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Promoting employee's self-change skills: The role of job characteristics, goal clarity, and learning goals[1]

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Abstract

Personal growth initiative (PGI), i.e. self-change skills, is necessary for employees to adapt to changing environments, but research examining the antecedents of PGI in an organizational context is limited. The present research investigated the antecedents of PGI in the workplace. Using a two-wave questionnaire survey, data were collected from 204 employees, including nurses, medical technicians, and administrative staff, at six healthcare organizations in Japan. The results of hierarchical regression analyses showed that goal clarity and learning goal orientation were positively related to PGI, whereas autonomy, skill variety, and job complexity were not significantly related to PGI. The results also showed that goal clarity positively moderated the effect of skill variety on PGI, yet negatively moderated the effect of job complexity on PGI. This study contributes to the existing literature by demonstrating how personal and situational factors influence employees' self-change skills in the workplace.

[1] There are no conflicts of interest to declare.

Introduction

Self-change is considered to be central to success across many life domains, from school to the workplace (Inzlicht et al., 2014). As personal change is required for employees to develop their overall potential capabilities (Jones & Kriflik, 2005), promoting employee's self-change skills is an important concern of professional and career development (Celik, 2015; Robitschek, 1997; Robitschek & Cook 1999; Tien & Wang, 2016; Wang & Tien, 2011; Wong et al., 2017). Although employee growth at work involves a process of learning how to make progressive self-change (Franz, 2010; Sonenshein et al., 2013), such self-change efforts tend to fail (Polivy & Herman, 2000). Therefore, it is imperative for human resource development research to investigate the antecedents of employees' self-change skills.

In counseling psychology, personal growth initiative (PGI) refers to a skillset for intentional change and development (Robitscheck et al., 2019). PGI is conceptually unique in its focus on the intentional use of skills for self-change or personal growth and is distinguished from other constructs, such as intrinsic tendencies or goal-setting behaviors (Robitschek et al., 2012; Thoen & Robitschek, 2013). Prior studies have found that PGI enhances a wide range of positive outcomes involving well-being, growth, and vocational development and decreases distress and depression (e.g., Hardin et al., 2007; Robitschek & Cook 1999; Shigemoto et al., 2017; Weigold et al., 2013, 2020a, 2020b). Research suggests that PGI is imperative for adapting to a dynamic work environment (Robitschek & Cook, 1999; van Woerkom & Meyers, 2019).

Most prior research has primarily investigated the consequences of PGI, whereas, except for a limited number of studies that investigated the effects of intervention training (e.g., Meyers et al., 2015), self-efficacy (van Woerkom & Meyers, 2019), self-compassion (Umandap and Teh, 2020), and family functioning (e.g., Whittaker & Robitschek, 2001), there has been few research on the predictors of PGI in the workplace. Moreover, PGI has been studied in the fields of clinical psychology (Shigemoto et al., 2017), religion (Ivtzan et al.,

2013), and higher education (Chang & Yang, 2016), but only limited research has explored PGI in an organizational context (e.g., Robitschek & Cook, 1999; van Woerkom & Meyers, 2019). In particular, exploring the antecedents of PGI is an important research topic for organizations in radically changing environments.

To fill this gap in the literature, the present study was designed to investigate the antecedents of PGI in an organizational context, especially in the healthcare industry, because healthcare professionals have to adjust their knowledge, skills, and practices in response to radical changes (Chreim et al., 2012; Colquhoun et al., 2017; Lown et al., 2019; McBride & Mustchin, 2013). The research model for the present study was based on self-determination theory (Deci et al., 2017), goal-setting theory (Locke & Latham, 2002), and the job characteristics model (Hackman & Oldham, 1976; Oladam & Hackman, 2010). Drawing on these theories, this study examined the effects of job characteristics, goal clarity, and learning goal orientation on PGI. Specifically, based on goal-setting theory, the current study focused on the moderating effect of goal clarity and learning goal orientation on the relationships between job characteristics and PGI (Locke & Latham, 2002).

The main contribution to the literature is to determine how PGI is promoted by personal and situational factors in the workplace, a topic that has not been sufficiently investigated in previous studies. Specifically, this study identified the importance of learning goal orientation and goal clarity as facilitators of PGI, as well as the moderating role of goal clarity in influencing the effects of job characteristics on PGI.

The rest of this paper is organized as follows. First, the literature on PGI, job characteristics, goal clarity, and learning goal orientation is reviewed for proposing hypotheses. Next, the quantitative methodology is described, and the results are presented. Finally, the results are theoretically and practically discussed.

Theoretical background and hypothesis

Personal growth initiative

As mentioned earlier, PGI is defined as active and intentional involvement in the self-change process, assuming that individuals can self-direct their growth processes (Robitschek, 2003). More recently, PGI was also conceptualized as a developed set of skills, including cognitive and behavioral components for self-improvement (Robitschek et al., 2012). The original nine-item unidimensional PGI scale was developed by Robitschek (1998), and she and her colleagues further extended the original scale to a 16-item four-dimensional scale involving 'readiness for change', 'planfulness', 'using resources', and 'intentional behavior' (Robitschek et al., 2012). That is, individuals with high PGI scores prepare for changing specific things about themselves, make realistic plans for the change, ask for help when they try to change, and look for opportunities to grow (Robitschek et al., 2012).

PGI has unique characteristics that emphasize intentional self-change and a set of skills for personal growth (Robitschek et al., 2012). Notably, PGI is distinguished from other constructs, such as GRIT, i.e. perseverance and passion for long-term goals (Duckworth et al., 2007), or proactive personality, that is, a stable disposition to take personal initiative in a broad range of activities and situations (Seibert et al., 2001), which do not include intentional use of skills for personal growth (Thoen & Robitschek, 2013). Given its characteristics, PGI constitutes a necessary component in a self-determination process in which autonomous motivation plays a significant role (Deci et al., 2017). Importantly, Robitschek, an advocate of the concept, has regarded PGI as an important capacity for vocational transition (Robitschek, 1997; Robitschek & Cook, 1999).

Previous research has reported that PGI has a positive impact on psychological, social, and emotional well-being (Robitschek & Keyes, 2009); positive affect (Hardin et al., 2007); environmental exploration; post-traumatic growth (Shigemoto et al., 2017); vocational identity (Robitschek & Cook, 1999); and engagement in higher education (Chang & Yang,

2016). It was also found that PGI has a negative influence on social avoidance and distress (Hardin et al., 2007), social sensitivity (Yang & Chang, 2014), and depression (Shigemoto et al., 2017). The results suggest that PGI is imperative for individuals to adapt to the work environment.

However, previous research has investigated the antecedents of PGI mainly in clinical and counseling psychology fields (Celik, 2015; Meyers et al., 2015; Umandap & Teh, 2020; Wang & Tien, 2011; Whittaker & Robitschek, 2001). To clarify the conditions for increasing employees' PGI, it is necessary to investigate the predictors of PGI in the workplace. Drawing on self-determination theory (Deci et al., 2017), GST (Locke & Latham, 2002), and the job characteristics model (Hackman & Oldham, 1976; Oladam & Hackman, 2010), the present research examined the role of job characteristics, goal clarity, and learning goal orientation in increasing PGI.

In addition, self-change skills are deemed imperative especially for workers in healthcare organizations, which are required to radically change provider-driven systems to patient-centered ones (Chreim et al., 2012; Lown et al., 2019). To adopt to the rapidly changing environment, healthcare professionals need to transform their knowledge and work practices (Colquhoun et al., 2017; McBride & Mustchin, 2013). Therefore, the present study explored how PGI is determined by personal and situational factors in the context of healthcare industries.

Job characteristics

This study investigated the effect of job characteristics on PGI, based on self-determination theory, which postulates that an organizational work context, with aspects such as challenging assignments and support from supervisors, may affect an individual's autonomous motivation (Deci et al., 2017). This study is also based on the job characteristics model (Hackman & Oldham, 1976), in which job characteristics such as skill variety, task significance, task

identity, autonomy, and feedback may influence employees' psychological state. Notably, using a meta-analytic approach, Christian et al. (2011) reported that such job characteristics enhanced work engagement.

Among the dimensions of job characteristics, this study focused on autonomy, skill variety, and job complexity as antecedents of PGI because these aspects have been frequently studied in prior research (e.g., Judge et al., 2000) and because jobs with these characteristics may require employees to change their work processes, skills, and knowledge. For example, leadership development research suggests that challenging job experiences may provide employees with opportunities to acquire new skills or new ways of working (Davis & Easterby-Smith, 1984; De Pater et al., 2009). On the other hand, dimensions such as task identity and task significance were not included, as these are not considered to be direct facilitators for self-change.

Morgeson and Humphrey (2006) classified autonomy into decision-making autonomy, work scheduling autonomy, and work methods autonomy. Of the three types of autonomy, this study focused on decision-making autonomy, as it is believed that the other two are ultimately out-powered by "decision-making." Therefore, this study defined autonomy as the extent to which a job allows employees to make decisions at work. Furthermore, job complexity is defined as the extent to which the tasks are complex and difficult to perform, whereas skill variety refers to the extent to which a job requires employees to use various kinds of skills to perform the work (Morgeson & Humphrey, 2006).

Jobs with high level of autonomy, complexity, and variety may induce employees to change their skills, behaviors, and work processes because these jobs force employees to question the effectiveness of existing methods for implementing tasks and to improve themselves when engaging in these jobs (Davies & Easterby-Smith, 1984). Specifically, job autonomy may motivate employees to solve problems by themselves, whereas job complexity may prompt employees to improve their conceptual abilities to understand situations. Skill

variety may stimulate employees to acquire various skills to perform their jobs. Therefore, the following hypotheses were generated:

H1. Autonomy is positively related to PGI.

H2. Job complexity is positively related to PGI.

H3. Skill variety is positive related to PGI.

Goal clarity and learning goal orientation

According to goal-setting theory proposed by Locke and Latham (2002), goals influence individuals' performance by directing their attention and stimulating efforts toward specific activities, and by facilitating the development of knowledge and skills needed to implement tasks. Goal-setting theory also postulates that clear and difficult goals promote performance. In particular, role ambiguity is the opposite of goal clarity (Cailler, 2016). It is believed that goal clarity reduces ambiguity about what should be achieved and directs individuals' actions (Anderson & Stritch, 2016; Locke & Latham, 2002).

Previous research found that goal clarity had a positive impact on performance (Anderson & Stritch, 2016), job satisfaction (Sawyer, 1992), self-efficacy, and extra-role behaviors (Cailler, 2016). Furthermore, goal clarity was found to lower turnover intentions (Cailler, 2016; Jung, 2012). Considering the function of goals in directing attention and efforts and in leading to the discovery of knowledge and skills (Locke & Latham, 2002), employees having clear goals could gain skills for self-change. Therefore, the following hypothesis was suggested:

H4. Goal clarity is positively related to PGI.

Goal clarity is the clarity or specificity of a goal assigned by supervisors or an organization, whereas personal goals should also affect PGI. Importantly, Dweck's goal orientation theory (Dweck, 1986; Dweck & Leggett, 1988) and Locke and Latham's (2002)

goal-setting theory assert that learning goal rather than performance goal may lead individuals to undertake challenges. Learning goal refers to a goal to increase one's competence, whereas performance goal refers to a goal involving garnering positive judgments from others (Dweck, 1986). It is important to note that learning goal orientation has been found to promote individuals' self-regulation such as learning strategies, self-efficacy, intrinsic motivation, training motivation, and proactive behaviors (Chakrabartia et al., 2014; Grant & Dweck, 2003; Joo et al., 2013; Maden, 2015; Potosky, 2010; Setti et al., 2015). Raemdonck et al. (2014) reported that self-directed learning orientation promoted workplace learning behaviors. As PGI can be recognized as a type of self-regulated learning strategy, the following hypothesis was proposed:

H5. Learning goal orientation is positively related to PGI.

Considering the job characteristics model (Hackman & Oldham, 1976), assuming that an employee's need for growth moderates the effect of job characteristics on their psychological state, it is reasonable to predict that learning goal orientation may be a moderator of the relationship between job characteristics and PGI. In accordance with this model, Dragoni et al. (2009) found that employees with stronger learning orientations tended to achieve higher levels of competence when they were engaged in growth assignments. Based on the model and evidence, it is predicted that employees with a high learning goal orientation are likely to perceive tasks with autonomy, skill variety, and complexity as opportunities for growth and participate in the self-change process. Thus, the following hypotheses were generated:

H6a. Learning goal orientation positively moderates the effect of autonomy on PGI.

H6b. Learning goal orientation positively moderates the effect of job complexity on PGI.

H6c. Learning goal orientation positively moderates the effect of skill variety on PGI.

H6d. Learning goal orientation positively moderates the effect of goal clarity on PGI.

Given the directive function of goals, as per Locke and Latham's goal-setting theory (2002), job characteristics such as autonomy, skill variety, and complexity may motivate employees to involve themselves in self-change processes when combined with clear goals, which direct employees to what they should do when faced with difficult jobs. Goal-setting theory (Locke & Latham, 2002) suggests that the effect of specific difficult goals on performance depends on task complexity as individuals need to acquire higher level skills to do the task. Thus, employees who have clear goals in engaging in complex tasks are likely to be motivated to change their skills. This prediction can also be applied to employees who have clear goals in engaging in job with a variety of skills and autonomy. Therefore, the following hypotheses can be formulated.

H7a. Goal clarity positively moderates the effect of autonomy on PGI.

H7b. Goal clarity positively moderates the effect of job complexity on PGI.

H7c. Goal clarity positively moderates the effect of skill variety on PGI.

Based on the hypotheses presented herein, this study proposed the conceptual model shown in Figure 1.

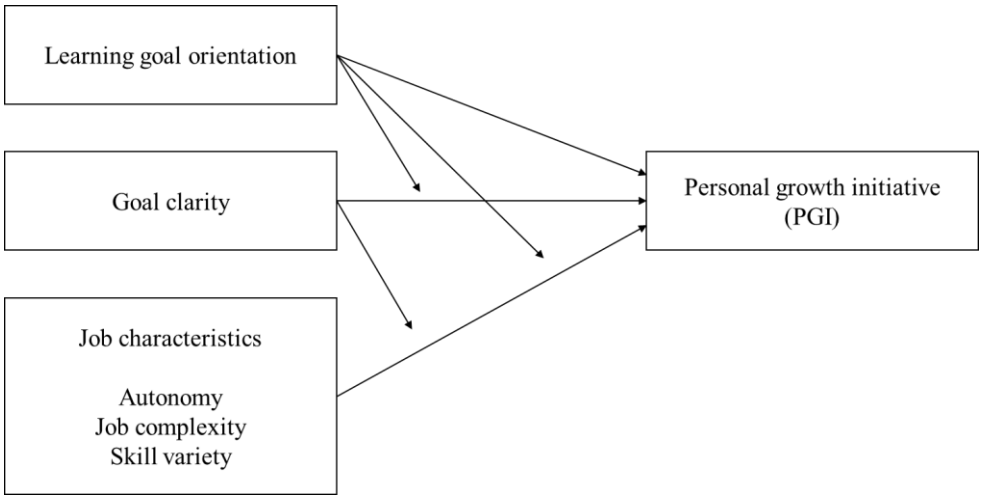

Figure 1 Research model

Methodology

Data collection and procedures

A two-wave questionnaire survey was conducted with employees, including nurses, medical technicians, and administrative staff, at six healthcare organizations that participated in a healthcare association, located in three adjacent prefectures in Japan. In the first survey, participants were asked to answer questions related to their job characteristics, goal clarity, and learning goal orientation. In the second survey, which was conducted 1 month after the first survey, participants were asked to answer questions related to their PGI. Of the 288 employees who were sent questionnaires, 204 responded to both surveys, yielding a response rate of 70.8%.

Organization type consists of clinics (9.3%), acute hospitals (41.2%), chronic hospitals (25.0%), nursing facilities (2.5%), home-visit nursing stations (2.0%), and the headquarter of the association (21.1%). The number of beds of the organizations are as follows: 0 (24.5%), 1–100 (4.4%), 100–299 (34.8%), 300–499 (32.4%), and 500 or more (3.9%). The sample included 63.7% females, and the age distribution was as follows: younger than 30 years (1.0%), 30–49 years (20.1%), 40–49 years (41.2%), 50–59 years (35.3%), and 60 and older (2.5%). The sample included administrative staff (36.3%), nurses (33.8%) and other medical specialists (29.9%). Respondents were employed in the following positions: staff level (2.5%), junior managers (9.8%), middle managers (52.0%), deputy general managers (13.6%), and general managers (22.1%).

Measures

Participants responded to all items on a five-point Likert scale with anchors from 1 (strongly disagree) to 5 (strongly agree). As the questionnaire was in Japanese, back translation was conducted to validate the translation (Cascio, 2012). The author translated the measures from English to Japanese. Then, a bilingual language professional translated them back to English.

Finally, the Japanese version was compared with the English version, and discrepancies were resolved.

Autonomy (Time 1). Autonomy was assessed using the three-item scale created by Morgeson and Humphrey (2006). The items are "The job provides me with significant autonomy in making decisions," "The job gives me a chance to use my personal initiative or judgment in carrying out the work," and "The job allows me to make a lot of decisions on my own."

Skill variety (Time 1). Skill variety was assessed using the four-item scale created by Morgeson and Humphrey (2006). Sample items include "The job involves performing a variety of tasks," "The job involves a great deal of task variety," and "The job involves doing a number of different things."

Job complexity (Time 1). Job complexity was assessed using the four-item scale created by Morgeson and Humphrey (2006). A sample item is "The tasks involved in the job are simple and uncomplicated (reverse scored)," "The job requires that I only do one task or activity at a time (reverse scored)," and "The job involves performing relatively simple tasks (reverse scored)."

Goal clarity (Time 1). Goal clarity was assessed using the five-item scale created by Sawyer (1992). Sample items include "The goals and objectives for my job are clear," "My duties and responsibilities are clear," and "The expected results of my work are clear."

Learning goal orientation (Time 1). Learning goal orientation was assessed using the six-item scale created by Vandewalle (1997). Sample items include "I often look for opportunities to develop new skills and knowledge," "I am willing to select a challenging work assignment that I can learn a lot from," and "I prefer to work in situations that require a high level of ability and talent."

PGI (Time 2). PGI was assessed using the four-dimensional 16-item scale created by Robitschek et al. (2012). Sample items include "I figure out what I need to change about

myself (readiness for change),” “I know how to make a realistic plan in order to change myself (planfulness),” “I ask for help when I try to change myself (using resources),” and “I take every opportunity to grow as it comes up (intentional behavior).”

Control variables. The following control variables were included in the model: gender (1 = female, 2 = male), job type (1 = administrative staff, 2 = medical staff (nurses and other medical specialists)), age (1 = 20s, 2 = 30s, 3 = 40s, 4 = 50s, and 5 =60s), position (1 = staff, 2 = junior managers, 3 = middle managers, 4 = deputy general managers, and 5 = general manager), and size of organization (number of beds: 1 = 0, 2 = 1–100; 3 = 100–299; 3 = 300–499; 5 = 500 or more). Job type was controlled because there may be differences in their skills between administrative and medical staff, which includes nurses and other medical specialists.

Results

Validation of measurements

To evaluate the reliability of the constructs, Cronbach’s alpha and composite reliability (CR) were calculated. Table 2 shows that Cronbach’s alphas for autonomy, skill variety, job complexity, goal clarity, learning goal orientation, and PGI were 0.82, 0.93, 0.79, 0.83, 0.84, and 0.79, respectively. The CR values for autonomy, skill variety, job complexity, goal clarity, learning goal orientation, and PGI were 0.83, 0.93, 0.82, 0.83, 0.85, and 0.82, respectively. All the scores met the recommended cutoff of 0.70 (Bacon et al., 1995; Nunnally, 1978).

To examine the discriminant and convergent validity of the constructs, several analyses were conducted. First, confirmatory factor analysis (CFA) including six latent constructs (autonomy, skill variety, job complexity, goal clarity, learning goal orientation, and PGI) and 26 items was performed. With regard to PGI, the average scores of the items within each dimension (parcel) were used as indicators of latent variables, following the recommendation of Coffman and MacCaullum (2005). The results showed that the fit indices

were: χ^2 = 390.72 (*df* = 284, *p* < .001), χ^2/df = 1.38, CFI = 0.92, TLI = 0.91, SRMR = 0.062, and RMSEA = 0.043. Considering the cutoff criteria suggested by prior research (Hu & Bentler, 1999; Lane et al., 2006), the scores were acceptable. Second, the discriminant validity of the six-factor model was examined by comparing the model with alternative models. Table 1 shows that the fit indices of the hypothesized six-factor model were much better than those of alternative models. Third, to evaluate convergent validity, the average variance extracted (AVE) was calculated. The AVEs for autonomy, skill variety, job complexity, goal clarity, learning goal orientation, and PGI were 0.61, 0.77, 0.55, 0.50, 0.50, and 0.54, respectively. Considering the cutoff value of 0.50 (Fornell & Larcker, 1981), the scores are acceptable. These results support the discriminant and convergent validity of the model constructs.

Table 1 Results of confirmatory factor analyses

Models	χ^2	*df*	$\Delta\chi^2$	CFI	TLI	SRMR	RMSEA
6-factor model	390.72	284		0.92	0.91	0.062	0.043
5-factor model (varieity + complexitiy)	551.05	289	160.33 ***	0.80	0.78	0.089	0.067
5-factor model (complexity + autonomy)	516.83	289	126.11 ***	0.83	0.81	0.098	0.062
5-factor model (variety + automomy)	523.92	289	133.20 ***	0.83	0.81	0.099	0.063
5-factor model (goal clarity + complexity)	579.89	289	189.17 ***	0.79	0.76	0.108	0.070
5-factor model (goal clarity + variety)	577.32	289	186.60 ***	0.79	0.76	0.111	0.070
5-factor model (goal clarity + autonomy)	488.82	289	98.10 ***	0.85	0.83	0.081	0.058
5-factor model (LGO + PGI)	510.33	289	119.61 ***	0.84	0.82	0.076	0.061
1-factor model	1261.36	299	870.64 ***	0.29	0.23	0.151	0.126

Note: LGO = learning goal orientation. PGI = personal growth initiative. 1-factor model: all variables were loaded on a single factor. ***p < .001.

Table 2 Descriptive statistics and correlations

Variable	*Mean*	*SD*	*CR*	*AVE*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	
1 Gender	1.36	0.48	-	-	-										
2 Age	3.18	0.81	-	-	-0.19 **	-									
3 Position	3.43	1.02			0.04	0.12									
4 Job type	1.63	0.48	-	-	-0.32 ***	0.09	-0.18 **								
5 Size of organization	2.87	1.22			-0.02	-0.07	0.13	0.14 *							
6 Autonomy (T1)	3.67	0.68	0.83	0.61	0.01	0.02	0.33 ***	0.19 **	0.09	(.82)					
7 Skill variety (T1)	4.18	0.65	0.93	0.77	0.01	-0.04	0.15 *	0.05	0.07	0.23 **	(.93)				
8 Job complexity (T1)	3.95	0.73	0.82	0.55	-0.06	-0.03	0.08	0.13	0.12	0.23 **	0.34 ***	(.79)			
9 Goal clarity (T1)	3.80	0.54	0.83	0.50	0.05	0.07	0.22 **	0.08	0.06	0.36 ***	0.22 **	0.03	(.83)		
10 LGO (T1)	3.31	0.61	0.85	0.50	0.15 *	-0.03	0.17 *	0.10	-0.01	0.28 ***	0.15 *	0.16 *	0.17 *	(.84)	
11 PGI (T2)	3.23	0.48	0.82	0.54	-0.07	0.04	0.04 *	0.18 *	-0.04	0.15 *	0.19 **	0.17 *	0.29 ***	0.41 ***	(.79)

Note: n = 204. * p < .05; ** p < .01; *** p < .001.Reliabilities are reported along the diagonal. CR = composite reliability. AVE = averaged variance extracted. LGO = learning goal orientation. PGI = personal growth initiative. Gender: 1 = female, 2 = male. Age: 1 = 20s, 2 = 30s, 3 = 40s, 4 = 50s, 5 = 60 and older. Position: 1 = staff, 2 = junior managers, 3 = middle managers, 4 = deputy general managers, and 5 = general manager. 1 = Job type: 1 = administrative staff, 2 = medical staff. Size of organization (number of beds): 1 = 0, 2 = 1-100; 3 = 100–299; 3 = 300–499; 5 = 500 or more.

Hypotheses testing

Table 2 shows the descriptive statistics, Cronbach's alphas, composite reliabilities, average variance extracted, and correlations of study variables. Table 3 presents the results of the hierarchical regression analysis with PGI as the dependent variable. The results for model 3 indicated that autonomy, job complexity, and skill variety were not significantly related to PGI (b = –0.070, *ns*; b = 0.064, *ns*; b = 0.057, *ns*;), suggesting that Hypotheses 1–3 were not supported. However, goal clarity and learning goal orientation were positively related to PGI (b = 0.206, p < 0.01; b = 0.372, p < 0.001). Therefore, Hypotheses 4 and 5 were supported. Table 3 also shows that learning goal orientation did not moderate the effects of autonomy, job complexity, skill variety, and goal clarity on PGI (b = 0.054, *ns*; b = –0.044, ns; b = –0.110, *ns*; b = 0.052, *ns*). Therefore, Hypotheses 6a–6d were not supported. It was also shown that goal clarity negatively moderates the effect of job complexity on PGI (b = -0.182, p < 0.05), and that goal clarity positively moderates the effect of skill variety on PGI (b = 0.182, p < 0.05). Figure 2 indicates that the effect of job complexity on PGI was weaker when goal clarity was high (vs. low), while Figure 3 indicate that the effect of skill variety on PGI was stronger when goal clarity was high (vs. low). On the other hand, goal clarity did not significantly moderate the effect of autonomy on PGI (b = 0.065, *ns*). Therefore, Hypothesis

7c was supported, while Hypotheses 7a and 7b were not supported.

Table 3 Results of hierarchical regression analyses

	DV = Personal growth initiative (PGI)		
	Model 1	*Model 2*	*Model 3*
Step 1: Control variables			
Gender	-0.013	-0.107	-0.102
Age	0.004	0.014	0.031
Job type	0.201	0.087	0.083
Position	0.083	-0.047	-0.044
Size of organization	-0.083	-0.074	-0.044
Step 2: Main effect terms			
Autonomy		-0.078	-0.070
Job complexity		0.088	0.064
Skill variety		0.079	0.057
Goal clarity		0.245 ***	0.206 **
LGO		0.378 ***	0.372 ***
Step3: Interaction terms			
LGO × Autonomy			0.054
LGO × Job complexity			-0.044
LGO × Skill variety			-0.110
LGO × Goal clarity			0.052
Goal clarity × Autonomy			0.065
Goal clarity × Job complexity			-0.182 *
Goal clarity × Skill variety			0.182 *
R^2	0.043	0.270	0.321
R^2 *(Adj)*	0.019	0.232	0.259
ΔR^2		0.227	0.050
ΔF		11.993 ***	1.971

Note: n = 204. LGO = learning goal orientation. Coefficients are standardized. Interaction terms are the products of mean-centered values. VIFs are below 1.808. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

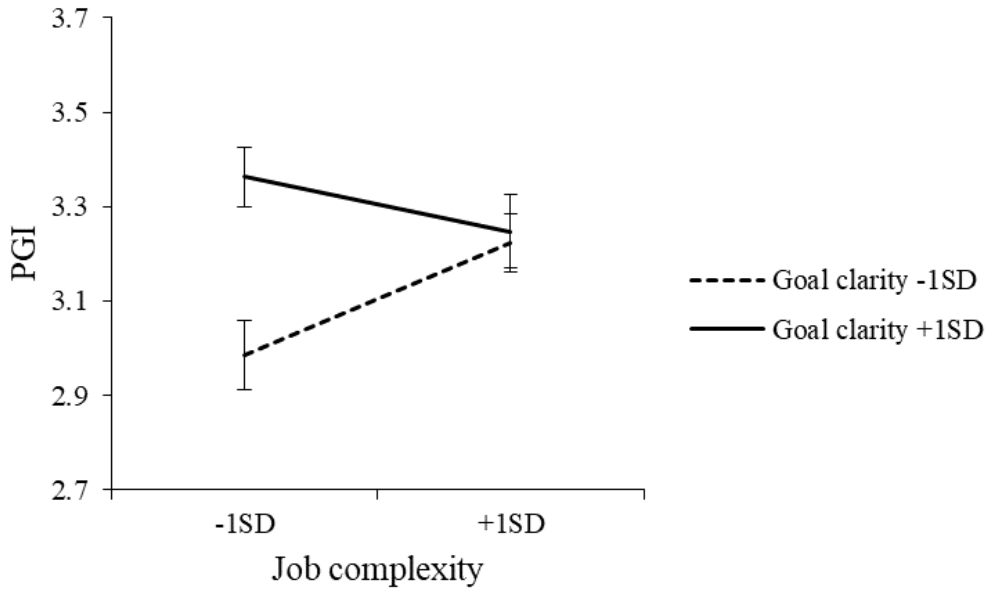

Figure 2 The moderating effect of goal clarity on the relationship between job complexity and PGI.

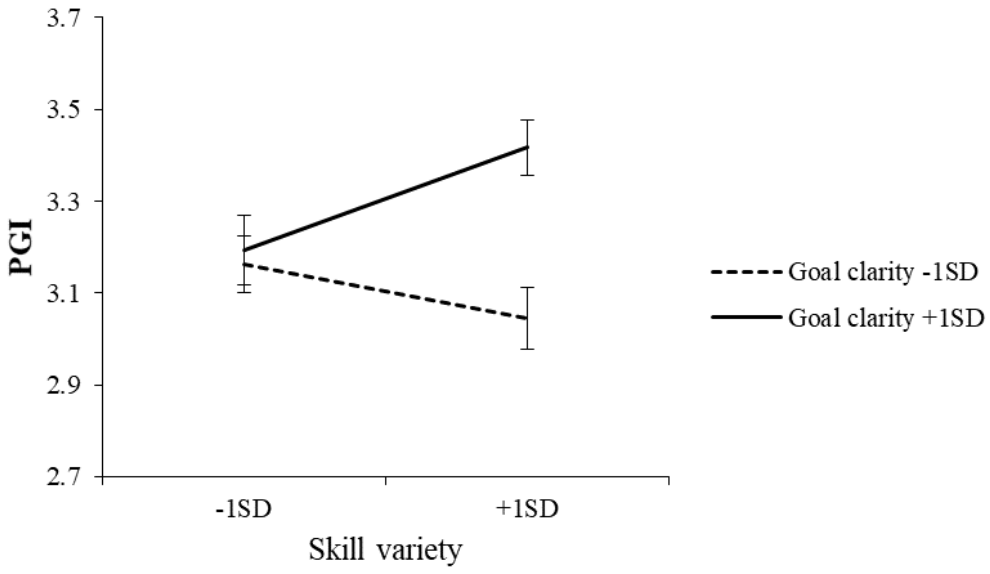

Figure 3 The moderating effect of goal clarity on the relationship between skill variety and PGI.

Discussion

Self-change is critical not only for employees aiming to fulfill their potential (Jones & Kriflik, 2005), but also for their professional and career development (Celik, 2015; Robitschek & Cook 1999; Wang & Tien, 2011; Wong et al., 2017). To explore the self-change process, the present research focused on PGI (Robitscheck et al., 2012, 2019), which has received limited attention in an organizational context. Based on self-determination theory (Deci et al., 2017), goal-setting theory (Locke & Latham, 2002), and the job characteristics model (Hackman & Oldham, 1976; Oladam & Hackman, 2010), the present research investigated the effects of job characteristics, goal clarity, and learning goal orientation on PGI using survey data of healthcare organizations. The findings indicate that goal clarity and learning goal orientation positively influenced PGI. Notably, goal clarity had a significant moderating effect on how job complexity and skill variety affect PGI.

Theoretical implications

The present research has four major theoretical implications. First, it was found that PGI was enhanced by goal clarity. These results suggest that self-change processes can be explained in terms of goal-setting theory, indicating that goals have directive functions (Locke & Latham, 2002). Specifically, clear goals may direct employees' attention, efforts, and actions toward discovering the knowledge and skills needed to perform tasks (Anderson & Stritch, 2016; Locke & Latham, 2002). This directive function of goals may induce employees to be engaged in the self-change process.

Second, the findings indicate that PGI was positively influenced by learning goal orientation. The results correspond to Dweck's goal orientation theory (Dweck, 1986; Dweck & Leggett, 1988) and Locke and Lathams's (2002), which postulate that learning goal orientation leads individuals to undertake challenges; Locke & Latham, 2002). That is, learning goal orientation affects PGI insofar as such goals promote self-change processes

through self-regulated learning strategies (Grant & Dweck, 2003; Joo et al., 2013). Indeed, employees with high learning goals are likely to gain new knowledge and skills in a self-regulated manner, which leads to altered work processes. It should be noted that learning goals are personal goals, whereas goal clarity is specific to assigned goals, suggesting that both personal and assigned goals facilitate the self-change process of employees working for healthcare organizations, which are required to adapt to radically changing environments (Chreim et al., 2012; Lown et al., 2019).

Third, the results reveal that goal clarity positively moderates the effect of skill variety on PGI, suggesting that employees who are engaged in jobs that require a variety of skills are motivated to initiate changes at work when the goal is clear. The findings indicate that clear goal directs employees to acquire necessary skills to achieve their goals, as suggested by goal setting theory (Locke & Latham, 2002). In contrast, goal clarity negatively moderates the effect of job complexity on PGI, indicating that employees who are engaged in complex jobs are reluctant to initiate changes at work when the goal is clear. This can be interpreted as complex jobs with clear goals may confuse or divert employees' focus on self-change, and lead them to cognitive discrepancy or interruption of ongoing action (Mandler, 1989). For example, many employees in healthcare organizations should have clear goals on patient-centered services, but they may encounter difficulty to change their practices when the job is complex. On the other hand, it may be easier for employees to deal with skill variety because they can identify skills that should be acquired or changed. This study contributed to the literature by demonstrating that a combination of goal clarity and job characteristics influences PGI.

Finally, contrary to the original hypotheses, job characteristics such as autonomy, skill variety, and job complexity had no significant direct effects on PGI. This result indicates that PGI is not driven by the difficulty of tasks. Importantly, there was no moderating effect of learning goal orientation on the effects of autonomy, skill variety, job complexity, and goal

clarity on PGI. These results do not correspond to those of the job characteristics model (Hackman & Oldham, 1976; Oladam & Hackman, 2010) or the findings of Dragoni et al. (2009), which indicate that growth needs or learning goals moderate the relationship between challenging job characteristics and psychological state or learning. Instead, the findings indicate that goal clarity and learning goal orientation independently enhance PGI. This study contributes to current knowledge by showing that personal and assigned goals independently promote individuals' involvement in the self-change process.

Practical implications

The findings of the present research carry several practical implications. First, to facilitate employee self-change, organizations should provide employees with clear and specific goals. Such goals enable employees to understand what they need to change in their work processes. The use of well-defined and measurable key performance indicators (KPIs) in a management-by-objectives (MBO) system may provide employees with specific and clear goals (Aksoy & Bayazit, 2014).

Second, managers who are interested in promoting employee self-change need to enhance learning goal orientation. As Dragoni (2005) argued, leadership may influence subordinates' stated learning goal orientation through developing an environment for learning. Organizations can also use the learning goal orientation training developed by Noordzij et al. (2013) to encourage employees to have learning goals in human resource development.

Third, to motivate employees to change themselves, they should be assigned jobs with clear goals that require a variety of skills. Developing inventories of the skills required for each job may help employees to identify which skills they should develop. For promoting professional development, organizations can promote employee learning by inventorying their skills, which should be combined with skill inventories for the job (Clardy, 2008).

Fourth, organizations need to support employees who are engaged in complex jobs

with clear goals, because such confusing situations often demotivate them to change their practices. It is necessary for managers to help subordinates analyze and identify skills and practices that need to be changed.

Finally, it should be noted that challenging jobs, which involve complexity, autonomy, and skill variety, must be imperative for developing professionals, while “jobs” alone are insufficient to create influence on employees’ self-change process. To enhance PGI, elements of learning goal orientation should be involved when challenging jobs are assigned.

Limitations and future research

There were several limitations to the present research. First, goal clarity was found not to moderate the effect of autonomy on PGI; however, the results were not sufficiently explained. It is necessary to investigate the mechanisms underlying how job characteristics are combined with goal clarity to influence PGI in future studies.

Second, the sample of this study was drawn from employees working for healthcare organizations in Japan. Thus, there is a possibility that the national culture and the characteristics of the healthcare industry and might have affected the results. Future research needs to analyze the model using survey data from different industries and countries to enable generalization of the findings.

Third, the present research found that learning goal orientation positively influenced PGI, but other types of goals were not included in the model. It may be interesting to examine the effects of a performance-prove goal orientation and a performance-avoid goal orientation (Vandewalle, 1997) on PGI. It is predicted that a performance-avoid goal orientation may negatively influence PGI.

Finally, the units of analysis of this study were individuals, and group-level factors were not examined. As learning goal orientation was shown to enhance PGI, team-level learning goal orientation (e.g., Gong et al., 2013) should be included as an independent

variable in future research.

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