



PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE
FACULTAD DE CIENCIAS SOCIALES
ESCUELA DE PSICOLOGÍA

Training, Voluntary Turnover, and Firm Financial Performance

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Profesor guía: Agustín Molina

Tesis presentada a la Escuela de Psicología de la Pontificia Universidad Católica de Chile, como requisito para optar al grado académico de Magíster en Psicología
Laboral-Organizacional

Noviembre, 2021

Santiago, Chile



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*A mi familia, amigos, amigas y profesores, que
ayudaron a hacer de estos años universitarios los
mejores años de mi vida hasta el momento.*

Gracias de corazón.

Abstract

Several studies suggest that organizational practices promoting human resource development (HRD), such as training, increase organizational performance. However, most of these studies rely on the use of subjective measures and cross-sectional designs. Moreover, this line of research has mostly focused on general overall indicators of HRD rather than addressing different dimensions of HRD which may help researchers and practitioners better understand the complexity of the HRD-performance link. The main objective of this study was to examine the effect of employee exposure to HRD and resource investment in HRD, on voluntary turnover. Additionally, we aimed to examine the interaction between these two dimensions of HRD in predicting voluntary turnover, as well as the conditional indirect effect from employee exposure to HRD, to organizational financial performance, through the mediating role of voluntary turnover. We tested our proposed moderated mediation model using objective firm-level data collected at three points over a three-year period, from a sample of 72 companies. We found evidence that employee exposure to HRD was negatively related to voluntary turnover and—indirectly—positively related to firm financial performance. Additionally, we found that these effects were amplified when the moderating variable—resource investment in HRD—was high. Noteworthy, this is the first study to examine the interactive effect between these two dimensions of HRD. Thus, this study contributes to the scientific literature by offering new insights about the conditions under which organizational training practices may impact voluntary turnover and, subsequently, firm financial performance. Practical and research implications are discussed.

Keywords: *human resource development, training, voluntary turnover, financial performance*

Introduction

Organizational practices that promote human resource development (HRD) have widely been recognized as key strategic tools for organizations to enhance the knowledge, skills, and abilities of their employees, as well as their motivation and commitment (Jiang et al., 2012; Sung & Choi, 2014). Among these practices, there is considerable support for the benefits of training in relation to individual and team performance within organizations, which ultimately contributes to overall organizational effectiveness. For instance, evidence suggests that training relates to organizational performance (e.g., financial outcomes) as well as other outcomes that relate indirectly to performance (e.g., turnover; for a review see Aguinis & Kraiger, 2009).

Despite the importance of HRD practices, research on training and organizational-level outcomes has been the exception rather than the rule (Tharenou et al., 2007). Research addressing training at the organizational level is not only limited but also has been built upon evidence collected using self-reporting approaches. That is, this field of research is characterized by the use of subjective measures such as perceived investment in employee development, employee attitudes like commitment or intention to quit, and managerial perceptions of relative organizational financial performance (Tzabbar et al., 2017). Additionally, these studies are predominantly characterized by the use of cross-sectional designs, which shed little light on causality (Garavan et al., 2019; Garavan et al., 2021; Tharenou et al., 2007; Tzabbar et al., 2017). Meta-analytic evidence also suggests the prevalence of mixed empirical results within the training domain, particularly when examining the training-firm performance link (Tharenou et al., 2007). As suggested by Sung and Choi (2014), existing studies have conceptualized and tested different dimensions of HRD, but under the same name. This lack of consensus on the operationalization of the HRD construct may explain the mixed empirical findings reported in the literature. Furthermore, as reported in a recent meta-analytic review, researchers have mainly been motivated to uncover positive direct relations between training and firm performance. Hence, little attention has been given to the complexity within such direct path (Garavan et al., 2021).

This study aims to extend these previous observations, while attempting to cover the aforementioned limitations. To this end, we differentiate between *employee exposure to HRD*, which refers to the amount of hours to which employees are exposed to training, and *resource investment in HRD*, which refers to the actual amount of monetary expenditure a firm invests in training practices (Sung & Choi, 2014).

The main objective of this study was to examine the effect of *employee exposure to HRD* and *resource investment in HRD* to *voluntary turnover*. We also examined *resource investment in HRD* as a moderator of the link between *employee exposure to HRD* and *voluntary turnover*. Finally, we examined the conditional indirect effect from *employee exposure to HRD* to organizational *financial performance*, through the mediating role of *voluntary turnover* and the moderating role of *resource investment in HRD*. Our proposed first stage moderated mediation model is presented in Figure 1. To test this model, we utilized objective measures collected at three points over a three-year period, from a sample of small, medium, and large firms representing a wide variety of industries, operating in Chile.

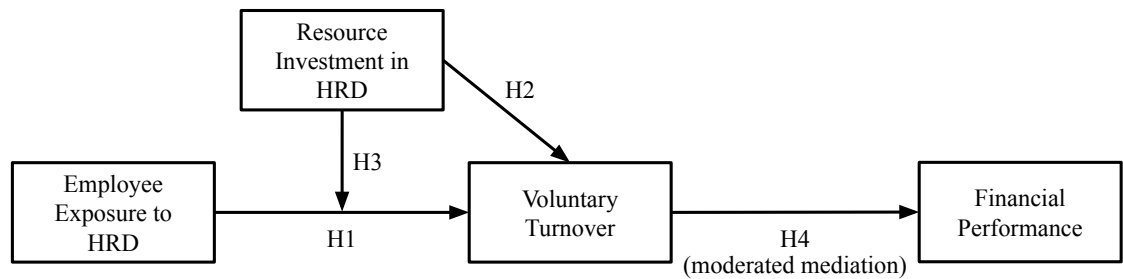


Figure 1. Proposed first stage moderated mediation model.

We believe the present study contributes to the existing literature in several ways. First, we answer the call to expand the limited number of empirical studies examining the relation between training and financial performance at the organizational level of analysis while utilizing a three wave longitudinal research design, as well as objective measures

for every variable included in the proposed model. Secondly, we examined the complexity of this relation by testing the mediating role of voluntary turnover in the training and financial performance link. Thus, we addressed not only one but two relevant organizational outcomes in the same study, a direct and an indirect outcome (voluntary turnover and firm financial performance, respectively). Lastly, as recommended by Sung and Choi (2014), we contribute to the current training literature by separating between employee exposure to HRD and resource investment in HRD, rather than addressing these constructs as one overall indicator. This allowed us to examine the differential impact of each construct in predicting voluntary turnover, as well as examining their interaction. Therefore, we offer new insights about the conditions under which HRD practices will have the greatest impact on reducing voluntary turnover and subsequently improving firm financial performance.

In summary, the current research helps to better understand when and why HRD increases firm financial performance. Our proposed model, as depicted in Figure 1, integrates research on HRD, voluntary turnover, and organizational performance. In the following section we describe the theoretical framework and present our hypotheses.

Theoretical Framework

Voluntary Turnover

Employee turnover is a topic of interest for both organizational researchers and organizations themselves. Particularly of interest is the type of turnover known as *voluntary turnover*, which has been consistently conceptualized as a withdrawal behavior characterized by the voluntary termination of membership to an organization by an employee's own choice (Rubenstein et al., 2018). Retention management and research typically focus on voluntary turnover, since this outcome refers to individuals that organizations would prefer to retain (Allen et al., 2010).

At the individual level of analysis, commonly thought of antecedents of voluntary turnover such as pay level and pay satisfaction have shown to be relatively weak predictors of voluntary turnover decisions (Allen et al., 2010). On the other hand, a recent meta-analytic review on the antecedents of voluntary turnover (Rubenstein et al., 2018) has indicated that key employee attitudes such as job satisfaction and organizational commitment have consistently shown to be strong predictors of voluntary turnover, while engagement—a relatively new phenomenon within the voluntary turnover literature—has increasingly received support as a strong predictor of this behavior as well. Explicitly; the higher the levels of commitment, satisfaction and engagement of an employee, the lower the probability of the employee quitting the job.

Voluntary Turnover and Organizational Financial Performance. When studying turnover at the organizational level of analysis, researchers have also used the term *collective turnover*, which refers to the aggregate levels of employee departures that occur within groups, work units, or organizations, during a given period of time (Hausknecht & Trevor, 2011). As such, when studying collective turnover at the organizational level, meta-analytic evidence has shown that high levels of voluntary turnover can have a negative effect on firm's financial performance (Hancock et al., 2013), as explained by the impact on more proximal outcomes such as higher separation and replacement costs associated with turnover (e.g., recruitment advertising, interviewing and selection costs),

as well as lower levels of productivity or quality due to the loss of valuable knowledge and skills employees had developed through experience and organizational memory that cannot be easily replaced when those employees depart (Allen et al., 2010).

Human Resource Development (HRD)

Although there is no single definition of human resource development (HRD), the term *HRD* has been widely used and broadly conceptualized as a process for developing and unleashing human expertise for the purpose of improving individual and collective work performance (Lee et al., 2018). In the present study, we focus on the training practices organizations implement to develop employees' work-related knowledge, skills, and abilities (KSAs), as these training efforts have been acknowledged as the core feature of HRD practices (Sung & Choi, 2014).

As previously discussed, several researchers have indicated that existing studies conceptualize and test different dimensions of HRD under the same name, which has resulted in mixed empirical findings regarding the outcomes of HRD (Sung & Choi, 2014; Tharenou et al., 2007; Tzabbar et al., 2017). In a general sense, more broadly operationalized HRD, usually including dimensions such as social support for developing employees and organization's long-term approaches to HRD, have been positively associated with organizational commitment and performance (Bartlett, 2001; Glaveli & Karassavidou, 2011), as well as enhanced levels of employees' KSAs (Combs et al., 2006).

Noteworthy, HRD is multifaceted and its core feature cannot be captured by a single concept (Tharenou et al., 2007). To address this limitation, Sung and Choi (2014) suggested a multiple dimensions model of HRD, which includes a distinction between resource investment in HRD and employee exposure to HRD. *Resource investment in HRD* refers to the actual amount of monetary or other forms of expenditure a firm invests in HRD practices, whereas *employee exposure to HRD* refers to the amount or degree to which employees are exposed to training and development activities (Sung & Choi, 2014). Thus, Sung and Choi's model is particularly appealing, as it offers a finer grained approach to training research, while attending two quantitative dimensions of HRD that can be

measured with objective organizational data. In the paragraphs to follow we address the link between these constructs and voluntary turnover.

Employee Exposure to HRD and Voluntary Turnover. Organizational support literature conceptualizes the formation of social exchange relationships as a two-phase process (Rhoades & Eisenberger, 2002). The basic theoretical premise proposed by this literature argues that when organizations demonstrate concern for an employee—first phase—, the employee will later feel an obligation to reciprocate that support in the form of organizational commitment—second phase (Lavelle et al., 2007).

Based on this premise, we could argue that employees' who are exposed to greater amounts of HRD practices will probably perceive that their organization supports them not only to achieve their work goals, but that they also care about their well-being, as well as their personal growth and development. Following the two-phase process, this would later lead to a stronger intention by those employees to reciprocate this support by showing greater loyalty and commitment to stay at the organization.

Empirical evidence supports this logic. For instance, Kampkötter and Marggraf (2015) showed that employees who participate in different training activities, tend to report higher levels of commitment and loyalty to the organization, which suggests that employees value and reciprocate the effort exerted by the organization. Based on these arguments, we propose the following:

Hypothesis 1: Employee exposure to HRD will be negatively related to voluntary turnover.

Resource Investment in HRD and Voluntary Turnover. Previous research shows that objectively measured resource investment in HRD seems to exert positive effects on subjective employee attitudinal outcomes such as commitment (Choi & Yoon, 2015), which is, in turn, a strong predictor of voluntary turnover (Rubenstein et al., 2018). Despite this logic, the empirical evidence regarding the relation between resource

investment in HRD and the objectively measured behavior of voluntary turnover is still unclear.

The job demands-resource (JD-R) model, however, provides some guidance in this regard. The JD-R model argues that physical, psychological, social, and organizational aspects of the job can be classified under two general categories; job demands and job resources. The former consists of job stressors that have shown to be strong predictors of burnout, whereas the latter refers to individual or organizational characteristics that are functional in achieving work goals, as well as reducing the associated negative costs of job demands, and increasing engagement (Bakker & Demerouti, 2007; Bakker et al., 2014). Hence, job resources—such as training—are not only important to help employees deal with their job demands; they are also important in their own right, as they help to increase well-being and performance.

Based on this logic, we presume that organizations that invest more monetary resources in HRD are more aware and committed to providing the high-quality training their employees need in order to achieve their work goals and enrich their well-being, while also stimulating their personal growth, learning, and development (Bakker et al., 2014). Therefore, to the degree that organizations provide high quality training—by investing more monetary resources in HRD—we would expect engagement and commitment to improve, along with subsequent employee retention rates (Rubenstein et al., 2018). Thus, we posit:

Hypothesis 2: Resource investment in HRD will be negatively related to voluntary turnover.

The Moderating Role of Resource Investment in HRD. To our knowledge, the interaction between resource investment in HRD and employee exposure to HRD in predicting employee outcomes has not been studied yet in the scientific literature. However, combining previous arguments, we believe resource investment in HRD can act

as a moderator variable, exerting an amplifying effect on the negative relationship between employee exposure to HRD and voluntary turnover.

As we previously mentioned, research on perceived organizational support and reciprocity suggests that employee exposure to HRD has the potential to decrease voluntary turnover. Remarkably, Sung and Choi (2014) found that the—subjective—perceived benefits of HRD amplify the positive relation between employee exposure to HRD and commitment, when perceived benefits of HRD are high. We believe this pattern can be replicated when using objective measures.

On this account, organizations that provide HRD practices will probably be perceived as more supportive when such practices are seen as more beneficial by the employees. Therefore, we expect that organizations that invest more monetary resources in HRD will be more able to provide the high-quality HRD activities that employees need in order to enhance their performance and well-being, which should result in a higher probability of these activities being perceived as beneficial by the employees (Sung & Choi, 2014). Simultaneously, this will also strengthen the perception that such developmental efforts on part of their organization are not simply perfunctory functions, thus, leading to a greater felt obligation to reciprocate this commitment by staying in the organization and, consequently, reducing voluntary turnover (Glaveli & Karassavidou, 2011). Based on these arguments, we propose:

Hypothesis 3: Resource investment in HRD will moderate the negative relationship between employee exposure to HRD and voluntary turnover, such that the relationship will be stronger when resource investment in HRD is high.

HRD, Voluntary Turnover, and Financial Performance. As reported by previous findings (e.g., Allen et al., 2010; Hancock et al., 2013), voluntary turnover is related to organizational financial performance. As shown in Figure 1, we address this evidence and

further examine the distal benefits of training by examining its effects on organizational financial performance:

Hypothesis 4: The conditional indirect effect from employee exposure to HRD to organizational financial performance, through the mediating role of voluntary turnover, will be stronger when resource investment in HRD is high.

Method

Sample

The hypotheses presented in this study were tested using secondary data collected by a Chilean non-profit organization. Data collection took place between 2017 and 2019. The data was collected from multiple companies belonging to various industries. These organizations voluntarily participate in a free-of-charge and evidence-based program that assesses people management practices. The participating organizations then receive feedback by the non-profit organization. The program is implemented annually and participating firms voluntarily submit their data, which is treated anonymously. Likewise, participating organizations sign an informed consent which states that the data collected will be used anonymously and advance the scientific literature.

The total number of companies with data reported at three different years within the time frame was 72. Company size ranged from 5 to 18192 (mean = 1327, $SD = 3068$). This sample consisted of firms belonging to the three economic sectors; primary, secondary, and tertiary (Dany et al., 2008). The primary sector group ($n = 8$) included firms engaged in production or extraction of natural resources. The secondary sector group ($n = 14$) consisted of firms engaged in the manufacturing and processing of finished goods. The tertiary sector group ($n = 50$) contained firms engaged in service activities.

Measures

Employee Exposure to HRD (T1). Each company reported the total number of training hours based on their records. Based on previous research (Sung & Choi, 2014), employee exposure to HRD was operationalized as the annual number of hours devoted to employee training during the year T1.

Resource Investment in HRD (T1). Each company reported the total cost that the organization incurred in training its employees, on the basis of the financial data of the company. Thus, resource investment in HRD was operationalized as the annual monetary investment in training practices spent by each organization during the year T1.

Voluntary Turnover (T2). In line with previous suggestions (Hausknecht & Trevor, 2011), voluntary turnover was operationalized as the percentage of employees who left the company voluntarily during the year, in relation to the average number of employees in the company during that year. Voluntary turnover was measured within the year T2.

Financial Performance (T3). Financial performance was operationalized as the average of the standardized values of the following annual data reported by each organization: operating income and profit after taxes. Financial performance was assessed at the year T3.

Control variables. A variety of factors can influence firm financial performance. In this study, and consistent with previous research (Choi & Yoon, 2015), we controlled for company size and industry sector. All control variables were measured at T1.

Analysis

We used multiple regression to test our hypotheses. To this end, we first transformed the model's core variables logarithmically, and then utilized Hayes' (2018) PROCESS macro (Model 7) for SPSS to estimate the equations of the model and obtain bias-corrected bootstrapped confidence intervals based on 5000 bootstrap samples for the conditional indirect effect of employee exposure to HRD (T1) on financial performance (T3), through the mediating role of voluntary turnover (T2), at ± 1 SD of resource investment in HRD (T1). All predictors were mean centered.

Results

Table 1 contains the means, standard deviations, and correlations among the variables examined in this study.

Table 1

Means, standard deviations, and correlations of study variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Economic Sector: Primary ^a	0.11	0.32	—						
2. Economic Sector: Secondary ^b	0.19	0.40	-.17	—					
3. Company Size	1327	3068	.26*	.10	—				
4. Employee Exposure to HRD ^c T1	2.84	1.69	.26*	.14	.52**	—			
5. Resource Investment in HRD ^c T1	5.55	3.46	.23	.23*	.40**	.85**	—		
6. Voluntary Turnover ^c T2	0.94	0.40	-.29*	.07	-.08	-.37**	-.34**	—	
7. Financial Performance ^c T3	0.30	1.04	.28*	.17	.59**	.87**	.73**	-.49**	—

Note: Unit of analysis is organization ($N = 72$). T1 = Time 1; T2 = Time 2; T3 = Time 3.

* $p < .05$, ** $p < .01$

^a 1 = primary sector, 0 = other sector. (Correlation Coefficient: Spearman's rho)

^b 1 = secondary sector, 0 = other sector. (Correlation Coefficient: Spearman's rho)

^c log transformed.

To estimate the effects of Economic Sector as a control variable, we created two dummy variables. Dummy 1 compared Primary Sector (coded with 1) with Secondary and

Tertiary Sector (coded with 0); Dummy 2 compared Secondary Sector (coded with 1) with Primary and Tertiary Sector (coded with 0). Hence, for all cases, Tertiary Sector was the reference category. Table 2 presents the results of the hierarchical multiple regression analyses used to test the study's hypotheses.

Table 2
Results of hierarchical multiple regression analyses

Predictors	Dependent Variable			
	Voluntary Turnover T2		Financial Performance T3	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Economic Sector: Primary (cv)†	-.16	(.15)	.27	(.20)
Economic Sector: Secondary (cv)†	.18	(.14)	.22	(.15)
Company Size (cv)	.04	(.02)	.09**	(.03)
Employee Exposure to HRD T1	-.10*	(.05)	.38**	(.05)
Resource Investment in HRD T1	-.04	(.02)	—	—
Employee Exposure to HRD T1 X Resource Investment in HRD T1	-.02*	(.01)	—	—
Voluntary Turnover T2	—	—	-.57**	(.17)
<i>R</i> ²	.26**		.84**	

Note: Unit of analysis is organization ($N = 72$). T1 = Time 1; T2 = Time 2; T3 = Time 3.

* $p < .05$, ** $p < .01$

R^2 = explained variance; B = unstandardized beta; SE = standard error.

cv = control variable. († Economic Sector: Tertiary is the reference).

Hypothesis 1 postulated a negative relationship between employee exposure to HRD and voluntary turnover. The results reported in Table 1 provide preliminary support for this hypothesis since employee exposure to HRD was negatively correlated to voluntary turnover ($r = -.37$, $p < .01$). Additionally, as depicted in Table 2, employee

exposure to HRD was negatively and significantly related to voluntary turnover, even after controlling for the other variables included in the regression model ($B = -.10, p < .05$). Therefore, the results provide support for Hypothesis 1.

On the other hand, even though resource investment in HRD was negatively correlated to voluntary turnover ($r = -.34, p < .01$), the relation was not significant when controlling for the other variables included in the regression ($B = -.04, p = .07$). Thus, Hypothesis 2 was not supported.

Importantly, as indicated by the interaction term on Table 2, the relation between employee exposure to HRD and voluntary turnover was significantly moderated by resource investment in HRD ($B = -.02, p < .05$). This interaction explained 5% of the variance, providing preliminary support for Hypothesis 3.

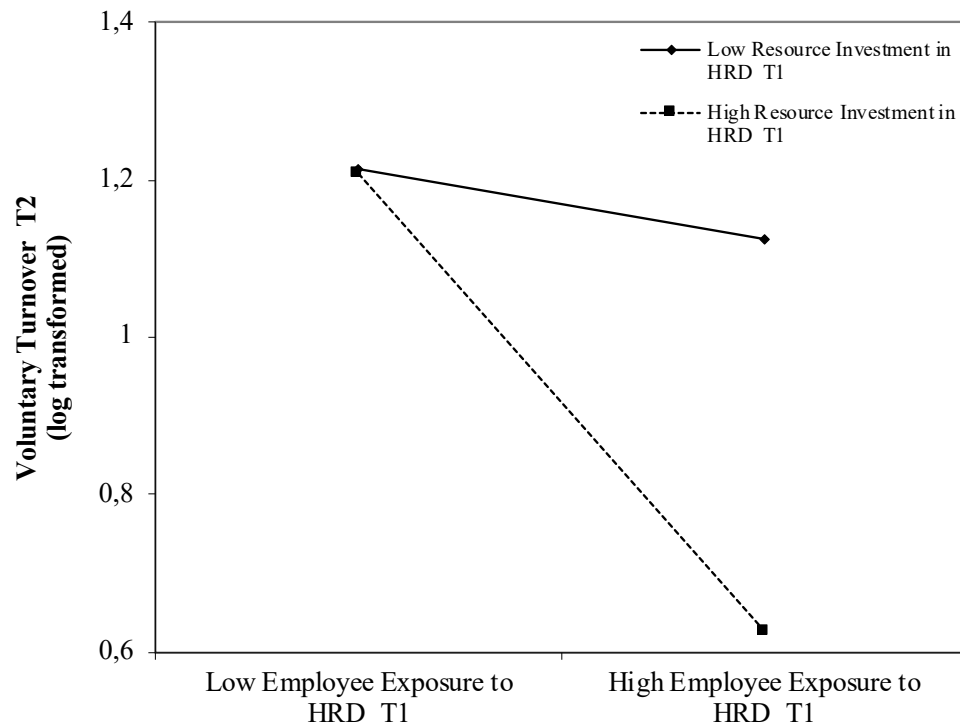


Figure 2. Interaction between Employee Exposure to HRD in Time 1 and Resource Investment in HRD in Time 1 on Voluntary Turnover in Time 2 (log transformed).

Figures 2 and 3 present a graphic description of the interaction between employee exposure to HRD and resource investment in HRD, in predicting voluntary turnover. For Figure 2 we used the log transformed values of voluntary turnover, whereas for Figure 3 the results were back-transformed into the original values for interpretation purposes. As shown in both figures, when resource investment in HRD is low (-1 SD from the mean), there is no significant relation between employee exposure to HRD and voluntary turnover ($p > .05$). However, when resource investment in HRD is high (+1 SD from the mean), the negative relationship between employee exposure to HRD and voluntary turnover is significant ($B = -.17, p < .01$). Altogether, these results provide support for Hypothesis 3 as high resource investment in HRD amplified the negative effect of employee exposure to HRD on voluntary turnover, whereas low resource investment in HRD buffered the relationship between these constructs.

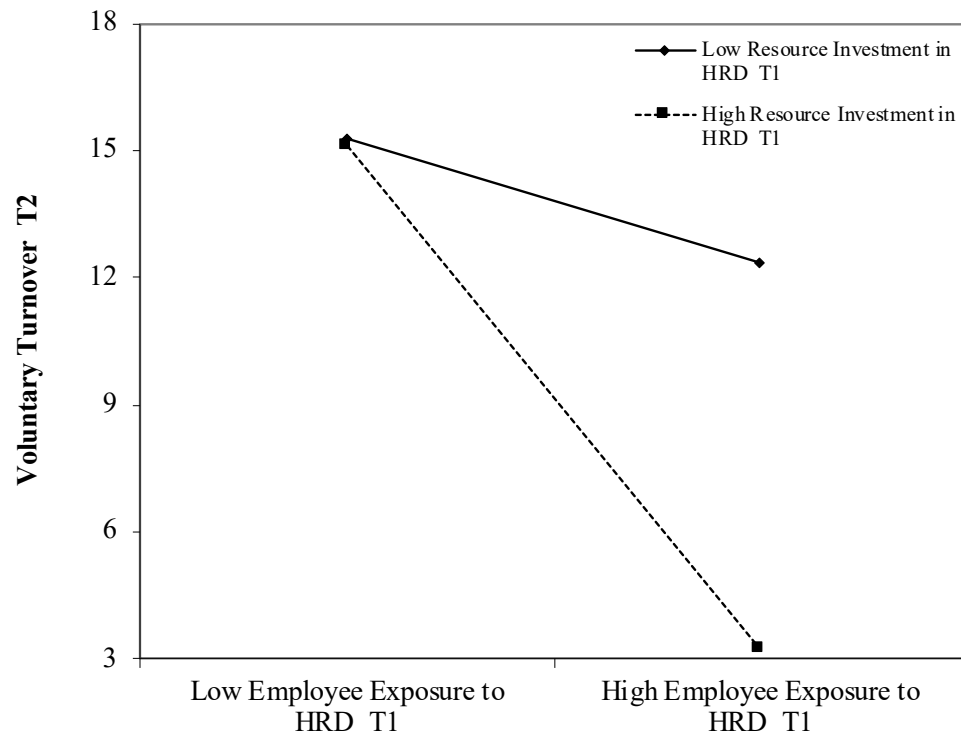


Figure 3. Interaction between Employee Exposure to HRD in Time 1 and Resource Investment in HRD in Time 1 on Voluntary Turnover in Time 2 (back-transformed for interpretation).

Finally, as reported in Table 2, there was a significant negative relation from voluntary turnover to financial performance ($B = -.57, p < .01$), providing preliminary support for Hypothesis 4. Furthermore, the indirect effect of employee exposure to HRD on financial performance through voluntary turnover, increased when organizations were in the high resource investment in HRD condition (+1 SD from the mean) versus the low resource investment in HRD condition (-1 SD from the mean), as the slope of the line—the index of moderated mediation—is positive (index of moderated mediation = .012, 95% MCCI = .001, .028). Therefore, Hypothesis 4 was supported, as the conditional indirect effect from employee exposure to HRD to firm financial performance, through the mediating role of voluntary turnover, showed to be stronger when resource investment in HRD was high. The full moderated mediation model is presented in Figure 4.

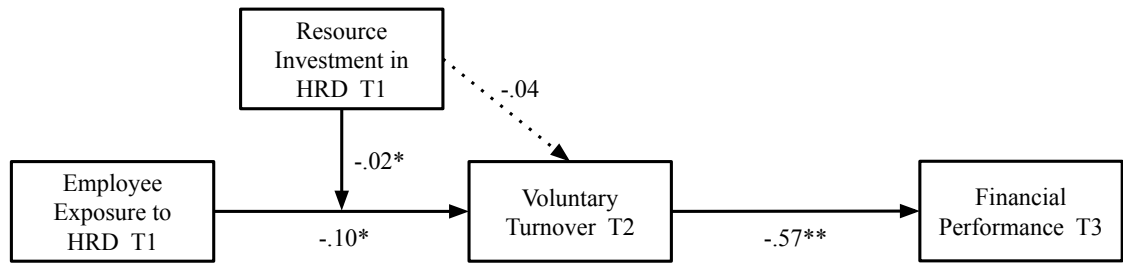


Figure 4. Path analysis model for Resource Investment in HRD and Employee Exposure to HRD in Time 1, Voluntary Turnover in Time 2 and Firm Financial Performance in Time 3.

Note: Significant paths are depicted as solid lines, and non-significant paths are depicted as dotted lines. Control variables are not presented in the diagram. The regression coefficients shown are unstandardized. $*p < .05$, $**p < .01$.

Discussion

The present study provides a rigorous empirical investigation of the HRD–performance relation. Specifically, the main objective of this study was to examine the effect of employee exposure to HRD and resource investment in HRD, on voluntary turnover. Additionally, we aimed to examine the interaction between these two dimensions of HRD in predicting voluntary turnover, as well as the subsequent indirect effect on financial performance. Our design includes two theoretically-driven objective measures of HRD dimensions (Sung & Choi, 2014)—annual hourly exposure to training and monetary investment in training—and two critical objective organizational outcomes—annual voluntary turnover and financial performance. Objective firm-level data collected over a three-year period support most of our hypotheses. In the paragraphs to follow we discuss our results, highlight the implications of this study, and present limitations along with suggestions for future research.

As expected per Hypothesis 1, employee exposure to HRD had a negative effect on voluntary turnover. This finding is consistent with previous research utilizing subjective measures of employee outcomes such as commitment and loyalty (Glaveli & Karassavidou, 2011; Kampkötter & Marggraf, 2015), thus contributing to enrich the existing literature by complementing its findings with objectively measured organizational-level data. Additionally, the finer grained conceptualization of the HRD dimensions in our study allowed us to demonstrate that this relationship took place even when controlling for the effect of resource investment in HRD. Noteworthy, this result suggests that employees value and reciprocate the amount of training received in its own right, even after eliminating the effect of the monetary resources invested in such activities.

Hypothesis 2 postulated a negative relation between resource investment in HRD and voluntary turnover. Even though the preliminary evidence seemed to support this contention—the correlation between these constructs was significant—, we did not observe a significant relation between resource investment in HRD and voluntary turnover

when controlling for the effect of employee exposure to HRD. While this hypothesis was based on previous research, it is important to remember that most studies have focused on a single indicator of HRD; usually, employee exposure to HRD or resource investment in HRD (e.g., Choi & Yoon, 2015). That is, most studies did not account for both of these predictors separately and simultaneously in the same study. In light of the present findings, it is reasonable to think that "the amount of training hours to which employees are exposed to" is more salient, and thus conveys a stronger contribution to employees' perceptions of organizational support, than "the monetary expenditure invested by the firm on training", which is less salient.

Interestingly though, as suggested by Hypothesis 3, our results showed that resource investment in HRD *is*, however, an important boundary condition that can amplify the negative effect of employee exposure to HRD on voluntary turnover—when resource investment is high—, or buffer said relationship—when resource investment is low—. In other words, the effect of employee exposure to HRD on voluntary turnover is not entirely independent of the level of resource investment in HRD, but can actually be benefited or hindered by it. Noteworthy, this is the first study to examine the interactive effect between employee exposure to HRD and resource investment in HRD. Hence, we call for future researchers to differentiate the two main dimensions of HRD (Sung & Choi, 2014) and examine their distinct functional roles, but also to further examine their interaction, as it clearly propounds potentially appealing explanations for the synergistic effects of HRD dimensions on relevant employee and organizational outcomes. In this regard, the organizational support literature, for instance, already provides a lens through which to interpret the amplifying effects of the exposure to HRD x resource investment in HRD interaction. Recent meta-analytic evidence indicates that training is the human resource practice most strongly related to perceived organizational support, as it is considered the job condition most greatly viewed as under discretionary control of the organization (Kurtessis et al., 2017). These results suggest that, for HRD practices to influence perceived organizational support—and activate the norm of reciprocity—, human resources practices must be interpreted as an organizational non-mandatory effort

(Eisenberger et al., 2020). Hence, employees' felt sense of obligation to reciprocate could be particularly strong when the resource investment in training is higher than expected (Pfeffer, 2007). This could be the case for organizations in the high resource investment condition.

Hypothesis 4 further supported the relevance of the proposed model. Our firm-level analysis of three-wave lagged data confirms that employee exposure to HRD indirectly predicts firm financial performance, via its direct effect on voluntary turnover, when resource investment in HRD is high. That is, the indirect effect of employee exposure to HRD on financial performance, through voluntary turnover, is not independent of the level of resource investment in HRD but, rather, depends on it.

Notably, this study presents several strengths that enhance our confidence in the present results. However, the current findings should still be cautiously interpreted, as some limitations must also be considered. For instance, one of the main strengths of this study is the use of objective firm-level data for every variable included in the proposed model. However, given that the unit of analysis were organizations and not employees, and due to the sensible nature of the information assessed as well as the need to collect data over a three-year period; the size of the sample included in this study was relatively limited. As is often the case, a larger sample could have been useful to increase the statistical power of the analyses. Our three-wave longitudinal research design is another important strength of this study. Even though this design has advantages over the cross-sectional research designs predominantly present in the literature, it cannot unequivocally determine the direction of causality. Consequently, we suggest that future studies include *past financial performance* as a control variable—to further analyze the potential reciprocal effects or reverse causality between financial performance and investment in training (Tharenou et al., 2007)—, as well as including other people management practices that may be affecting voluntary turnover and firm financial performance.

On a further note, despite the sole focus of this study on training practices, we did not examine the format or content-related characteristics of these activities. As has been

suggested in previous studies, the effects of training could be contingent on the content or the type of training (Sung & Choi, 2014). Thus, future studies should explore the implications of different types of training, specific content domains, designs or delivery formats of these activities with regard to voluntary turnover and organizational performance. In addition, it may be useful to match individual-level survey answers to firm-level data to deepen our understanding of the mechanisms behind behavioral reactions to these specific HRD practices.

Even after considering the aforementioned limitations, we believe the present study contributes not only to the academic literature but also to several practical implications. Organizations spend valuable resources—such as time and money—on the training and development of their employees. Understanding whether these organizations attain the intended benefits is pivotal. While the intended and distinct benefit of HRD is traditionally the improvement in employee task capabilities and the development of KSAs (Sung & Choi, 2014), additional benefits—such as commitment—could be enhanced through other management practices or strategies (Jiang et al., 2012). Thus, aside from affective outcomes, objective behavioral changes among employees should occur in order to justify further corporate efforts and expenditures for HRD activities. As our results suggest, organizations would benefit from increasing the amount of training hours provided, as employees' react to higher levels of exposure by lowering their levels of voluntary turnover. Whenever possible, organizations should also consider increasing the monetary expenditure invested into such activities, since this has shown to further augment the negative impact of hours of training on voluntary turnover. Our findings join a previous set of evidence that suggests that employees value and reciprocate human capital investment. As noticed here, increasing the amount of hours and monetary resources invested in training can ultimately benefit the firm's bottom line, not only by improving performance, but also by decreasing voluntary turnover and its associated financial costs.

In conclusion, the present study enriches the literature by utilizing objective measures and time-lagged data to build on previous research findings, while also offering

new insights about the conditions under which organizational training practices may impact voluntary turnover and, subsequently, firm financial performance. Notably, separating between *employee exposure to HRD* and *resource investment in HRD*—rather than addressing these constructs as one overall indicator—allowed us to provide researchers and practitioners with clearer insights on the differential impact of these two distinct dimensions of HRD, as well as their interaction. Given that this is the first study to examine the interactive effect between these two dimensions of HRD, we believe this study opens up new and important avenues for future research.

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