

**Impact of Proactive Personality in predicting Training Outcomes**

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### Abstract

While past researches have extensively focused in the field of training transfer, there is little empirical work done examining the influence of personality. The purpose of the paper is to operationalize the personality construct proposed by Baldwin and Ford's (1988) transfer of training model. Specifically, the paper examines the role of participants' age in moderating the relationship between proactive personality and motivation to transfer and training transfer. The study used responses from 233 employees working in a large paint manufacturing company based in India. Data was analyzed using OLS regression followed by multi-group mediation analysis using bootstrapping. The discussion provides insights into training initiatives within the organization and recommendations for practice.

*Key words:* proactive personality, motivation to transfer, training transfer

## **Impact of Proactive Personality in predicting Training Outcomes**

### **Introduction**

Organizations are increasingly becoming aware of the need to invest in employee competence development through training. Several studies have highlighted the importance of training and its benefits to individuals and organizations at large (Maurer and Tarulli, 1994; Maurer, Weiss, and Barbeite, 2003). According to American Society of Training and Development (2012), US firms spent approximately \$156.2 billion per employee in 2011 to enhance their employees' skills and competencies. The number of training opportunities available is increasing dramatically with various organizations taking advantage of open source learning, adaptive learning methods and web based learning which individuals can complete at their own pace. These self-guided courses of voluntary nature are emphasizing greater need for initiative, responsibility and ownership in learning compared to traditional training techniques that are obligatory in nature (Major, Turner and Fletcher, 2006). Given the range of choices available employees face a greater challenge to implement what they learn to enhance job performance.

Nearly 40 percent of the participants attending job-related training programs fail to transfer their acquired knowledge to job post the training and in total only 50 percent of investments in training actually result in individual and organizational improvement (Saks, 2002). Given, the investment made on training each year, and increasing rates of failure to implement learning, there is a need to examine the factors influencing training transfer more closely.

In the said context, understanding individual predisposition is important to understand who will be motivated to engage in training transfer post the completion of training program. A variety of factors have been identified as instrumental in influencing training transfer such as individual

characteristic, work environment, training design and organization support (Holton, 2005; Holton, Bates and Ruona, 2000; Baldwin and Ford, 1988). However, individual characteristics have been strong predictors of involvement in development activity such as training especially when the nature of training is voluntary (Major et al., 2006; Colquitt, LePine and Now, 2000; Warr and Birdi, 1998; Maurer and Tarulli, 1994). While individuals can increase their own competence and capability through these training interventions, organizations also benefit greatly by having an agile and flexible workforce willing to take on broader roles with added responsibilities. Overall, continual learning is viewed as a significant contributor to firms competitive advantage (Major, 2000).

Similarly, motivation to transfer has received substantial attention of researchers (cf. Burke and Hutchins, 2007; Gegenfurtner, Veermans, Festner and Gruber, 2009) in influencing training transfer. Motivation to transfer has been found crucial in the training transfer process post the training (Holton et al., 2000; Noe, 1986). For example, Ford (1997) found that motivation to use knowledge and skill acquired from the training was instrumental in predicting training transfer. Similarly, Axtell, Maitlis, and Yearta (1997) found that motivation to transfer was crucial in predicting transfer of interpersonal skills and Holton et al. (2000) identified motivation to transfer central variable in their learning transfer system impacting learning implementation leading to individual and organizational performance.

Maurer, Weiss and Barbeite (2003) explained a model to explain the effects of age in predicting development activities, specifically examining the effects of age on training motivation and training intention. While researchers (Major et al., 2006; Colquitt et al., 2000; Warr and Birdi, 1998; Maurer and Tarulli, 1994) have identified personality characteristics as an important factor in involvement of voluntary training activities, none of the studies have examined the role of

personality variables and training outcomes. As motivation seems to mediate effects of personality characteristics and work-related outcomes (e.g. Barrick, Stewart and Piotrowski, 2002) and that motivation varies with age (Kanfer and Ackerman, 2004), it is important to examine whether personality variables such as proactive personality are differentially related to training outcomes for younger and older employees. Recently, Ng and Feldman (2008) provided meta-analytic evidence to state that age moderated the relationship between proactivity and training-related outcomes. The present study aims to investigate the link individual personality attributes and motivation to transfer. While proactive personality has been shown to impact development activity (Major et al., 2006; Bertolino, Truxillo and Fraccaroli, 2011), its influence on training transfer has not been examined, thus far. Evaluating effectiveness of training transfer leading to bring about positive change would be interesting to study in India despite the “alleged authoritarian and dependency prone managerial culture” (Khandwalla, 1984, p10) since eighty four percent of companies in public sector and fifty four percent of companies in private sector in India perceive absence of training transfer as one of their major lacunae in improving training effectiveness (Yadapadithaya, 2001). Thus the aim of the present article to bridge the gap by examining the role of proactive personality in predicting training transfer in Indian context, and in doing so, gather support for Baldwin and Ford’s (1988) personality construct.

### **Defining key variables**

#### **Proactive personality**

Bateman and Crant (1993) defined proactive personality as “one who is relatively unconstrained by situational forces, and who effects environmental change” (p, 105). Individuals with prototype of proactive personality scan the environment, demonstrate initiative through focused action and persist till they bring about positive change (Crant, 2000). It is a dispositional

construct distinguishing people to the extent to which they influence the environment (Bateman and Crant, 1993). They are more likely to engage in opportunities for self-development through higher education or acquiring skills that may be essential for promotion in near future. Proactive individuals show persistence and perseverance to in pursuing actions which is a feature of self-development. Such individuals utilize opportunities to bring about positive change in their work environment. Personality variables are more enduring relatively more stable characteristics displaying inclinations and predispositions (Major et al., 2006). Rather than being reactive, individuals with proactive personality take initiative to bring about meaningful change, without being prompted to do so.

### **Transfer of training**

Baldwin and Ford (1988) defined transfer of training as the extent to which individuals as utilize their knowledge and skills acquired during the training in their work context. Both, practicing managers and researchers have long recognized the transfer problem (Michalak, 1981). Though Grossman and Salas (2011) provide the important factors that can be attributed to training transfer but largely, there is still no consensus or agreement with the way in which these factors interact among each other. Importance of positive training transfer, or the degree to which learning resulting through training experience is transferred to the job resulting in positive impact in the work area (Goldstein and Ford, 2002). Application of learning on the job includes generalization and maintenance of knowledge and skills (Baldwin and Ford, 1988). To summarize, transfer of training involves applying the knowledge and skills learnt during the training on to the work environment for improving the performance.

### **1.2.3. Motivation to transfer**

Noe (1986) defined motivation to transfer as focused effort of individuals aimed to implement the knowledge and skills acquired during training to the work environment. Individuals are

motivated to transfer when they are confident to be able to utilize their knowledge and skills during the training; they are able to identify the work situations where those knowledge and skills can be applied appropriately and feel that they can make improvement in performance in their work area (Clark, Dobbins, and Ladd, 1993; Baldwin and Ford, 1988; Noe, 1986). Holton et al. (2000) described motivation to transfer as crucial during post training phase impacting actual transfer and consequently performance. Unless, individuals put effort to transfer the learning acquired through training process, it is unlikely that there can be visible impact of the knowledge and skills acquired during the training on the work environment.

### **Hypotheses development**

#### **Proactive personality and motivation to transfer**

According to self determination theory, employee need to feel competent in order to be motivated to perform (Gagne and Deci, 2005; Ryan and Deci, 2000). However, in order to perform, employees need the motivation to mobilize their competencies on the job. In other words, opportunity to mobilize competencies would influence training transfer. Baldwin and Ford (1988) mentioned that opportunity to utilize knowledge and skills acquired during the training would influence training transfer. Proactive personality represents individual disposition to identify opportunities to bring about positive change to the work environment (Bateman and Crant, 1993). Individual dispositions affect motivation influencing learning and transfer of learning during training intervention (Herold, Davis, Fedor and Parsons, 2002; Kanfer and Ackerman, 1988). Engagement in training activities exposes individuals to wide range of knowledge and proactive individuals could be more active in gathering such knowledge and use it to make efforts beyond requirements of the job and identify opportunities for make improvements (Seibert, Karimer and Crant, 2001).

Major et al. (2006) found that proactive personality was associated with engagement in training activities and predicted motivation to learn. Since motivation mediates the relationship between personality variables and work outcomes (Barrick, Stewart and Pitrowski, 2002) and work motivation also varies with age (Kanfer and Ackerman, 2004), it is quite possible that younger employees with proactive personality are more motivated to transfer training compared to older employees. Ebner, Freund and Baltes (2006) found the younger individuals were more motivated towards their goal orientation while older individuals were concerned about maintenance. Similarly, Freund (2006) found that while younger individuals were focused at optimizing performance, older individuals were focused at reducing losses. Ng and Feldman (2008) emphasized the need to examine the effects of age on the relationship between proactivity and training outcomes especially since age impacts work outcomes differently. Further, Bertolino et al. (2011) found stronger relationship between younger workers' proactive personality and training motivation compared to older workers. Given the effects of age on motivation and motivational variables mediating the relationship between personality and training outcomes (e.g. Barrick et al., 2002), it seems quite plausible that younger individuals with proactive personality would be more strongly associated with transfer motivation compared to older individuals.

Put together, age differential impacting motivation (e.g. Kanfer and Ackerman, 2004; Ebner et al., 2006) clearly suggest the age influence individual motivation differently. In other words, the meaning of "proactive" varies among younger and older individuals (Bertolino et al., 2011). Put differently, younger individuals do not vary in their understanding of proactivity; in fact, research has found non-significant correlations between age and proactivity (e.g., Erdogan & Bauer, 2005; Harvey, Blouin, and Stout, 2006; Seibert, Crant and Kraimer, 1999). Therefore,



proactivity would vary between younger and older individuals. While younger individuals focus on competing for goals, older individuals may be reluctant to engage in skill development initiatives and rather focus on collaborating with the team (Kanfer and Ackerman, 2004). The perceived value and utility of skill building initiatives is lesser in older compared to younger individuals (Kanfer and Ackerman, 2004). Recently, Betolino et al. (2011) found that proactive personality among younger workers was more strongly associated with training motivation compared to older workers. It can therefore be stated that proactive personality should have a differential relationship with intention to engage in training initiatives and motivation to transfer for younger and older individuals. Specifically, proactive personality should be positively related to motivation to transfer among younger individuals for whom training is essential for individual development. But this relationship should be less positive for older workers, for whom the benefits of training such as individual development are of lesser importance and relevance

Hypotheses 1: Employees' age will moderate the relationship between proactive personality and motivation to transfer. Specifically, there will be a more positive relationship between proactive personality and motivation to transfer training for younger employees than for older employees.

### **Proactive personality and training transfer**

Training engagements provide access to knowledge that can be used to make improvements in work environment (Seibert et al., 2001; Seibert et al., 1999). Availability to training opportunities may be sufficient for individuals who are disposed proactively to engage in training activity (Major et al., 2006). This opportunity-seeking propensity among proactive individuals is more likely to be associated with training transfer. Therefore, it is quite reasonable to expect that individuals with proactive personality to be in a better position to transfer the training. Proactive individuals demonstrate initiative, act and persist until they bring about

change (Bateman and Crant, 1993). Borrowing from interactionist perspective (Bandura, 1977; Schneider, 1983) proactive individuals create situations which they can control. Based on concept of interactionalism individual behavior can be conceived of individual factors internally controlled and situational factors externally controlled and vice versa (Schneider, 1983). Additionally, proactive personality has been found to predict objective job performance (Crant, 1995) and career success (Seibert et al., 2001). In other words, it can be expected that proactive individuals can purposefully create and influence their environment making successful transfer possible. Such individuals would transfer knowledge to work situations where they are confident of utilizing their knowledge and skills (Noe, 1986). They might focus on areas where their skills can be utilized and work towards making improvements that can directly impact actual performance.

Individual personality differences should have influence in the entire training engagement impacting learning the knowledge and skills, transfer of knowledge and skills and eventually impacting job performance (Collquitt, LePine and Noe, 2000). Since age moderates the relationship between perceived benefits obtained from training for younger and older workers (Bertolino et al., 2011) and given that previous studies have shown that age influences involvement in development initiatives such as placement in training activities, training motivation and learning orientation (Maurer et al., 2003), it is plausible to expect that younger proactive individuals would be more favorably disposed to transfer training compared older individuals. The definition of “practivity” and consequently proactive behaviors vary with age (Berolino et al., 2011). Younger individuals are focused towards their goal orientation while older individuals were keen for collaboration and maintenance (Ebner et al., 2006) compared to older proactive individuals. There are motivational differences between younger and older

proactive individuals in work settings (e.g. Freund, 2006; Kanfer and Ackerman, 2004). Younger individuals, compared to older adults, were more determined in their efforts to pursue actions that offered greater opportunities to optimize performance (Freund, 2006). Comparatively, older adults focus towards maintaining status quo and persevere to maintain in order to adapt themselves to changing opportunities and limitations in their life (Ebner et al., 2006). As younger proactive workers perceived greater career development opportunities through training interventions, compared to older workers; it is plausible that younger proactive adults would be oriented towards transfer of training compared to older adults who would seek to maintain status quo.

Hypotheses 2: Employees' age will moderate the relationship between proactive personality and transfer of training. Specifically, there will be a more positive relationship between proactive personality and motivation to transfer of training for younger employees than for older employees.

### **Motivation to transfer and training transfer**

Several studies (Holton et al., 2000; Axtell et al., 1997; Baldwin and Ford, 1988) have shown motivation to transfer is related to learning implementation post training. Previous studies (Chiaburu and Lindsay, 2008; Collquitt et al., 2000; Holton et al., 2000; Facticeau, Dobbins, Russell, Ladd and Kudisch, 1995; Axtell et al., 1997) have shown that motivational mechanisms are related to training implementation. Kanfer and Ackerman (2004) reviewed that motivation and associated to exert effort declines with age. In other words, younger adults are more goals orientated and are willing to exert greater efforts and persist even at times of challenges. Ebner et al. (2006) found that younger adults reported higher goal orientation and acquired knowledge and skills that would help them perform better while older adults focused at maintenance and

optimizing existing knowledge and skills. Additionally, research shows that younger adults are more persistent in pursuing activities that have greater opportunities to improving performance Freund (2006). Younger adults would be interested to engage in training initiatives as they perceive to have more time, while older adults would be keen to focus on maintaining and enhancing their relationship with their colleagues (Beier, 2008). Recently, Bertolino et al. (2011) found that younger workers displayed greater orientation towards career development opportunities that ensue from training compared to older adults. In other words, older workers see little benefits accrued through training. It is therefore reasonable to assume that younger adults would have greater motivation to transfer leading to training effectiveness compared to older adults.

Hypotheses 3: Employees age will moderate the relationship between motivation to transfer and transfer of training. Specifically, there will be a more positive relationship between younger employees' motivation to transfer and transfer of training compared to older employees.

### **Mediating role of motivation to transfer**

Katzell and Thompson's (1990) model of work motivation suggests that individual characteristics and attitudes towards performance is completely mediated by motivation. In their model, it was also posited that the situational factors have a direct and indirect effect on actual performance. Similar thoughts have been reflected echoing this notion. Noe (1986) argued that transfer environment was closely linked to motivation of individuals in training. Facticeau et al. (1995) studied that support (peer and supervisor) and task constraints impacted training transfer both directly and indirectly through motivation. Naylor, Pritchard and Ilgen (1980) proposed motivation as a function of individual differences such as personality and demographic variables that creates differences in resource availability. In their model, Naylor et al. (1980) argued that

individual's differences influence each stage of motivation. Kanfer and Ackerman (1989) proposed a similar view in their resource allocation perspective on motivation where they supported the view that individual differences influence resource capacity which in turn affects the resource allocation for a particular activity. This suggests that individual differences do influence training outcomes post training as resource allocation becomes crucial for training transfer.

Hypotheses 4: Motivation to transfer will partially mediate the relationship between proactive personality and transfer of training for younger employees than for older employees.

### **Research Method**

#### **Participants and procedure**

Participants were 233 employees working in a company engaged in manufacturing of paints that have decorative and industrial application based in India. The sample comprised of employees working in various departments ranging from purchase, production, accounting and quality and all working on the permanent rolls of the company. Employees working in purchase were involved with procuring raw materials from different vendors by placing purchase orders, developing new vendors, monitoring procurement costs, planning and ensuring timely delivery. Accounts section dealt with processing payments of vendors, customers and calculating sundry expenses. Employees associated with quality were responsible for both inward quality of raw materials and outward quality of the finished product. They used to perform random sample testing of paints to ensure compliance to established quality standards. Employees working in production department used to manufacture paints through various chemical treatments. The employees of the organization were approached through the human resource (HR) department. They were explained the objective of the study and were assured anonymity of their responses.

Participation in the survey was voluntary in nature. While the data for proactive personality and motivation to transfer was obtained directly from the respondents, actual transfer was measured based on supervisor's feedback to the survey. For this purpose each questionnaire carried a unique serial number known to the researcher and the participant only. The HR department of the organization helped the researcher to get in touch with the respective supervisors of the employees to capture their training implementation data. From the initial sample (N = 233) employees who were contacted for the survey, 27 either did not indicate their supervisor or did not complete all parts of the questions and hence they were excluded from the analysis. For the remaining 206 employees, 18 supervisors were contacted to collect their subordinate's training implementation data. A reminder was sent via electronic mail requesting them to complete the survey once after an interval of 3 days. Final consolidation of data was done after three such reminders resulting in a total completed survey of 187 employees resulting in a response rate of 79.83 percent. The mean age was 35.71 (SD = 7.78) with a range from 23 to 53. Sixty seven percent of the respondents were male while the remaining was female. The average of the female respondents was lower compared to males. With respect to education, 28.7 percent had a diploma, 54.3 percent were graduates, and 17 percent were post graduates. With regard to the tenure 46.2 percent had less than five years of experience, 32.7 percent had experience ranging from five to ten years, 19.4 percent had experience ranging from ten to fifteen years while 1.7 percent of the respondents had more than fifteen years of experience. The training provided by the organization ranged from emulsifier treatment, additives preservation, solvent extraction, planning methods, accounting methods and guidelines and statistical quality control. Participation in various training programs was voluntary in nature.

### **Measures**

Proactive personality was measured using ten items scale developed by Seibert et al., (1999). Respondents were asked to assess the extent to which they believed that the statements accurately described them. Responses were on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Sample items include, “No matter what the odds, if I believe in something, I will make it happen” and “I excel at identifying opportunities”. The internal consistency of this scale was  $\alpha = 0.88$

Motivation to transfer was measured using a subscale of the Learning-Transfer-System-Inventory (LTSI) Holton et al., (2000). Sample items of the four item scale include, “I get excited when I think about trying to use my new learning of my job” and “I am motivated to apply the new skills I gained in the training on my job”. Responses were scored on a 5-point scale ranging from 1 (totally disagree) to 5 (totally agree). This measure reported an internal consistency of  $\alpha = 0.82$

Transfer of training was measured using Xiao’s (1996) output of transfer scale consisting of six items. Respondents were asked to rate to the extent they agreed or disagreed with each of the statement. Responses were on a 5-point Likert scale ranging from 1 (strongly disagree) to 5(strongly disagree). Sample items include, “I have accomplished my job tasks faster than before training” and “The quality of my work has improved after using the new KSA”. In the present study, the alpha co-efficient was 0.85

Information regarding respondents’ demographics such as age, gender, and organization tenure and education level was also collected. Participants age was measured using an open-ended question while gender, education level and organization tenure was measured using multiple choice response. All the participants completed the survey during the participation in the training programs.

## Results

The study used hierarchical OLS regression to test the hypothesis followed by multi-group mediation analysis using bootstrapping procedure recommended by Preacher and Hayes (2008). Reliability of the scales was checked using Corrected Item Total Co-relation and all items showing item-total co-relation less than 0.4 were discarded according to Brut-Banks criterion ( $p < 0.001$ ). Initially, to examine the internal structure and convergence validity of the FRO, RBSE and ERB; the items were subjected to an exploratory factor analysis using Kaiser-Meyer-Olkin (KMO) criterion with Barlett test of Sphericity using Principal axis factoring and “promax” rotation. Three factors emerged accounting for 58.64% of variance. Means, standard deviations and inter correlations among the study variables are represented in Table 1. A review of correlation matrix shows non-significant correlation between age and proactive personality ( $r = -0.12, p > 0.05$ ) which is consistent with past research (e.g. Bertolino et al., 2011; Erdogan and Bauer, 2005; Harvey et al., 2006; Seibert et al., 1999). Proactive personality was related to transfer motivation ( $r = 0.26$ ) and actual training transfer ( $r = 0.37$ ). Training motivation was related to training transfer ( $r = 0.43$ ) which are consistent with earlier findings (Chiaburu and Lindsay, 2008; Seyler et al., 1998).



**Table1. Descriptive statistics: means, standard deviations, and correlations**

Variable	Means	SD	1	2	3	4	5	6	7
1. Gender	0.67	0.47	-						
2. Age	35.71	7.78	0.31	-					
3. Org. tenure	1.76	0.81	0.24**	0.62**	-				
4. Education level	2.27	0.72	0.07	0.04	0.11	-			
5. Proactive personality	59.01	5.38	0.06	-0.12	-0.04	0.12	-		
6. Transfer motivation	14.02	3.62	0.04	-0.09	0.05	0.04	0.26*	-	
7. Training transfer	21.25	3.80	-0.02	-0.12	0.09	0.09	0.37*	0.43**	-

*Notes:* Gender was coded: 0 = female, 1 = male; education level was coded: 1 = diploma or high school, 2 = graduation, 3 = post graduation; 4 = Doctorate; organization tenure was coded: 1 = less than 5 years, 2 = between 5.1 to 10 years, 3 = between 10.1 to 15 years, 4 = greater than 15 years.

\* $p < 0.05$ , \*\* $p < 0.01$ ,  $n = 187$

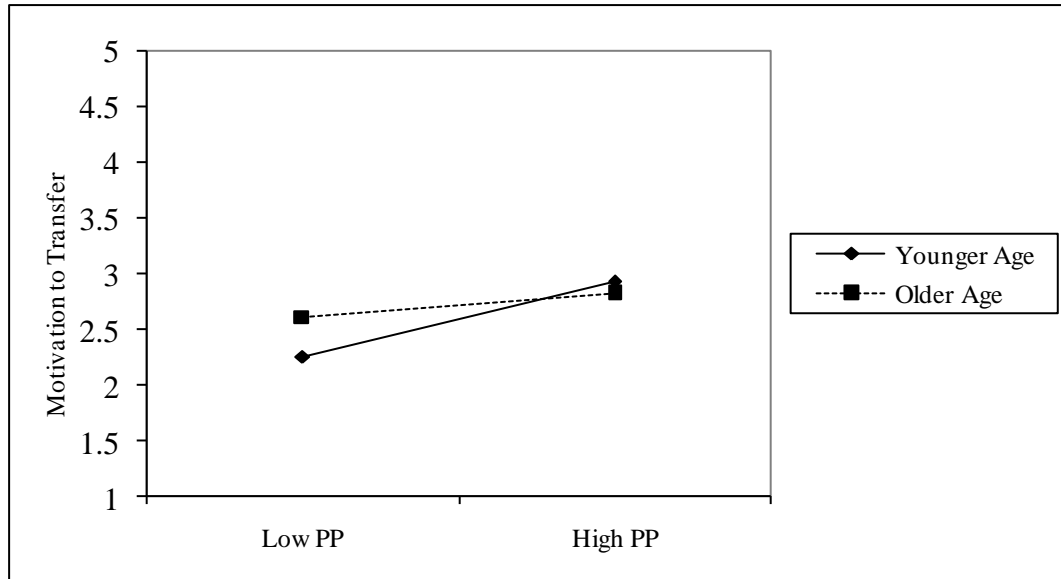
Hierarchical OLS regression was used to test the hypotheses H1 and H2. The dependent variables in these equations were training transfer and motivation to transfer. The main effects were centered (e.g. Aiken and West, 1991) i.e. setting the mean to zero, in order to reduce the multicollinearity between the main effects and the interaction term due to scaling. The control variable gender, participants' age (centered) and proactive personality (centered) were entered in Step 1. The interaction term formed as a product of proactive personality and age was entered in Sep 2. Table 2 shows the results of hierarchical OLS regressions

Hypothesis 1 stated that employees' age and proactive personality would interact to affect motivation to transfer such that there would be stronger positive relationship between proactive personality and motivation to transfer among younger individuals than older counterparts. The results supported Hypothesis 1, as indicated by significant increase in  $R^2$  due to presence of the interaction term in Step 2,  $\Delta R^2 = 0.06$ ,  $F(1, 182) = 5.94$ ,  $p < 0.005$ . As shown in Figure 1, for younger employees there was stronger relationship between proactive personality and motivation to transfer, but this relationship was weaker for older employees.

**Table 2. Hierarchical OLS regressions for age, proactive personality, and their interaction on motivation to transfer and training transfer**

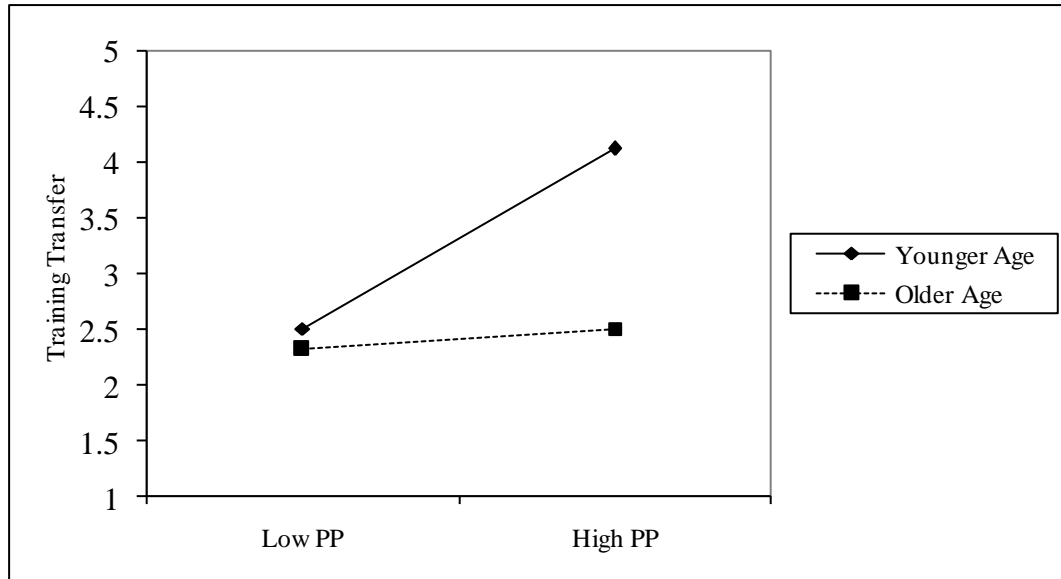
Variable	Motivation to transfer			Training transfer		
	$R^2$	$\Delta R^2$	$\beta$	$R^2$	$\Delta R^2$	$\beta$
Step1	0.06**			0.14**		
Control variable: gender			0.03			0.09
Age			-0.09			-0.08
Proactive personality			0.15***			0.36**
Step2	0.12**	0.06**		0.16**	0.02*	
Age X proactive personality			-0.42**			-0.62**

*Note:*  $N = 187$ , \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .  $R^2$  and  $\Delta R^2$  may not add up due to rounding. Gender was coded: 0 = women, 1 = men.



**Figure1: Interaction of age and proactive personality on motivation to transfer. Note: Younger age means 27.9 (-1 SD below the mean) and older age means 43.5 (+1 SD above the mean), PP = proactive personality**

Hypothesis 2 mentioned that age and proactive personality would interact to influence training transfer, such that there would be stronger relationship between proactive personality and transfer of training among younger employees than their older counterparts. Results supported Hypothesis 2,  $\Delta R^2 = 0.06$ ,  $F(1, 182) = 8.82$ ,  $p < 0.05$ . This interaction is represented graphically in Figure 2. Specifically, there was a greater positive relationship between employees' proactive personality and training transfer for younger employees compared to older employees.



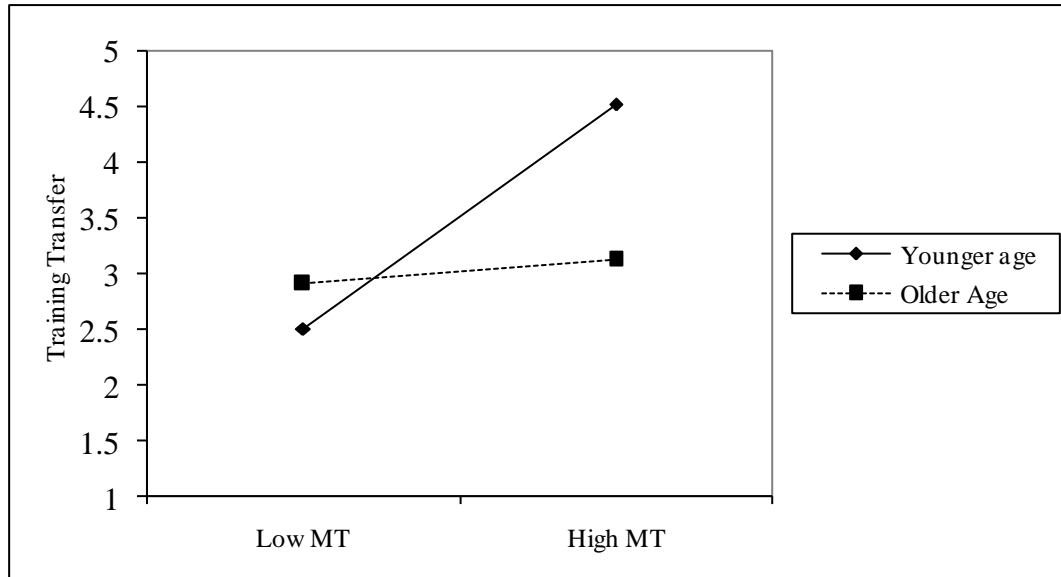
**Figure2: Interaction of age and proactive personality on training transfer. Note: Younger age means 27.9 (-1 SD below the mean) and older age means 43.5 (+1 SD above the mean), PP = proactive personality**

Hypothesis 3 predicted that age and motivation would interact to influence training transfer, such that there would be stronger relationship between proactive personality and transfer of training among younger employees than their older counterparts. Results of OLS regression are shown in Table 3. The control variable gender, participants' age (centered) and motivation to transfer (centered) were entered in Step 1. The interaction term formed as a product of motivation to transfer and age was entered in Sep 2. The results supported Hypothesis 3,  $\Delta R^2 = 0.01$ ,  $F(1, 182) = 6.88$ ,  $p < 0.05$ .

**Table3. Hierarchical OLS regressions for age, motivation to transfer, and their interaction on training transfer**

Variable	Training Transfer		
	R <sup>2</sup>	Δ R <sup>2</sup>	β
Step1	0.19**		
Control variable: gender			0.04
Age			-0.07
Motivation to transfer			0.18*
Step2	0.20**	0.01**	
Age X motivation to transfer			-0.23**

This interaction is represented graphically in Figure 3. Specifically, there was a greater positive relationship between employees' proactive personality and training transfer for younger employees compared to older employees.



**Figure3: Interaction of age and motivation to transfer on training transfer. Note: Younger age means 27.9 (-1 SD below the mean) and older age means 43.5 (+1 SD above the mean), MT = motivation to transfer**

Hypotheses 4 predicted that motivation to transfer will partially mediate the relationship between proactive personality and transfer of training for younger proactive adults than for older proactive adults. Mediation analysis was carried out using multi-group mediation analysis using bootstrapping recommended by Preacher and Hayes (2004). Compared to Barron and Kenny (1986) method of mediation testing that assumes normality of sample, bootstrapping method is applicable to samples that need not follow a normal distribution (Preacher and Hayes, 2004). Further, Barron and Kenny's method essentially mandates that path from IV to M (regression coefficient denoted by  $a$ ) and path from M to DV (regression coefficient denoted by  $b$ ) to be statistically significant; while either or both the paths could be non-significant due to low statistical power. The bootstrap method therefore avoids Type II errors by testing whether the product of the two paths (i.e. difference between total effects of IV on DV not controlling for M; regression coefficient denoted by  $c$  and the direct effect of IV on DV after controlling for M;

regression coefficient denoted by  $c'$ ) i.e.  $c - c' = ab$  is significantly different from zero. The results of mediation analysis for older employees are presented in Table 4.

**Table 4: Results of Direct and Total effects of motivation to transfer based on Preacher and Hayes (2004) for older individuals**

	Coeff	s.e	t	Sig (two)
1. PP to MT (a path)	0.014	0.096	0.147	0.884
2. Direct effects of MT on TT (b path)	0.679	0.117	5.831	0.004
3. Total effects of PP on TT (c path)	0.204	0.098	2.072	0.044
4. Direct effect of PP on TT ( $c'$ path)	0.195	0.075	2.600	0.0126

*Note:* PP = proactive personality, MT = motivation to transfer, TT = training transfer, older individuals means with age greater than 43.5 (+1 SD above the mean)

Clearly, proactive personality predicting motivation to transfer is not significant ( $p > 0.05$ ), but the effect of proactive personality on training transfer is significant ( $p < 0.05$ ) and the effect of motivation to transfer and training transfer is significant ( $p < 0.05$ ). In the present study, 95% confidence interval of the indirect effects was obtained with 5000 bootstrap re-samples (Preacher and Hayes, 2004). Examination of specific indirect effects indicated that relative magnitude of motivation to transfer was not significantly different from zero because the point estimate for motivation to transfer (0.0081) within the 95% CI for RBSE, with a lower limit of -0.1319 and an upper limit of 0.1430 that did not contain zero. Results of mediation analysis are presented in table 5.

**Table 5: Mediation result of motivation to transfer for older individuals**

<i>Mediating variable</i>	<i>Effect of PP on MT (a)</i>	<i>Effect of MT on TT(b)</i>	<i>Indirect effect of MT (Bootstrap estimate) (ab)</i>	<i>95% confidence interval for the estimate (Lower limit to Upper limit)</i>
MT	0.0141	0.6791*	0.0081	-0.1319 to 0.1430

N = 42, \* $p < 0.001$ ,

Similar, analysis was carried out for younger individuals with age less than 27.5 years. All the paths, proactive personality predicting motivation to transfer ( $p < 0.05$ ), proactive personality predicting training transfer ( $p < 0.05$ ) and motivation to transfer predicting training transfer ( $p < 0.05$ ) were significant. Results are shown in Table 6. In presence of motivation to transfer, there is significant influence of proactive personality on training transfer indicating partially mediating result for motivation to transfer.

**Table 6: Results of Direct and Total effects of motivation to transfer based on Preacher and Hayes (2004) for younger individuals**

	Coeff	s.e	t	Sig (two)
1. PP to MT (a path)	0.287	0.114	2.521	0.017
2. Direct effects of MT on TT (b path)	0.329	0.185	1.779	0.085
3. Total effects of PP on TT (c path)	0.374	0.124	3.023	0.005
4. Direct effect of PP on TT (c' path)	0.279	0.131	2.123	0.041

*Note:* PP = proactive personality, MT = motivation to transfer, TT = training transfer, older individuals means with age less than 27.5 (-1 SD below the mean)



Using 95% confidence intervals and with 5000 bootstrap re-samples as recommended by Preacher and Hayes (2004), examination of indirect effects showed that magnitude of motivation to transfer was significantly different from zero because the bootstrap estimate of 0.094 within 95% CI with lower limit of 0.0075 and upper limit of 0.2684 did not contain zero. Results of final mediation effects are shown in Table 7.

**Table 7: Mediation result of motivation to transfer for younger individuals**

<i>Mediating variable</i>	<i>Effect of PP on MT (a)</i>	<i>Effect of MT on TT(b)</i>	<i>Indirect effect of MT (Bootstrap estimate) (ab)</i>	<i>95% confidence interval for the estimate (Lower limit to Upper limit)</i>
MT	0.287*	0.329*	0.094	0.0075 to 0.2684

N = 45, \* $p < 0.05$ ,

This means that there is significant partial mediation of motivation to transfer between the relation of proactive personality and training transfer. Based on the above findings, Hypothesis 4 stands proven.

### Discussion

The purpose of the study was to operationalize the personality construct in Baldwin and Ford's (1988) for training transfer and generalization. In doing so, attempt was made to examine the moderating effect of age on the relationship between proactive personality and motivation to transfer and training transfer. An attempt was made to integrate the research on proactive personality influencing development activity (e.g. Major et al., 2006), age and development

activity (e.g. Maurer et al., 2003) and research on varying levels of motivation with age (e.g., Kanfer and Ackerman, 2004).

Results illustrate that age moderated the relationships of proactive personality with motivation to transfer and training transfer. Age also moderated the relationship between motivation to transfer and training transfer. Results presented are consistent with prior research findings indicating that age is associated with varying levels of motivation (e.g. Freund, 2006) and that personality could vary with age (e.g. Roberts, Walton and Viechtbauer, 2006; Bertolino et al., 2011). Positive relationships were found between proactive personality and motivation to transfer (H1) and training transfer (H2) for younger employees compared to older employees. Younger proactive employees could be in a better position to seek developmental opportunities (such as taking part in training or be concerned about implementing key learnings) unlike their older counterparts who might not perceive this as an opportunity in the first place (Bertolino et al., 2011). Similarly, age moderated the relationship between motivation to transfer and training transfer (H3). It is important to note that older employees were less motivated to transfer their training compared to younger counterparts. This could be due to the reason that older employees were more concerned with maintenance of status quo and younger employees were more development oriented (e.g. Fecteau et al., 1995). Similarly, younger proactive employees were more inclined to motivation to transfer and training transfer compared to older counterparts, perhaps because older proactive employees were keen to focus on other outcomes at the expense of these (e.g. Kanfer and Ackerman, 2004). Practicing managers need to consider that proactive personality has varying interpretations based on employees' age. Research of employees' age and organizational outcomes indicate that varying age influences work outcomes (e.g. Kanfer and Ackerman, 2004). According to Kanfer and Ackerman, employees work motivation varies with their life stage. For

example, older employees may be less concerned over failure for promotion since achievement is less important in their lives. Older employees may be more concerned for maintenance of relationships rather than optimizing opportunities (Freund, 2006) or growth (Ebner et al., 2006). The present study however, did not indicate any significant relationship between age and proactive personality (e.g. Bertolino et al., 2011). Results from the study indicate that motivation to transfer varies with age and hence practicing managers need to take cognizance of employees' age while attempting to make training transfer more effective. One way of doing this could be to provide more training opportunities for younger employees since it is important for their career development. This could be supplemented by providing robust metrics to monitor and evaluate costs for economic and non-economic benefits accrued from training programs especially in India where it is of a more of strategic intent (Yadapadithaya, 2001).

#### **Limitations and future directions**

The study presents potential limitations. First, since the sample comprised of employees working in manufacturing company, results may not generalize to other work contexts. Similar research can be done using sample from different organizations. Second, cross sectional methodology of data collections limits the possibility to attribute any causality. Data was collected from two different sources, the employees and their supervisors. When possible, objective data on training implementation could be more useful rather than capturing perceptions of training implementation through the supervisor. Third, while data collection was based on technical trainings attended by the employees, they would be more related to actual work done by the employees impacting productivity.

Future research could focus on examining the relationship between how younger and older employees perceive "young" or "old" age. There has been little agreement on the operational

meaning of “younger” and “older” workers (e.g. Finkelstein and Farrell, 2007). It may also be that ages are differently conceived of based on perceptions of development opportunities in an individuals’ career. Older employees may be less interested in training activities due to limited career opportunities being perceived as a result of which despite being proactive they see little value in training per say (Bertolino et al., 2011). Further, the theoretical framework is based upon western literature (low collectivism and low power distance) while India as a country is characteristically high in power distance. Culture plays an important role in shaping one’s personality and career orientation (Xiao and Tsui, 2007) and hence the role of culture on career salience cannot be overruled. While past research has shown the proactive personality is related to career success (Seibert et al., 2001), future research could examine the interactive effects of age and proactive personality on specific training programs aimed at enhancing career salience. Subsequent research needs to examine whether proactive personality and age interact in predicting development orientation among employees.

### **Conclusion**

To conclude, the results of the present study may be useful to understand proactivity and training outcomes. Specifically, it suggests that age moderates the relationship between proactive personality and motivation to transfer and training transfer. In other words, younger proactive employees were more inclined or motivated to transfer and also younger employees’ motivation to transfer was more related to the training transfer. The purpose of the study was also to examine the mediating role of motivation to transfer. Multi-group mediation analysis illustrated that for younger employees’ motivation to transfer partially mediated the relationship between proactive personality and training transfer.

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