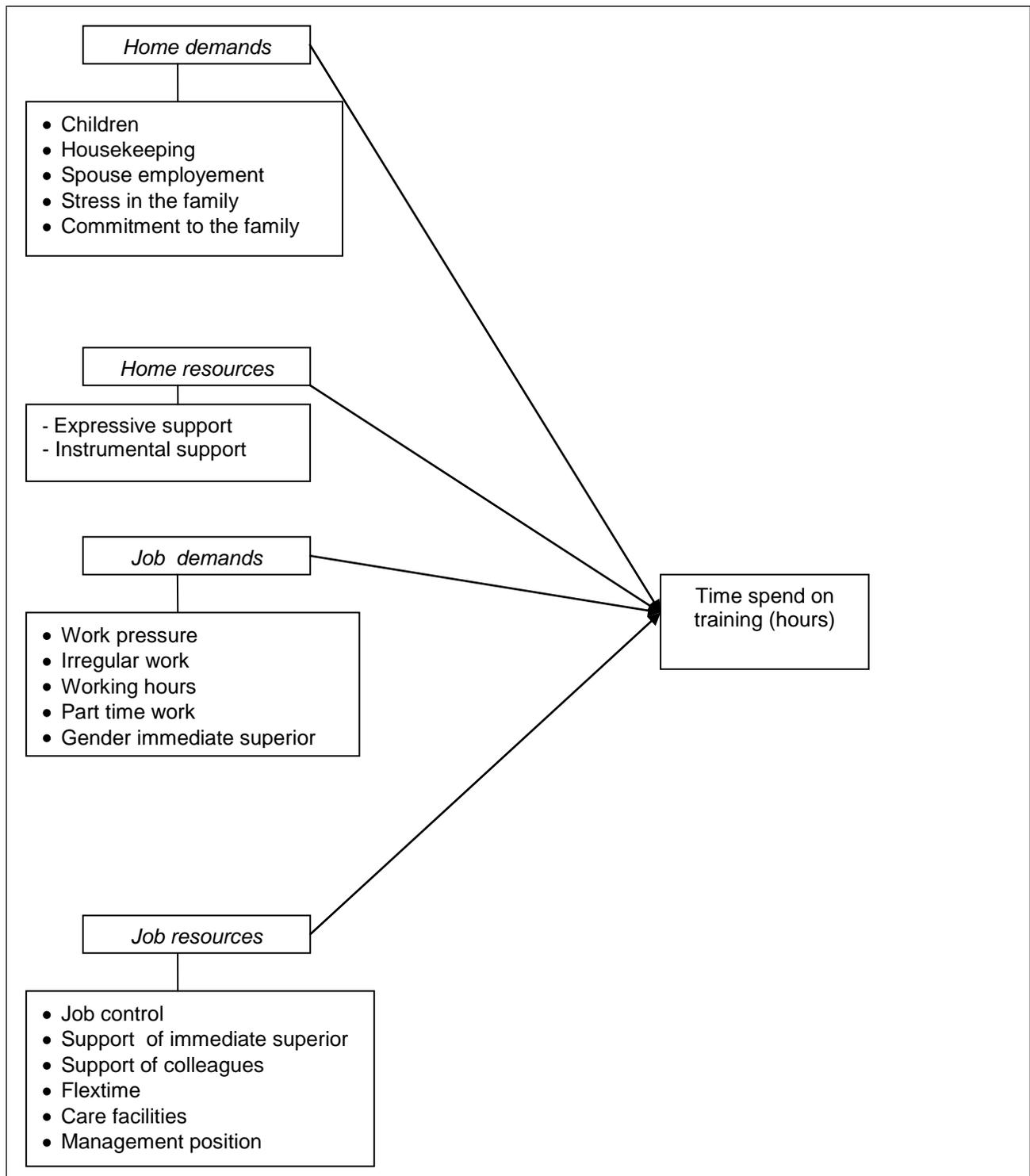
Summarizing on the one hand *home demands* such as the care of young children, the responsibility for housekeeping, a fully employed spouse, stress in the family and a high feeling of commitment to the family can diminish the participation of women in training. On the other hand *work demands* such as work pressure, long and/or irregular working hours, and part-time work can diminish the participation of women in training.

2.2 Working and caring in The Netherlands

In recent years mothers' labour participation has increased sharply in the Netherlands (Merens, & Hermans, 2009; Portegijs, Hermans & Lalta, 2006b; Tijdens, 2006). In this period the labour market participation of mothers with very *young children* (younger than 6) almost doubled. Dutch women's employment rates have been above the European average, but far more women work part-time in the Netherlands than they do elsewhere. The majority of Dutch women working in *part-time jobs* like to have time to raise their children; 38 percent of the Dutch women indicate that they want to raise their children personally (Portegijs et al., 2008). This 'care ethos' is a typically Dutch phenomenon that predominantly occurs by women with a lower educational level (Van Wel & Knijn, 2006). The consequence is that especially mothers with young children spend less time on their professional career. Merens & Hermans (2009) confirm the relationship between children and the number of working hours. They indicate that on the Dutch labour market, one third of the women who give birth to their first child, reduce their working hours and 10 percent even stops working. In addition, 21 percent of the women work part-time because of *housekeeping*. In 2005, women spend 23 hours on housekeeping work while men spend only 11,3 hours on housekeeping. Seventeen percent of the Dutch women work *part-time* to have more leisure time and 13 percent does so to save time for their social life and hobbies (Portegijs & Keuzekamp, 2008). Further once Dutch women work part-time they stay working part-time (Yerkes, 2007). Working part-time means working less than 34 hours a week (Portegijs et al., 2008). In accordance with Allaart & Bellmann (2007) and Portegijs & Keuzekamp (2008: 20) two forms of part-time work (those of 29-27 hours and of 28-34 hours a week) are interesting because it is most likely that women in these part-time jobs regularly take part in training (Portegijs & Keuzekamp, 2008). One important reason for this is that these jobs are commonly occupied by higher educated women. Empirical research of Jonker en Grip (1999) shows that part-timer's spend less time on training. Portegijs et al (2006a) and Benschop (1996) explain this for women with the concept "mommy-track". A mommy-track, a shortened career for women who work part-time that leads to low-skilled jobs, in which it is permitted not always to be present. Taking part in a full career path for a management job means working more than 40 hours a week and full availability for the organization. Women that cannot be fully available have to withdraw. (Jonker & Grip, 1999; Bierema, 2001; Tijdens, 2006; Versantvoort, 2007).

These figures indicate on the one hand that for Dutch women part-time jobs offer a way to balance work and personal life in the present one-and-a-half earner type family with the man working full-time and the woman working part-time. On the other hand the distribution of household responsibilities remains more unequal than many anticipated following the entry of married women into the labour force and the increase in egalitarian attitude (Kirchmeyer, 2002, 2006). The reason is that women's primary responsibility for early child care and socialization is still taken for granted. Hochschild (1989: 235) cites this as the 'stalled revolution' in which 'women have gone to work, but the workplace, the culture, and most of all the men, have not adjusted themselves to this new reality'.

Figure 2. A model of home- and work factors influencing the time women spend on training.



Hochschild (1997) has proposed that since women's 'first shift' hours have increased in the labour market, their 'second shift' hours on housework feel more harried and segmented. And the rushing and stress that women have to do has led to the need for a 'third shift' of emotional labour to manage the negative emotions produced for the women and their families, increasing the amount of domestic work when it is defined more broadly like this. According to a study of Brines (1994) housework stays 'women's work' despite substantial changes in employment patterns because economic dependency compels wives to exchange unpaid labour for a share of the husband's income while the more a husband relies on his wife for economic support, the less housework he does. These facts reveal several *home demands* such as children, housekeeping, spouse employment, commitment to the family (care ethos) and stress in the family. Part-time work can be seen as a *job demand* because as mentioned above it can lead to more (house)work to be done in a shorter time. Also authors like Hayes & Flannery (2002) see part-time work as a possible cause of less participation of women in training. All demands mentioned take time away and as such heighten the probability that women spend less time on training.

2.3 Job resources and home resources

Work home enrichment

However Greenhaus & Powell argue in a more recent literature review that participation in multiple roles, role accumulation, can also produce positive outcomes for individuals (Greenhaus & Powell, 2006). It is possible that the two domains work and family can enrich each other. Grzywacz & Marks (2000) talk about positive spill over. Positive experiences from one domain can spill over to the other domain. For women that have a family and work, work may give them extra energy so that they function better in the family. Participation in both domains can also be a buffer for bad experiences in one of the domains. For example a supportive husband, a supportive friend can be a buffer for a high workload (Byron, 2005). On the other side sole mothers and women experience more home-work interference than respectively married parents and men (Van der Lippe & Peters, 2007).

In general a *resource* such as support can have a positive effect on the work-home conflict. Social support, a transaction between persons that concerns emotional care, and instrumental support, information or rewards can reduce role stress (Carlson & Perrewé, 1999). *Expressive support* (emotional support from for example husband, friends, or family) can be distinguished from *instrumental support* (good income from the partner; a cleaning-woman; a babysitter, family member or neighbour who cares for the children). Research shows that women experience more expressive support from their partner, family and friends than from their immediate superior or colleagues (Marcinkus, Whelan-Berry, & Gordon, 2007). Crompton (2006) remarks that in a family were both adults work fulltime instrumental support such as both a babysitter and a cleaning woman is indispensable. Research of Tijdens et al. (2003) shows that the probability that women have a cleaning-woman raises as they earn more money per hour. The home resources expressive and instrumental support create possibilities for women to take part in training.

Immediate superior support, the extent to which an employee observes that his or her immediate superior provides instrumental support (time, money, knowledge etc) and psychological support (coaching, inspiring etc) is very important to motivate employees to take part in training (Tannenbaum, 1997; Van Ruyseveldt, 2006). The same holds for *support by colleagues*, although to a lesser extent.

The Leader-Member Exchange model of Dansereau, Graen en Haga (1975) further shows insight in the support of the immediate superior. An immediate superior has little time and can only support a few employees adequately. He divides his employees in an 'ingroup' and an 'outgroup' for example based on competences of employees. The employees who belong to the 'ingroup' are supported by the immediate superior with information, money and training. The 'outgroup' has only limited access to this support (Dansereau et al, 1975). Or it can be expected that the 'ingroup' has more access to training as the 'outgroup'. Because immediate superiors are predominantly men, and they tend to choose 'our kind of people' the 'ingroup' will exist predominantly of men (Benschop, 1996). Accordingly a *immediate superior who is a man* has the effect of a *job demand* for a woman that needs training.

Another form of support created by the organization are work-home arrangements. These arrangements, such as childcare facilities (the presence of a day nursery and after-school care for children), flexible working patterns (flexible working hours and part-time work) and leave (such as maternity leave), facilitate women to balance work and home responsibilities. Den Dulk (1998) explains that the use of work-home arrangements depends on the employer; the arrangements must contribute to profits and harmony on the work floor. Dijkers (2004), in this respect, speaks about a work-home culture (of an organization). Den Dulk (1998) argues that work-home arrangements, especially for women, have a positive influence on the combination of different roles (e.g. the work versus the mother role). *Flexible working hours* defined as the ability for employees to regulate their working hours in accordance with their own preferences can be important for women working in part-time jobs to better adapt the work and family life and increase the likelihood of these women to participate in training. This gives reason to think that these arrangements could also have a positive influence on the time women spend on training.

In contrast with mommy-track jobs *management jobs* create more possibilities for women to receive training (Bierema, 2001; Tijdens, 2006; Versantvoort, 2007).

Demerouti et al. (2001: 501) define *job control* as the extent to which an employee has control and autonomy over his/her tasks. Demerouti et al (2001) and Bakker et al (2004) show that high job control leads to less exhaustion of employees, because it saves time and energy. And it may create for women more opportunities to spend time on training. Further according to Karasek en Theorell's (1990) active learning hypothesis a job with high job control and high task demands will influence learning by employees positively. Empirical research of Taris, Kompier, Lange, Schaufeli and Schreurs (2003) corroborates this influence of job control on learning by employees.

2.4 Definitions, central question and hypotheses

Definitions:

- Children: children younger than 17
- Housekeeping: jobs to be done in and around the house such as cleaning, cooking, gardening, walking the dog, and also administrative work.
- Spouse employment: a partner that (has less time/energy to fulfil his duties in the family because he/she) works.
- Stress in the family: stress caused by not being able to handle the family and work role at the same time.
- Commitment to the family: Time and energy spend on the family
- Expressive support: Emotional support (talking about problems, encouraging to do things) given by partner, family and/or friends
- Instrumental support: Practical support with for example child care such as a babysitter, a housekeeper, money for a day nursery, a family member that cleans, does the shopping or temporary cares for the children)
- Work pressure: The amount of experienced physical burden and/or time pressure and the experienced intensity of contacts with customers at work.
- Irregular work: The amount of evening, night and weekend shifts at work.
- Working hours: Hours spend on work.
- Part-time work: Working less than 34 hours a week
- Gender of immediate superior: Male
- Job control: the extent to which an employee has control and autonomy over his/her tasks.
- Support of immediate superior: The amount of expressive (encouragement, inspiration) and instrumental support (time, money, information) received from the immediate superior concerning training as perceived by an employee
- Support of colleagues: The amount of expressive (encouragements, inspiration) and instrumental support (time, information) received from the colleagues concerning training as perceived by an employee
- Flexitime: An employee chooses the hours each day that she works, as long as the hours add up to the same fixed number of hours every week or month.

- Care facilities: Being able to leave the children in a day nursery or let them stay at school after school hours.
- Management position: A woman has the position of a manager.

The central question of this study is:

Which home and work factors influence the time women spend on training?

From the theory the following hypotheses can be deduced about home and job demands and home and job resources, and the time spent by women on training.

Hypotheses about Home demands

- Hypothesis 1: The presence of children (younger than 17) has a negative influence on the time spent on training by women.
- Hypothesis 2: Housekeeping has a negative influence on the time spent on training by women.
- Hypothesis 3: An employed spouse has a negative influence on the time spent on training by women.
- Hypothesis 4: Stress in the family has a negative influence on the time spent on training by women.
- Hypothesis 5: (high) Commitment to the family has a negative influence on the time spent on training by women.

Hypotheses about Home resources

- Hypothesis 6: Expressive support of the partner, family or friends has a positive influence on the time spent on training by women.
- Hypothesis 7: Instrumental support (care for the children by the partner, family or friends, neighbours, a babysitter or a housekeeper) has a positive influence on the time spent on training by women.

Hypotheses about Job demands

- Hypothesis 8: Work pressure has a negative influence on the time spent on training by women.
- Hypothesis 9: Irregular work has a negative influence on the time spent on training by women.
- Hypothesis 10: (many) Working hours has a negative influence on the time spent on training by women.
- Hypothesis 11: Part-time work has a negative influence on the time spent on training by women.
- Hypothesis 12: A male immediate superior has a negative influence on the time spent on training by women.

Hypotheses about Job resources

- Hypothesis 13: (high) Job control has a positive influence on the time spent on training by women.
- Hypothesis 14: Support of the immediate superior has a positive influence on the time spent on training by women.
- Hypothesis 15: Support of colleagues has a positive influence on the time spent on training by women.
- Hypothesis 16: Flexitime has a positive influence on the time spent on training by women.
- Hypothesis 17: Care facilities have a positive influence on the time spent on training by women.
- Hypothesis 18: Working in a management job has a positive influence on the time spent on training by women.

3. Method

Sample/Data collection

To answer the research question with cross-sectional survey research based on a questionnaire with closed questions the research population consisted of Dutch women that are working. The sampling was based on a 'snowball' sampling strategy and the aim was to collect data on 150 women. Sampling by three researchers took place in August, September and October 2008. Fifteen organizations have been approached: nine in the service sector (2 day care centres, 1 welfare centre, 2 detachment centres, 1 care centre, 1 consultancy bureau, 1 architectural office, 1 office offering facility services), three in the educational sector (1 primary school, 2 secondary schools), one in the financial sector (1 auditor's office), one in the technical sector (1 ICT organization) and one in the industrial sector (1 energy supplier).

Survey

The survey contains 146 questions and consists of six sections: a general section (personal characteristics of the women and demographics), the family (home demands and resources, independent variables/co-variables), work (job demands and resources, independent variables/co-variables), time spend on training (dependent variable), career motivation and career. For this paper only the data collected in the first four sections have been used. As much as possible existing questionnaires have been used to measure the independent variables: Stress in the family and instrumental support have been measured by a questions of Carlson & Perrewé (1999), Job demands have been measured by questions of Semmer (1984), Karasek (1985), and Hackman & Oldham (1974), support of the immediate superior, or colleagues have been measured by questions of (Hackman & Oldham, 1974) and job control has been measured by a questions of Jackson et al. (1993).

Validity/Reliability

The reliability of the scales has been measured with the Cronbach's α , variables measured with one item were excluded from this procedure. The following values for Cronbach's α for scales with two or more items have been found: .944 housekeeping, .639 stress in the family, .969 commitment to the family, .630 expressive support, .745 work pressure, .757 job control, .855 support of immediate superior, .841 support of colleagues.

Data analysis

Data were entered in an SPSS data file. First the data have been checked for homoscedasticity, multicollinearity, variable type, normal distributed errors. When this check was sufficient data were analysed with multi regression analysis. Eighteen independent variables, seven home factors and eleven job factors have been tested in 2 multiple regression analyses: one for the home factors and one with the job factors with the other factors as co-variables. The dependent variable was the time spend on training by the women.

4. Results

4.1 Descriptive statistics

After permission of the organizations 250 women have been approached 154 (a response percentage of 62%) returned the questionnaire.

The mean age of the respondents is 38 (SD=12) and varies between 21 and 63. The variable is normally distributed. Three quarter of the women in the sample has a partner.

About half of the women of the sample (79=53%) have children. Twenty five per cent of the women have two children and eight per cent of the women have three or more children. About 75% of these children is younger than 17. About 60% of the women with children has children younger than 17. About 45% of the women with children has children younger than 13. Caring for the children is mainly done by the women themselves (37%) or by both parents (43%). The partner of the women is never the main caregiver.

Most women (67%) followed higher education.

Most women (70%) work in the service sector or in education (21%). The women work predominantly in midsized organizations (10-500 employees) (67%). A smaller part of the women (32%) works in a large organization (500 or more employees) and only a few women work in a small organization (1%).

Only 12% (18) of the women has a management position. Most women (84%) are workers. Half of the women have a immediate superior who is a woman. Most of the women have a permanent job (78%). On average the women work 31 hours per week. About half of the women (54%) works part-time (less than 36 hours per week). Few women (19=12%) have irregular work. Most women (69%) have a partner that is employed. A minority of the women (33%) has the possibility of flexitime or working at home (16%). Few women (12=8%) have the possibility of day-care at work and only one women makes use of this

possibility. Few women use a housekeeper (14%). Most women that do not use a housekeeper don't find it necessary to have one (65%).

About half of the women (55%) has received training last year. Most women that didn't participate in training say they did not need training for their work. Some women (21%) did not have time to participate. The most important reasons to take part in training is to keep up to date in one's occupation (48%) and to develop oneself (64%). To get more chance on promotion (14%) and growing into a higher position (18%) are less important. The women that take part in training follow training in the area of personal development (26%), sector and branch-specific training (23%) and training in quality, working conditions and environment (24%). The employer of most women (83%) offered the training. The training courses of most women (51%) lasted one or two days or was a short training (with fewer than ten sessions) (33%). On average the women spend four contact hours and four 'study' hours a month on the training. The training costs of nearly all women (90%) were incurred by their employer. Nearly half of the women (42%) received some kind of study leave. About 28% of the women that participated in training was not satisfied with it.

4.2 Home factors

Table 1 shows the multiple regression analysis with 111 respondents because there were 'missing values' by 39 respondents without partner by housekeeping and commitment to the family and also four outliers have been removed. The control variables, the job demands and the job resources, were included in this analysis (see Fig. 2). The F-test (whole model, Table 1, Figure 3) shows that the whole model is significant. The variables of the model (Table 1) explain 33.8% of the variance of the dependent variable time spend on training by women. With the T-test the significance of every single independent variable, what every single independent variable adds to the explanation of the dependent variable was tested. Only the variable stress in the family has a significant effect on the time women spend on training. This effect is positive. This means that women spent more time on training when there is more stress in the family. The Beta (β) shows that the independent variable stress in the family has the most influence on the time women spend on training followed by instrumental support, expressive support, children, housekeeping, employed partner and commitment to the family.

Testing the hypotheses on job demands and resources.

Hypotheses about Home demands

The results of the regression analysis show that the following home demands: Presence of children (younger than 17), Housekeeping, an Employed spouse and Commitment to the family have no significant relation with time spend on training by women. Therefore hypotheses 1, 2,3 and 5 have been rejected. Stress in the family unexpectedly has a positive significant influence on the time spend on training by women. Because a negative relationship was supposed in hypothesis 4 this hypothesis has also been rejected.

Hypotheses about Home resources

The results of the regression analysis also show that both Expressive support of the partner, family or friends and Instrumental support (care for the children by the partner, family or friends, neighbours, a babysitter or a housekeeper) have no significant relation with time spend on training by women. This means that hypotheses 6 and 7 have been rejected.

Figure 3: Home factors influencing time spend on training by women

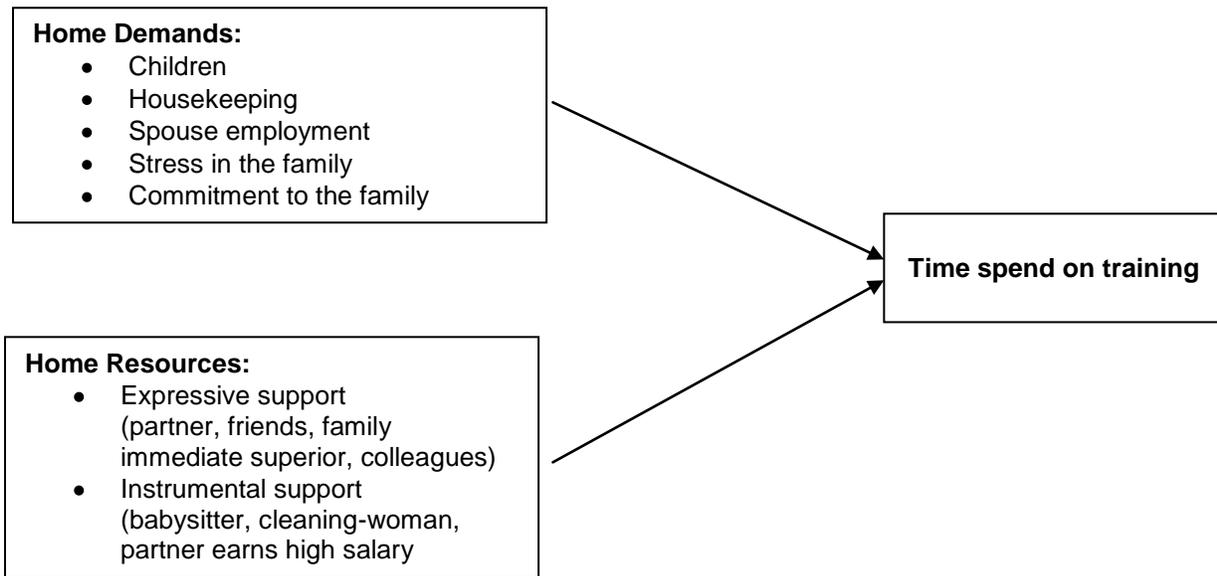


Table 1: Results multiple regression analysis with home demands and home resources as independent variables and time spend on training as dependent variable. (N=111)

Independent variable	F	R ²	ΔR ²	B	Bèta (β)
Children				.084	.096
Housekeeping				.006	.067
Employed partner				-.094	-.064
Stress in the family				.027	.231*
Commitment to the family				.005	-.032
Expressive support				-.011	-.101
Instrumental support				-.195	-.228
	2.796***	.338***	.217		

* $p < .05$ (significant on a significance level of .10 (2 * .05 one sided test))

** $p < .01$

*** $p < .001$

4.3 Job factors

Table 2 shows the multiple regression analysis with 150 respondents because four outliers have been removed. The control variables, the home demands and the home resources were included in this analysis (see Fig. 2). The F-test (whole model, Table 2, Fig. 4) shows that the whole model is significant. The variables of the model (Table 1) explain 33.8% of the variance of the dependent variable time spend on training by women. With the T-test the significance of every single independent variable, what every single independent variable adds to the explanation of the dependent variable was tested. The results show that Part-time work, Support from colleagues and Job control has a significant relationship with time spend on training by women. Beta (β) shows that the independent variable Part-time work has the most influence on the time women spend on training followed by Support by colleagues, Job control, Flexitime, Support of the immediate superior, working hours, Work pressure and Gender of immediate superior.

Testing the hypotheses on job demands and resources.

Hypotheses about Job demands

The results of the regression analysis show that the following Job demands: Work Pressure, Working hours, Gender of immediate superior have no significant relation with time spend on training by women. Therefore hypotheses 8, 10 and 12 have been rejected. Hypothesis 9 about irregular work could not be tested because of absence of irregular work in the sample. Part-time work has a significant negative relationship with the time spend on training by women. Because a negative relationship was supposed in hypothesis 11 this hypothesis has been accepted.

Hypotheses about Job resources

The results of the regression analysis also show that both Support of the immediate superior and Flexitime have no significant relation with time spend on training by women. This means that hypotheses 14 and 16 have to be rejected. Support from colleagues has a positive and Job control has a negative significant relationship with the time spend on training by women. This means that hypothesis 13 has to be rejected because a positive influence of job control was expected and hypothesis 15 has to be accepted, because a positive influence of support from colleagues was expected. Both variables Care facilities (day care and after school care) and Position of the manager could not be tested because there were too few women in the sample respectively one women made use of care facilities and nine women were manager

Figure 4: Job factors influencing time spend on training by women

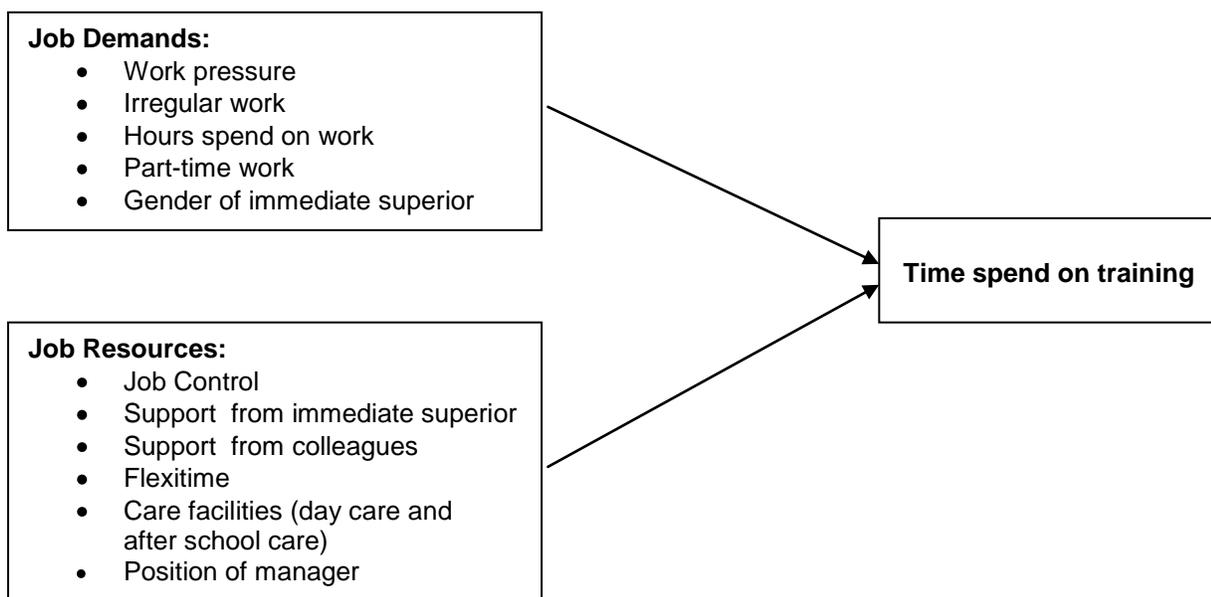


Table 2: Results multiple regression analysis with job demands and job resources as independent variables and with time spend on training as dependent variable. (n=150)

Independent variable	F	R ²	ΔR ²	B	Bèta (β)
Work Pressure				.002	- .015
Working hours				-.003	-.063
Part-time work*				-.265	-.310*
Gender of Immediate superior				-.006	-.007
Job Control*				-.029	-.217*
Support immediate superior				.005	.072
Support colleagues*				.026	.236*
Flexitime				.039	.104
	2.796***	.338***	.217		

5. Conclusions Discussion

As answer the research question: *Which home and work factors influence the time women spend on training?* The present study finds four factors that have a significant influence on the time women spend on training: Stress in the family (+), Part-time work (-), Job control (-) and Support from colleagues (+). One home demand and three job resources.

5.1 Home demands and resources

The present study indicates unexpectedly that women that experience stress in the family spend more time on training. Originally we argued that stress would hinder women to spend time on training based on a (stress related) conflict between the work and family roles of women (Greenhaus & Beutell, 1985). On the one hand a possible explanation of the results of the present study can be that women prefer to work and study hard because of stress in the family on the other hand it is possible that if women spend more time on training this creates stress in the family. Anyway that there is a relation between stress and home-work interference is confirmed by the literature (Byron, 2005; Mesmer-Magnus & Viswesvaren, 2005).

Further the literature indicates that the presence of young children in the family can create stress (Greenhaus & Beutell, 1985) and this can lead to negative spillover from home to work (Grzywacz & Marks, 2000). And although the literature (Merens & Hermans, 2009; Portegijs et al., 2008; Van Wel & Knijn, 2006) shows that childcare is primarily women's work in The Netherlands, sometimes shared with the partner, which is confirmed by the results of the present study (see 4.3), the present study doesn't show a relationship between children and time spend on training by women. For the regression analysis the variable children was split in four age groups: 0-16, 0-12, 0-7 and 0-4. It's possible that few data were

available in some age groups. About half of the women in the sample had children and less than half of this group had children aged below 16. This would explain why no relation between children and time spend on training by women was found.

Also employment of the partner did not influence the time spend in training by women in the present study, while time-related role conflicts and work-home interference were expected (Byron, 2005; Greenhaus & Beutell, 1985 Grzywacz & Marks, 2000, Van der Lippe et al., 2003) .

The literature shows that commitment to the family is determined by the time and energy women spend on the family (Byron, 2005; Frone et al., 1992). A strong commitment to the family is linked up with the home-work conflict (Eby et al., 2005). Yet the present study showed no significant relationship between commitment and time spend on training by women. A possibility is the low number of children with the age between 0-16 in the sample of women of the present study.

Besides the home demands, the home resources were part of the present study. Expressive support from for example the partner can alleviate the pressure of the work home conflict (Carlson & Perrewé, 1999; Marcinkus et al. 2007). However the present study shows no relation between expressive support and time spend on training by women.

Further instrumental support such as for example a housekeeper can diminish the work-home conflict (Crompton, 2006; Marcinkus et al., 2007). Again the present study shows no relation between instrumental support and time spend on training by women. An explanation may be that instrumental support is predominantly based on support by child care because few women in the sample (14%) had a housekeeper. The point is as has been mentioned earlier that the sample of women had not many women with young children.

5.2 Work demands and resources

The results show that work pressure and (long) working hours had no significant effect on the time women spend on training, An explanation may be that many of the women did work part-time and these women did not often work overtime. So just as in the case of irregular work there were few respondents to test these hypotheses.

Part-time work had a significant negative effect on women taking part in training. On the one hand these results corroborate with the argument of Hayes and Flannery (2002) that part-time work diminishes time spend by women on training, because part-timers' mostly are workers that don't need much extra training. This argument was further supported by the fact that only 11 of the 154 women in the sample worked in a management position. On the other hand these results confirm the notion of Brines (1994) that housework stays 'women's work' and the notion of Hochschild (1989: 235) who speaks about a 'stalled revolution' in which 'women have gone to work, but the workplace, the culture, and most of all the men, have not adjusted themselves to this new reality' and finally the notion of Greenhaus & Beutell (1985) who suggest that part-time jobs of women may lead to role overload.

The finding that the gender of the immediate superior had no significant effect on the time women spend in training contradicts the assumptions of the Leader-Member Exchange Model (Danserau et al, 1975).

The results show unexpectedly that there is a negative significant effect of job control (the extent to which an employee has control and autonomy over his/her tasks) on the time women spend on training. According to the learning hypothesis of Karasek and Theorell (1990) it was expected that high job control would go with women that spend a lot of time on training. An explanation is that most women of the present study are workers and as such may have work in which they don't need much training.

In contrast to the expectations (Tannenbaum, 1997) that support of the immediate superior is very important for learning from employees the results show no effect of this kind of support on the time women spend on training. It may be that the definition of the dependent variable that only includes official training courses and no informal ways of learning influenced these results. The results do confirm the

data of Byron (2005) and of Greenhaus & Powell, 2006) that support of colleagues has a positive significant effect on the time women spend on training. In contrast to the expectations (Den Dulk, 1998; Konrad & Mangel, 2000) flexitime had no significant relationship with the time women spend on training. A possible explanation is that only 22 women from the sample had flexitime at their disposal. As already mentioned the relationship between both care facilities and position of manager could not be tested because there were too few women in the sample, respectively one and nine.

5.3 Research design, respondents and variables

An important shortcoming of the present study was the size of the data set. For eighteen independent variables (seven home factors and eleven job factors tested in 2 multiple regression analyses: one for the home factors and one with the job factors with the other factors as co-variables) the data set was rather limited. On the one hand this makes the sample unstable and this may in turn have influenced the regression analysis. On the other hand in certain groups the number of valid cases was too low for example the group women with young children, and the group women with a housekeeper, one woman that made use of care facilities and the small group of women that worked as a manager. Also the sample was not random, because the snow-ball method has been used. Another point is that the questionnaire contained many questions (143) and this made it difficult to recruit respondents. Further this study is a cross-sectional study done at one point in time. This makes it difficult to show a causal relationship between two variables. A causal relationship can only be showed by a study done in different points in time. Also the data are self-reported, based on the perceptions of the women. The experienced family has been measured, not the family as it is in reality.

The present study doesn't account for the diversity within the group of women. Personal characteristics may influence the results of the study (Xanthopoulou et al., 2007). The personal choice of women (Hakim, 2000, 2002) and the motherhood culture (Portegijs & Keuzenkamp, 2008) have not been included in the present study.

Further, the home demands- and resources could be more fine tuned to the real situation when the sample of women had been larger. Then it would have been possible for example to distinguish stress and conflicts in the family (Byron, 2005). In the present study both factors have been melted together into one factor. The same goes for the number of children and the age of the children (Byron, 2005).

Another essential weak point of the present study is measuring the time spend on training by women with one question. It had been a better solution to create a scale with more items to measure this variable. The data were limited because only 84 of the 154 women did spend time in a training last year. The dependent variable was lopsided and this did not fully vanish after transformation of the variable. This resulted in some heteroscedasticity in the model.

5.4 Future research

In the first place it seems obvious that future research should use a much larger sample and a shorter questionnaire. Further the dependent variable should be measured by a scale with more items.

Secondly because both the two tested models (model with the home factors and the model with the job factors) were significant and single variables showed little significance research into the interaction between job and home demands and resources seems a logical next step. This calls for explorative qualitative in depth research with employed women.

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