

Does perceived support in employee development affect personnel turnover?

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Fleur Koster
Andries De Grip
Didier Fouarge

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Research Centre for Education and the Labour Market
Maastricht University
P.O. Box 616, 6200 MD Maastricht, The Netherlands
T +31 43 3883647 F +31 43 3884914

secretary-roa@maastrichtuniversity.nl
www.roa.nl

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T +31 43 3883647 F +31 43 3884914

secretary-roa@maastrichtuniversity.nl
www.roa.nl

* Corresponding author. Email: a.degrip@maastrichtuniversity.nl. We would like to thank Bas van Diepen and Piet Van den Bossche from Maastricht University for their useful comments on an earlier version of this paper.

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Abstract

Does Perceived Support in Employee Development Affect Personnel Turnover?

This paper focuses on the question whether it is beneficial for firms to invest in the general skills of their workforce or that these training investments merely encourage personnel turnover. We examine two contrary theoretical perspectives on how investments in employee development are related to their turnover behaviour. Estimation results derived from a sample of 2,833 Dutch pharmacy assistants show that participation in general training does not induce the intention of assistants to quit, as predicted by human capital theory. We find that a firm's investments in general training, significantly contribute to the perceived support in employee development (PSED) among their workforce. Our results also show that PSED is negatively related to the intention of employees to quit the firm. This effect is to a large extent mediated by the job satisfaction of pharmacy assistants. Our findings support the importance of social exchange theory in explaining turnover behaviour as a consequence of personnel development practices. It should be noted, however, that PSED only diminishes the intention to quit for other occupations.

Keywords: training, job satisfaction, social exchange theory, human capital theory

Fleur Koster
Joanknecht en Van Zelsts accountants
P.O. Box 263
5600 AG Eindhoven
The Netherlands
fleurkoster@hotmail.com

Andries de Grip
ROA
Maastricht University
P.O. Box 616
6200 MD Maastricht
The Netherlands
a.degrip@maastrichtuniversity.nl

Didier Fouarge
ROA
Maastricht University
P.O. Box 616
6200 MD Maastricht
The Netherlands
d.fouarge@maastrichtuniversity.nl

Introduction

Training and development practices constitute one of the most important ways to assist personnel in gaining new knowledge and skills required to adhere to competitive standards (Tsai and Tai, 2003). As acquiring knowledge has turned out to be vital for organizations, appropriate training and development practices are decisive for a firm's success (Martin et al., 1999).

Within the literature, two perspectives on investing in employee development are widely acknowledged. The first perspective on the relation between training and development and personnel turnover stems from human capital theory. It suggests that investing in employee development may contribute to the market value of employees and hence induces turnover. Especially investments made in general skills training are of interest, as this type of training equally increases the productivity of employees in organizations other than the incumbent firm (Becker, 1962). For this reason, human capital theory assumes that firms will not pay for this training. However, several studies do show that firms usually also pay the training costs when their workers participate in general training (Benson et al., 2004).

The other perspective, however, puts forward that by investing in the development of employees, their turnover intentions decrease (Benson et al., 2004; Sieben, 2007). Several studies have found that HRD practices affect the behaviour and attitudes of employees (Guest, 2002; Edgar and Geare, 2005; Muse and Stamper, 2007). Moreover, Lee and Bruvold (2003) found that the investments of firms in training their workforce contribute to the creation of positive perceptions in employees of the organization's willingness to support their development. These perceptions are related to the psychological contract and embedded in the context of social exchange theory (Blau, 1964; Eisenberger et al., 1986). Positive perceptions cause employees to believe in a social exchange relationship between them and the organization, which makes them act in a reciprocate manner (Wayne et al., 1997; Lee and Bruvold, 2003). Employees are more satisfied with their jobs and more willing to work hard in order to contribute to a higher performance of the organization (Arthur, 1994; Eisenberger et al., 2001).

Until today, it is unclear whether it is human capital theory or social exchange theory that provides the best explanation for turnover behaviour. While most studies investigated the relationship between the investments of firms in employee development and personnel turnover from either a social exchange or a human capital perspective, the goal of this paper is to approach the problem by adding the human capital perspective to the social exchange model that we further develop in this study. Firstly, we explicitly test

the major hypothesis from social exchange theory that general training is a predecessor of employees' perceptions on employer support. Secondly, we investigate how employee perceptions are associated with their intentions to quit. Thirdly, we examine whether job satisfaction plays a mediating role in this relationship. Fourthly, we test the relevance of the social exchange and the human capital perspective for explaining workers' intentions to quit. Finally, we repeat this analysis with a distinction between (1) workers' intention to quit for a similar job in another firm in the same sector and (2) the intention to quit for another occupation. In order to study this matter on a homogenous group of employees, we utilize an employee data set on Dutch pharmacies that solely consists of female workers with the same vocational education background.

This study contributes to the literature in several ways. First, we incorporate the contrary hypotheses of human capital theory as well as social exchange theory in our analysis. Our study builds on Sieben (2007) who contrasted the human capital perspective and the social exchange perspective in an analysis on the relationship between training participation and labor turnover. We extend her analysis by including employee perceptions on perceived support of their employer as well as workers' job satisfaction in the analysis. Second, little research has been conducted so far on how the perceptions of employees on their organization's willingness to contribute to their development, influence subsequent behaviour and attitudes. Lee and Bruvold (2003) addressed the impact of the perceptions of employees on investment in their development, but suggested that further research is required. Third, we combine research on perceived organizational support (POS) (Eisenberger et al., 1986) with research on perceived investment in employee development, in order to investigate the role of employee perceptions on a supportive climate regarding their development. We call this *perceived support in employee development* (PSED).

The Dutch pharmacy sector is a highly interesting sector for a study on the relationship between PSED and turnover intentions, because Human Resource Development (HRD) practices are central to the Human Resource practices in this sector (De Grip and Sieben, 2009). Moreover, increasing recruitment problems for pharmacy assistants are expected in the next few years. Therefore, it is of great interest to investigate whether in this sector the investments of firms in the general competences of their employees stimulate or restrict personnel turnover. Especially, examining the effect of general skills is highly relevant since these general skills have become increasingly important within service sector firms such as the pharmacy branch. For example, recent changes within the sector – more demanding clients and increased competition with independent drugstores (De Grip et al., 2006) – require pharmacy assistants to be more

customer-oriented and to have better commercial as well as communication skills. However, training provided to the pharmacy assistants often focuses on sector-specific skills that increase pharmaceutical knowledge. The transferability of these skills is restricted to other pharmacies.

The article is organized as follows: in the following section, we briefly discuss the literature on human capital theory, social exchange theory, and prior research on the relation between job satisfaction and turnover intentions. This section also outlines our hypotheses. We then describe the research methodology used and present the results of our empirical analyses. The last section concludes and discusses the limitations of our analysis as well as suggestions for further research.

Theoretical background and hypotheses

Human capital perspective and turnover intentions

Most studies on the effect of training on personnel turnover approach the issue from the point of view of human capital theory. According to human capital theory, investment in training contributes to an increase in worker productivity. Becker (1962), as the major initiator of human capital theory, distinguishes between two types of training: specific and general. Specific training is defined as the acquisition of competences that can hardly be transferred to other firms. It therefore only raises employee productivity within the firm. Employers are able to recoup all the costs and receive the full benefits, but nevertheless face the risk that employees might quit. Therefore, both the employer and employee pay for this type of training in order to create mutual commitment which will diminish turnover intentions.

General training, however, generates competences and qualifications that are of equal value to organizations other than the training firm. As a consequence, personnel turnover increases, because employees can easily be poached by other organizations (Green et al., 2000). Although most studies on training and personnel turnover do not distinguish between general and specific training, or merely focus on firm-specific training (Bishop, 1997), a few empirical studies provide some evidence for the human capital perspective, indicating that as a consequence of general training participation, workers' turnover increases (Bedeian et al., 1992; Benson et al., 2004; Sieben, 2007).

Most theoretical models of turnover integrate one or more turnover cognitions as direct precursors of turnover. The intention to quit is such a cognition, which is verified as a highly significant determinant of actual turnover (Herrbach et al., 2004; Steel and Ovalle, 1984). This leads to the following research hypothesis:

Hypothesis 1: The intention of employees to quit their current employer is positively related to participation in general training

Social exchange perspective and turnover intentions

Social exchange theory defines the employer-employee relation as one based on implicit obligations and trust. According to this perspective, employees are willing to exchange work performance for additional values that are less tangible, such as feelings of being valued and supported (Eisenberger et al., 2001). Social exchange theory has been widely studied through research on POS (Eisenberger et al., 2001; Muse and Stamper, 2007; Harris et al. 2007). POS can be defined as: “*The extent to which employees perceive that their contributions are valued by their organization and that their firm cares about their well-being*” (Eisenberger et al., 1986 p. 501). POS is a general concept for the organizational support provided by the employer. This support can take the form of investment in employee development, which improves the employability of a worker (cf. Lee and Bruvold, 2003). Whereas previous research examined the effect of POS on workers’ attitudes and behaviour (e.g. Muse and Stamper, 2007), we focus on the perceptions of employees on the support they receive regarding their personal development. We refer to these as *perceived support in employee development (PSED)*, which we would define as “*the extent to which employees perceive that their employer supports their competence development*”.

Employers who train their employees in general skills signal that they are willing to invest in the competences of their employees which make them attractive employers¹. Employees who are able to participate in general training perceive that their employer cares about their ‘employability’ and that they are valued by the organization (Tannenbaum et al., 1991; Sieben, 2007; Lee and Bruvold, 2003).

PSED is therefore created through the employees’ evaluation of their organization’s dedication to support them in acquiring new general skills, knowledge and competencies. Through the feeling of their employer’s support in their own development, employees have less intention to quit. Investments in general training may therefore be perceived by employees as a signal that their organization values them individually rather than as employees only within the organization (Galunic and Anderson, 2000). We therefore formulate the following hypothesis:

Hypothesis 2: Participation in general training has a positive effect on perceived support in employee development

¹ Our dataset shows that in the Dutch pharmacy sector employers pay the full training costs for 92% of all trainings (Sieben, De Grip and Smits, 2006).

Social exchange theory provides contrasting insights on training and turnover. Employee turnover causes high costs of recruiting and training new employees. Moreover, organizational forgetting (Darr et al., 1995) and a reduction of morale among remaining employees are common negative consequences of excessive turnover (Lee and Bruvold, 2003; Benson et al., 2004). Therefore, firms attempt to reduce this turnover by increasing employees' commitment to their firm, e.g. by way of employer-provided training. Looking at the employer-employee relationship as a social exchange relation, employees are expected to respond to this perceived support by a low intention to quit. This is because low intentions to quit can be regarded as a way in which employees repay their firms for the care and contribution to their employability. Studies taking a social exchange perspective have provided evidence for a negative relationship between training participation and turnover behaviour (Whitener, 2001; Arthur, 1994; Hung and Wong, 2007). However, these studies do not distinguish between general and specific training. We therefore formulate the subsequent hypothesis:

Hypothesis 3: Perceived support in employee development is negatively related to the intention to quit

The indirect effect of PSED on turnover intentions via job satisfaction

A number of studies have indicated that employee development positively affects the level of job satisfaction (Edgar and Geare, 2005; Georgellis and Lange, 2007). Therefore, it can be conceived that the level of job satisfaction is also affected by PSED. Employees who believe that dedicated organizations provide development opportunities for the benefit of the employees, are expected to behave reciprocally (Georgellis and Lange, 2007; Lee and Bruvold, 2003; Eisenberger et al., 2001). Studies on social exchange theory by Guest (2000) and Hung and Wong (2007), have investigated how POS and compliance with the psychological contract affects job satisfaction. They found POS to be positively related to job satisfaction. Furthermore, Georgellis and Lange (2007) found that due to the perception of a breach in the psychological contract, women in Germany showed a lower level of job satisfaction.

We argue that PSED can affect job satisfaction in three ways. First, organizations that are supportive in developing their employees can induce their employees to feel emotionally attached to the organization. In this way, organizations are able to enhance the psychological contract between employees and employer, which may result in more satisfied employees (cf. Georgellis and Lange, 2007). Second, as a consequence of PSED, employees may perceive the organization that provides training courses as

signalling its concern for the maintenance or growth of the competences of the workforce. The latter is supported by Shields and Ward (2001) who found that dissatisfaction with training opportunities has a stronger impact on job satisfaction than dissatisfaction with workload and pay. Third, the possibility to develop new skills and competences enhances the level of the employees' employability both within and outside the firm (cf. Lee and Bruvold, 2003). This leads to the following hypothesis:

Hypothesis 4: Perceived support in employee development is positively related to the employees' job satisfaction

Job satisfaction as one of the most researched work-related variables has been shown to negatively influence undesirable employee behaviour, such as absenteeism and turnover intentions (Bartlett, 2001; Hung and Wong, 2007; Winterton, 2004). Furthermore, Muse and Stamper (2007) found that job satisfaction serves as a mediating variable between perceived organizational support and task and contextual performance, and Herrbach et al. (2004) showed that job satisfaction mediates the relationship between perceived external prestige of the organization and turnover intentions. Therefore, we expect that the hypothesized relationship between PSED and the assistants' intention to quit is mediated by job satisfaction. Hence we test the following hypothesis:

Hypothesis 5: The negative relationship between PSED and their intention to quit is mediated by job satisfaction

The hypotheses to be tested in this paper are summarized in Figure 1. We expect a positive effect of training in general skills on the intention to quit (H1) and on PSED (H2). We expect a negative effect of PSED on the intention to quit (H3), but a positive effect of PSED on job satisfaction (H4). The expected mediating role of job satisfaction (H5) is represented by the dotted lines: inclusion of job satisfaction in the model is expected to reduce the direct effect of PSED on the intention to quit.

Insert Figure 1 about here

Data and Methodology

Data collection and sample

For our analysis, we use an employee data set on Dutch pharmacies. We focus on the 'core' workers in these firms – i.e. the pharmacy assistants – who represent 80% of the

total labor force in the pharmacies (De Grip and Sieben, 2009). Focusing the analysis on the core workers of the firms has the advantage of being able to identify a category of employees that is homogenous in terms of educational background and profession.

The employee data set was acquired by means of a survey among pharmacy assistants in the Netherlands at the beginning of 2008. We invited 6,000 pharmacy assistants – selected from the administrative database of the Pharmacy Pension Fund² with which all assistants have to register – to take part in the survey. If an e-mail address was available, invitations to participate in the survey were sent by e-mail. The e-mail contained a link to the online version of the questionnaire. A total of 2,156 pharmacy assistants were contacted by e-mail. The 3,844 pharmacy assistants for whom no e-mail address was known, were invited by regular mail. The invitation contained the printed version of the questionnaire and an individual link to the online version of the questionnaire. From the group of 6,000 contacted pharmacy assistants, a total of 2,833 responded. The response rate (47%) was marginally higher for assistants who were contacted by e-mail. In total, 70% responded to the online questionnaire and 30% to the paper version of the questionnaire. The respondents to the survey are representative for all Dutch pharmacy assistants with respect to their background characteristics. The only exception is age as the response probability is a slightly increasing function of age. A weighting scheme was therefore designed to correct for this.

Measures

Table 1 shows the means and standard deviations of the variables included in our research model. We discuss these descriptive statistics in the remainder of this section.

Insert Table 1 about here

Participation in general training In the pharmacy sector, training is very common: 85% of all pharmacy assistants followed one or more work-related training in the past calendar years. In our survey, we distinguished between training in general skills and training in firm- or sector-specific pharmaceutical skills. We asked whether employees participated in a training course in 2007 with respect to 13 general skills³: *communication skills, dealing with responsibilities, professionalism, problem-solving skills, being independent, being accurate, dealing with stress, leadership, interpersonal working skills, commercial skills, customer-orientation skills, planning skills, and computer skills.*

² In Dutch: Pensioenfonds Medewerkers Apotheken (PMA)

³ These skills are derived from the competence scheme of the training fund of the Dutch pharmacy sector.

Participation in general training was measured by summing up all general skills trainings. We focus on these general skills because they are also of value in organizations outside the pharmacy sector. When employees acquire competences that are also valuable in other industries, they may switch to others jobs, as human capital theory predicts. In 2007, 30% of the pharmacy assistants participated in at least one general skills training. In about half of the cases the general skills training was focussed one on one single general skill. In 19% of the case, the training pertained to two general skills. In the remainder of the cases the training was aimed at three or more skills general skills.

Perceived Support in Employee Development (PSED) The scales used to measure perceived organizational support focus on general perceptions of employees about intentions and attitudes of the organization (Eisenberger et al., 2001). A typical statement included in these scale is “My organization values my contribution to its well-being”. Scales used to measure perceived investments in employee development emphasise how employees think about their organization’s commitment to improve their competence (Lee and Bruvold, 2003; Tsui et al., 1997). A typical statement in these scales is “My organization trains employees on skills that prepare them for future jobs and career development”. The PSED scale we use in this study, however, focuses more directly on the support employees receive from their supervisor and colleagues, manifestations of support such as having to deal with challenging tasks, as well as getting feedback and opportunities for the transfer of learning to the work floor. Building on the existing scales, we developed a seven items that includes statement such as⁴: ‘*I receive sufficient support from my supervisor*’, ‘*I always get to hear how I could improve my working method*’ and ‘*My supervisor encouraged me to transfer the learned material to the work floor*’. Respondents could react on these statements by means of 5-point scales ranging from 1 (don’t agree at all) to 5 (fully agree). Cronbach’s alpha for PSED is .74, which support the internal consistency of the construct.

Job satisfaction Following Hackman and Oldham (1975), job satisfaction was measured on a 4-point Likert scale, using six representative items. We measured general job satisfaction, as well as satisfaction with various aspects of the job as suggested in the literature, including the satisfaction of employees with job security, pay, work atmosphere, supervision and career perspectives (Alexandrov et al., 2007; Hackman and Oldham, 1975). We also included satisfaction with the job performance appraisal system.

⁴ See Appendix 1 for a complete overview of the items.

The latter is an important item for the pharmacy sector, since it was introduced only recently to assess how assistants function in their jobs. The scales ranged from 1 (not satisfied at all) to 4 (very satisfied). Cronbach's alpha for these six indicators of job satisfaction is .73.

Intention to quit Intention to quit is verified as a direct antecedent of turnover (Herrbach et al., 2004; Steel and Ovalle, 1984). Intentions to quit have often been measured indirectly using scales for job search behaviour (Campbell and Campbell, 2003). Here, we follow Robinson and Pillemer (2007) and measure intention to quit directly by a single item: '*Are you currently looking for a job?*'. Around 10% of the pharmacy assistants appeared to be looking for another job at the time of survey. This compares well to the actual job mobility in the sector as our computations on the administrative database of the Pharmacy Pension Fund have shown that within two years 10.6% of all assistants have changes employer. In an additional analysis, we use the different answer categories to distinguish between (1) workers' intention to quit for a similar job in another firm within the pharmacy sector, and (2) the intention to quit for another occupation.

Control variables In our empirical analysis, we control for several individual characteristics of pharmacy assistants that probably affect job satisfaction and the intention to quit: assistants' age, job tenure, contractual working hours, and gross monthly wages in full time working hours. These variables were not asked in the survey, but were obtained from the administrative database of the Pharmacy Pension Fund, and matched to the respondents. As shown in Table 1, pharmacy assistants are on average 39.3 years old, have a tenure of 9.4 years in the firm in which they are currently employed, earn approximately gross monthly wages of € 2,279, and work on average about 25 hours a week.

Table 2 shows the correlations between the various variables. Some of the correlations are interesting to note. As expected, participation in general training is positively related to PSED (.077). PSED is also positively related to job satisfaction (.545), but negatively related to employees' intentions to quit (-.200).

Insert Table 2 about here

Methodology

We test the hypotheses by means of Ordinary Least Square regression (OLS) and by logistic hierarchical regression analyses. OLS is used for testing the relationships between general training and PSED, and between PSED and job satisfaction. Logistic regression is required if the dependent variable is not linearly scaled, which is the case with the employees' intention to quit. Therefore, logistic regression is used to test the associations with our dependent variable. To complement this analysis, we make a distinction between the intention to quit for a similar occupation in another pharmacy and the intention to quit for another occupation outside the pharmacy sector. This is modelled within a multinomial logit framework.

In this study, we test for the mediating role of job satisfaction. We do this by means of hierarchical logistic regression analysis. Four requirements need to be fulfilled in order to indicate mediation. First, the independent variable needs to be significantly related to the dependent variable. Second, the independent variable should significantly predict the mediating variable. Third, the mediating variable should be a significant predictor of the dependent variable. Fourth, the effect of the independent variable on a dependent variable should be reduced when the mediator is included in the analysis. Moreover, when the coefficient of the independent variable is no longer significant when the mediator is included, there is strong evidence for a dominant mediator (Herrbach et al., 2004).

Results

Training, PSED and intentions to quit

Table 3 shows the estimation results with respect to the hypothesized relations between general training participation and intentions to quit (column 1), between general training participation and PSED (column 2), as well as between PSED and intentions to quit (column 3). The results in column 1 versus columns 2 and 3 enable us to test the two contrary theoretical perspectives on the relation between participation in general training and employees' intention to quit.

The table shows that participation in general training is positively related to the pharmacy assistants' intentions to quit. However, this effect is not statistically significant. This is not in line with the human capital perspective; hence hypothesis 1 is rejected. In recent paper, Chew and Chan (2008) also showed that 'training and career development' has no significant effect on employees' intentions to stay with the firm. As expected from the social exchange theory, participation in general training is positively associated with

PSED. This supports hypothesis 2. PSED is significantly negatively related to the intention to quit, which is in line with hypothesis 3.

Insert Table 3 about here

Mediating role of job satisfaction

The above analysis has shown that the social exchange theory is a more likely candidate in explaining employees' intentions to quit. However, it remains to be seen whether this finding still holds when we control for the hypothesized mediating effect of job satisfaction. The first requirement that needs to be fulfilled when testing for mediation has been met when testing hypotheses 3: perceived support in employee development is significantly associated with the employees' intentions to quit. The second requirement to be met is that PSED has a positive and significant effect on job satisfaction. This relationship is tested in the first column of Table 4, and the estimation result are in line with hypothesis 4.

Table 4 also presents the results of the regression analysis testing the mediating role of job satisfaction in the relationship between PSED and the intention to quit (column 2). The estimation results show that job satisfaction is significantly and negatively related to the intention of employees to quit: the higher the level of satisfaction, the lower the intention to quit. This supports the third requirement for establishing a mediating effect: the mediating variable is a significant predictor of the dependent variable. Furthermore, when we include job satisfaction in the logistic regression, the effect of PSED reduces in size and significance from $\beta = -.997$ ($p < .01$) in column 3 of Table 3, to $\beta = -.254$ ($p < .05$) in column 2 of Table 4. Therefore, we can conclude that job satisfaction functions as a mediator: most of the impact of PSED on the intention of employees to quit runs via employees' job satisfaction. This supports hypothesis 5.

With respect to the control variables included in the analysis, we find that the intention of employees to quit is significantly related to their age and job tenure.

Insert Table 4 about here

Multinomial analysis of turnover intentions

The above findings raise another interesting question: is this effect of PSED on turnover intentions the same for quits to other employers in the sector and for quits to another sector. When we split turnover intentions into (1) the intention to quit the pharmacy for a

similar job, and (2) the intention to quit the pharmacy for another occupation, PSED only has a significant negative affect on the intention to quit for another occupation (Table 5). When pharmacy assistants perceive their employers to be supportive for their personal development, they have less intention to quit for another occupation. Remarkably, this perception does not influence their quit intentions for another pharmacy in any significant way.

Insert Table 5 about here

Conclusion and discussion

In this study, we analyzed whether the investments of firms in the general competences of their employees stimulate or restrict personnel turnover in Dutch pharmacies. As in most other service sectors, general competences have become increasingly important in the Dutch pharmacy sector. Human capital theory postulates that investments in general skills will increase personnel turnover. However, according to social exchange theory employees particularly perceive general skills training as a gift because it increases the marketability of their competences outside the sector in which they are employed. We did not find any evidence for the prediction of human capital theory that employees' intention to quit is positively related to participation in general training.

On the basis of social exchange theory, we predicted that general skills training would positively affect PSED. Pharmacy assistants indeed perceive that general training investments signal an employer's care for their overall employability and consider being loyal as a way to repay their employer. However, PSED only has a significant negative effect on assistants' quit intentions for another occupation and not on their quit intentions for a similar job in another pharmacy. This shows that their loyalty is sector-specific and not pharmacy-specific.

Our analysis of the mediating role of job satisfaction in the relationship between PSED and the intentions of pharmacy assistants to quit showed that job satisfaction acts as a strong mediator. It seems that the negative relationship between PSED and the assistants' intention to quit is to a large extent mediated by their level of job satisfaction. Therefore the important role of job satisfaction should be taken into account when designing skill development practices for pharmacy assistants.

Implications

Since Dutch pharmacies are small firms in which personal relations between the employer and his or her employees are very important (De Grip and Sieben, 2009), it can

be conceived that our results are also applicable to small firms in other sectors. For these firms, it is important to know that firm climate that supports the development of employees enhances the level of job satisfaction among employees. As a consequence of higher levels of job satisfaction, employees will be highly motivated to stay with the organization. This implies that firms should develop general training programs that promote job satisfaction in order to reduce turnover. Supporting employees in increasing their overall employability creates a lively employer-employee relationship based on reciprocal behaviour.

Limitations and further research suggestions

Industry studies have great advantages in their focus on a rather homogeneous workforce. However, our results need to be reproduced in other industries in order to validate the results. Moreover, as our data set consisted solely of female workers, it would be interesting to reproduce our analysis in sectors of industry that are dominated by male workers.

Since the data we used are cross-sectional, our results may have been exposed to causal ambiguity. It is possible, for example, that more satisfied pharmacy assistants incite pharmacists to provide more development possibilities, support and feedback. Furthermore, it may take time before the increase in general competences affects the turnover intentions of employees. It would therefore be interesting to replicate this study in a longitudinal design. This would make it possible to determine the sustainability of the relationships between perceived support in employee development and positive work attitudes and behaviour.

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Appendix 1: Items included in the measurement of Perceived Support in Employee Development

Perceived Support in Employee Development (PSED)

- My supervisor encouraged me to transfer the learned material to the work floor
- My peers encouraged me to transfer the learned material to the work floor
- I receive sufficient support from my supervisor
- Everyone shares information with each other at work
- I always get to hear when I successfully accomplished a task
- I always get to hear how I could improve my working method
- I have to deal with tasks which are challenging

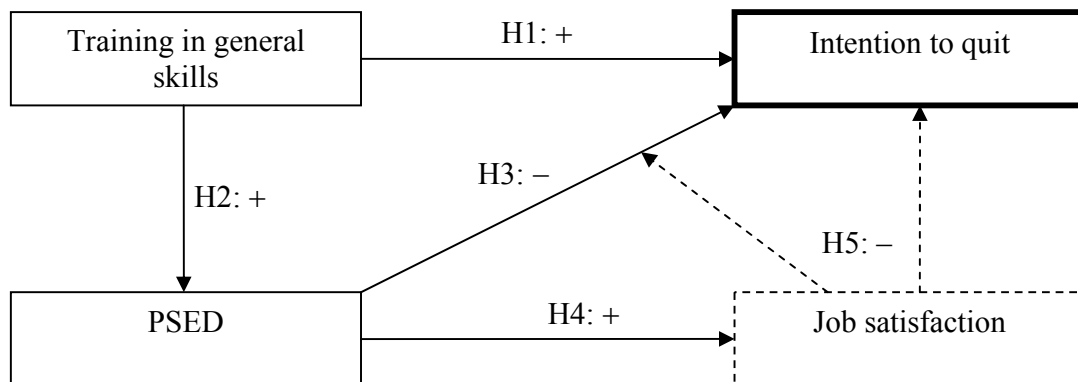


Figure 1 Hypothetical model for the effect of training in general skills, PSED and job satisfaction on the intention to quit the firm

Table 1 *Description of variables*

<i>Variables</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>
Intention to quit (%)	2,694	10.21	30.28
- to other pharmacy (%):		5.05	
- to other occupation outside sector (%):		5.16	
Participation in general skills training (%)	2,791	30.13	0.46
Perceived support in employee development	2,739	3.04	0.74
Job satisfaction	2,701	2.79	0.37
Age (in years)	2,791	39.31	10.41
Tenure (in months)	2,791	113.31	79.86
Number of contractual working hours (per week)	2,791	25.35	8.18
Gross full-time equivalent monthly wages	2,791	2279.18	365.17

Table 2 *Correlation analysis*

	1	2	3	4	5	6	7
1 Intention to quit (%)	1						
2 Participation in general skills training	0.0265	1					
3 Perceived support in employee development	-0.2004*	0.0766*	1				
4 Job satisfaction	-0.3112*	-0.0123	0.5453*	1			
5 Age	-0.0798*	0.0038	-0.0457	-0.0042	1		
6 Tenure (in log)	-0.0593*	0.0092	-0.1087*	-0.0759*	0.3556*	1	
7 Number of contractual working hours	0.0090	0.0302	0.0531*	-0.0470	-0.2862*	-0.1716*	1
8 Gross full-time equivalent monthly wages	-0.0196	0.0377	-0.0363	-0.0251	0.1193*	0.1814*	0.2592*

Note: * p<0.01

Table 3 *Training, PSED and intentions to quit: estimation results*

	(1) Intention to quit ¹⁾	(2) PSED ²⁾	(3) Intention to quit ¹⁾
Followed general skills training	0.054 [1.34]	0.040*** [4.18]	
PSED			-0.997*** [-10.50]
Age	0.153*** [2.75]	-0.020* [-1.84]	0.150*** [2.60]
Age squared (/100)	-0.225*** [-3.19]	0.025* [1.89]	-0.225*** [-3.09]
Tenure (in log)	-0.149** [-2.33]	-0.065*** [-4.35]	-0.213*** [-3.20]
Number of contractual working hours	0.000 [0.03]	0.003 [1.40]	0.003 [0.33]
Gross full-time equivalent wage (in log)	-0.050 [-0.61]	-0.024 [-1.21]	-0.055 [-0.65]
Constant	-3.546*** [-3.25]	3.781*** [16.34]	-0.296 [-0.25]
N	2,692	2,737	2,689
Adjusted-R-square		0.019	
Pseudo-R-square	0.019		0.085

Notes

t statistics in brackets

* p<0.10, ** p<0.05, *** p<0.01

1) Logit model for the intention to quit, beta coefficients

2) OLS regression for PSED

Table 4 *Job satisfaction, PSED and intentions to quit: estimation results*

	(1) Job satisfaction ¹⁾	(2) Intention to quit ²⁾
PSED	0.274*** [33.72]	-0.257** [-2.29]
Job satisfaction		-2.547*** [-11.48]
Age	-0.012** [-2.53]	0.128** [2.11]
Age squared (/100)	0.015*** [2.60]	-0.203*** [-2.64]
Tenure (in log)	-0.010 [-1.57]	-0.253*** [-3.63]
Number of contractual working hours	-0.005*** [-5.46]	-0.011 [-1.13]
Gross full-time equivalent wage (in log)	0.013 [1.50]	-0.016 [-0.18]
Constant	2.238*** [21.72]	5.055*** [3.82]
N	2,694	2,687
Adjusted-R-square	0.305	
Pseudo-R-square		0.166

Notes

t statistics in brackets

* p<0.10, ** p<0.05, *** p<0.01

1) OLS regression for job satisfaction

2) Logit model for the intention to quit, beta coefficients

Table 5 *Intention to quit to similar job in other pharmacy and intention to quit to other occupation outside the pharmacy branch: estimation results¹⁾*

	Quit for other pharmacy	Quit to other occupation
PSED	-0.174 [-1.17]	-0.341** [-2.27]
Job satisfaction	-2.399*** [-8.34]	-2.678*** [-9.45]
Age	0.183** [2.19]	0.088 [1.08]
Age squared (/100)	-0.284*** [-2.63]	-0.144 [-1.43]
Tenure (in log)	-0.354*** [-4.07]	-0.135 [-1.36]
Number of contractual working hours	-0.008 [-0.65]	-0.013 [-1.00]
Gross full-time equivalent wage (in log)	-0.075 [-0.74]	0.106 [0.63]
Constant	3.706** [2.17]	4.167** [2.20]
N	2,687	
Pseudo-R-square	0.143	

Notes

t statistics in brackets

* p<0.10, ** p<0.05, *** p<0.01

1) Multinomial logit model for the intention to quit (ref: no intention to quit), beta coefficients