

The Impact of Organizational Change on Employee Turnover Intention: Does Stress Play a Mediating Role?

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Abstract This study examined the relationship between change interventions and employee turnover intention to see if change interventions lead to increased employee turnover intention. Moreover, the mediating role of employee stress was tested. Data were collected from 162 respondents working at various administrative positions in a large public organization. The results indicate that employee turnover intention is positively correlated to human process, techno structural, human resources, and strategic interventions. Limitations and direction for future research are provided.

Keywords Organizational change · Employee turnover intention · Employee stress · Techno structural · Human resources · Strategic interventions · Stress · Mediating role

Introduction

Organizations no matter how big or small are prone to change. Change and its impact has become one of the most widely discussed areas in the field of management sciences. This has been largely due to continuous focus on improvement (Sikdar and

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Payyazhi 2014). With the advent of concepts like total quality management and six sigma, there are hardly any organizations left out on the idea of change and managing it efficiently (Vora 2013). No matter how big or small, change requires proper management. If properly managed, change leads to improvement in areas such as cost, management, quality, and decision making (van Hoek et al. 2010). This also has a domino effect on the rest of the organization and improvements in totality can be observed (Christiansen and Claus 2015). However, contrary effect can also be seen if change is not managed properly. Organizations, if they fail to effectively manage change, would not only lose resources such as time, efforts and finances, but also, returning to the prior state before the implementation of change process becomes quite difficult (Simoes and Esposito 2014).

Change can be managed effectively at the very initial stage if a clear line is drawn as to what kind of outcome is needed. Cummings and Worley (2014), in their book "*organization development and change*," identified four major types of organizational change processes which are:

1. Human process interventions
2. Techno-structural interventions
3. Human resource management interventions
4. Strategic interventions

For change managers to effectively manage the change process, it is very important to understand the kind and level of change being dealt with (Dasborough et al. 2015). Changes are often initiated from the top level and a trickle-down effect is observed.

Most of the research in the area of change management shows that there is a positive impact of change management on the performance of the organization (Bordum 2010). However, little research has been done to identify the negative impact of change on the organization's performance. Whenever change processes are introduced and implemented in organizations, employees go through feelings of anxiety, uncertainty, fear and stress (Ronnenberg et al. 2011). It is the responsibility of the change agents to monitor employees during the change process. If employees fail to understand the change process, it would ultimately result in employees feeling stressed (Abrell-Vogel and Rowold 2014). Most employees want to be a part of the change process and provide maximum input but are at times unable to do so because of incapacity to understand the change intervention and its main target (Rusly et al. 2012). As identified before, it is the responsibility of the change agents to facilitate the employees to deal with the change interventions. Change agents should remove those factors that excessively stress employees during the change process (Manning 2012). If employees are left unattended during the change process, it may ultimately result in employees leaving the organization. This would not only put the change process at question but would also negatively affect the performance of the organization (Rusly et al. 2012).

Following these lines, this research aimed at understanding the connection of the four types of change interventions identified by Cummings and Worley (2000). The impact of these four change interventions is identified on employee turnover. As discussed, change interventions can lead to employee stress which if not handled properly by the change agents can lead to dysfunctional employee turnover. So, the

impact of four types of change initiatives has been observed on employee turnover and the link is mediated by employee stress.

Literature Review

Gone are those days when organization were formed believing that they can perform without introducing any change (Younger et al. 2013). It has become important for all organizations to make sure that they stay robust and updated (Parkes and Davern 2011). Inability to do so can lead to organizations becoming obsolete and ultimately being forced out of the market by competition (Wong et al. 2015). Whenever the word change comes up, it becomes imperative to identify the type of change being implemented (Smith et al. 2011). With the organizations becoming ever so complex, it is important for managers to pay equal importance to each and every aspect of organization (Guimaraes 1997). From improving the manufacturing abilities of the organization to improving the service based organizations, the concept of change and its implication were never so inevitable (Smollan 2015).

The Relationship between Human Process Intervention and Employee Turnover Intention

Of the types of change interventions that are implemented, one of the very prevalent changes are human process interventions (Nyström et al. 2013). Human process interventions help employees to understand the communication protocols used in any organization (Bull and Brown 2012). Devising and understanding of human processes interventions are very important as they lay the foundation for information flow in the organization (Krell 2012). The protocols are devised on three levels: individual, group and organizational level. Human processes on individual level help to set the standard operating procedures (SOP's) for desired behaviors expected of employees in the organization (Agness 2011; Dunne and Mujtaba 2013).

Individuals in organizations are prone to conflict if proper mechanisms for individual level interactions are not identified (Perrott 2011). Bull and Brown (2012) identified the importance of individual level interactions and mechanisms for these interactions. If employees in an organization at the individual level are not able to communicate properly, it gives rise to conflict and for that human process change interventions are necessary (Szabla et al. 2014; Worch et al. 2012).

This kind of conflict also appears at the group level and the organizational level following the same mechanism (Harhara et al. 2015). One of most prominent repercussions that appear as a result of ineffective human processes interventions is employee turnover intention (Kemp et al. 2010). If for some reason, employees do not understand the human process intervention and the reasons for its implementation, they can undergo stress which ultimately leads to employee turnover intention (Tsai and Tien 2011; Carlström 2012). So, it is very important to not only properly communicate the human process intervention but to also justify the reasons for the change process. So following the above literature, our first hypothesis is,

H1: Human process interventions are positively related to employee turnover intention.

The Relationship between Techno Structural Intervention and Employee Turnover Intention

Structure plays a very important role in the functioning of the organization. Concepts like chain of command and span of control identify the level of empowerment being offered to the employees of the organization (Cheng and Waldenberger 2013). Having said that, structures are not independent of time. With every new day, organizations need to make sure that they stay robust. This helps in making the organization work like a well lubricated clock (Sune and Gibb 2015; Younger et al. 2013). Structure helps us to understand the subdivision of organization in to certain strata's (Dunne and Mujtaba 2013).

Different organizations use different kinds of structures (Leung et al. 2011). For organizations that want a centralized decision making authority, functional structure is the best option available to the organizations (Tjemkes and Furrer 2010). Under functional structure, organizations follow a very strict hierarchy (Jose-Luis 2013; Scanlon and Adlam 2012; Hede 2010). Employees have one supervisor in their reporting line (Guiette and Vandembempt 2014). Organizations that want more flexibility go for divisional or matrix structure (Azanza et al. 2015). These structures transfer power from the management to the employees working at the very grass root level (Jordan and Troth 2011; Nyström et al. 2013).

Organizations having different kinds of structures can bring techno structural interventions if they feel that the current structure is not fulfilling their requirement (Rahman and Nas 2013). However the process of bringing techno structural interventions is rarely as simple as it sounds (Davenport et al. 2004). One of the main effects of techno structural change is redistribution of resources and authority (Wang 2014; Chen et al. 2014). Different groups working in the organization would resist the change process if they believe that the change process would result in loss of power or resources (Dysvik and Kuvaas 2010). Techno structural interventions are also a source of altering the level of involvement of employees in the organization (Stensaker et al. 2014). Nyström et al. (2013) identified the importance of techno structural interventions and their impact on the empowerment level of the employees.

Factors working for the benefit of the organization can prove to be on the negative side as well if the organization fails to justify the change intervention (Strutton and Tran 2014; Zimmerman and Darnold 2009). Employees feel targeted if they are not able to understand the details of the change process. Consequently employees try to remove the dissonance by either justifying the need for intervention or ultimately leaving the organization (Aladwan et al. 2014; Jiun-Shen et al. 2010; (Nguyen et al. 2012c). On the basis of this literature, we postulate

H2: Techno structural interventions are positively related to employee turnover intention.

The Relationship between Human Resource Interventions and Employee Turnover Intention

Human resource policies serve the very basis on which employees work in their respective organizations (Szekely and Strebel 2013). These policies outline the expectations of organization from employees. Employees over a period of time adapt

themselves with respect to HR policies (Li and Zhou 2013). Rahman and Nas (2013), Aladwan et al. (2014), and Krell (2012) have identified the importance of HR policies and how employees consider these policies as their first line of defense in the organization. Having such close attachment to these policies whenever any change interventions are related to the HR policies can send employees mixed messages which can lead to undue stress (Enshassi et al. 2015). Considering the importance of these policies and their implication, employees try to resist it no matter what kind of HR policy intervention (Abrell-Vogel and Rowold 2014; Rosenbusch et al. 2015).

It should be kept in mind that employees not only resist the change process itself but even the very perception of it (Johannsdottir et al. 2015; Liu et al. 2013). If employees perceive that the HR intervention would affect them negatively, this perception follows through the entire change process (Björklund 2010; Mellor et al. 2013). It ultimately results in employees developing intentions of leaving the organization. So, at the very start of the change process, change agents must make sure to develop a positive image of the change process (Jaynes 2015; Vanfleet and Smith 1993).

H3 Human resource interventions are positively related to employee turnover intentions.

The Relationship between Strategic Interventions and Employee Turnover Intention

Strategy serves as a backbone for any organization. Strategies provide direction for the organization to follow (Barratt-Pugh et al. 2013). Without proper strategy, organizations cannot perform well. When we talk of strategies, there are certain types that should be considered (Thunman 2015; Bordum 2010; Willcocks 2011). Transformational strategic interventions are the ones that face the most resistance and require considerable amount of attention from the change agents (Langstrand and Elg 2012). As the name implies, transformational strategies completely change the way organizations operate (Yuan et al. 2014). Out of the many aspects of any organization, strategies are the most embedded ones in employees (Tuzun and Kalemci 2012). These define the very way employees operate. So, transformation strategies require transformational change interventions (Bhatnagar et al. 2010).

One of the contemporary strategies that are coined in some organizations is continuous improvement (Giette et al. 2014). It requires the employees to be in the constant state of change. Kemp et al. (2010); Perrott (2011); Carlström (2012) and Vithessonthi and Thoumrungroje (2011); Jurisch et al. (2014) have identified in their research continuum two extremes: one being as a state of inertia and the other is continuous improvement. Concepts like total quality management (TQM) are the ones that show emphasis on continuous improvement (Marta Dominguez et al. 2015; Ghosh et al. 2013).

Having said that, it is not possible for all the employees to work under such a constant state of stress (Fiorentino 2010). To be part of an organization that introduces continuous change intervention, employees should have the ability to handle continuous pressure (O'Halloran 2012). Employees on the other hand do not always feel comfortable with the idea of always being in a state of change and therefore, opt of saying farewell to the organization for good (Kerttula and Takala 2012). Organizations following the strategy of continuous improvement must focus on building capacity of

employees to handle the stress that comes with it (Poddar and Madupalli 2012). Upon the failure of this, employees ultimately decide to leave the organization (Nguyen et al. 2012a).

H4: Strategic interventions are positively related to employee turnover intention.

The Role of Stress as a Mediator between Human Process Interventions and Employee Turnover Intention

Stress is a very critical factor that has lasting effect on employee intention to leave (Nguyen et al. 2012b). This intention is amplified if the organization is going through a process of change (Smollan 2015). Ghosh et al. (2013). Tjemkes and Furrer (2010) accepted stress as a mediator in case of interventions related to human processes. It is stress that ultimately forces employees to leave rather the human process change in itself (Krell 2012).

H5: Employee stress mediates the relationship between human process interventions and employee turnover intention.

The Role of Stress as a Mediator between Techno Structural Intervention and Employee Turnover Intention

Different researchers have identified the role of stress in the form of mediation consequent of different type of organizational changes (Slåtten et al. 2011; Riot and de la Burgade 2012). Enshassi et al. (2015), Enshassi et al. (2015), Strutton and Tran (2014), and Hede (2010) in their research identified the role of stress in techno structural interventions being brought in the organization. Stress kills the creativity of the organization and if not handled properly can force employees to quit (Vithessonthi and Thourungroje 2011). The mediating role of stress shows the strength of its impact on change interventions and their relationship with employee turnover (Wayland 2015; Farler and Broady 2012).

H6: Employee stress mediates the relationship between techno structural interventions and employee turnover intention.

The Role of Stress as Mediator between Human Resource Interventions and Employee Turnover Intention

HR policies can be considered as a stepping stone for the employees. Whatever expectations are made from the employees, human resource interventions serve as a benchmark (Guimaraes 1997). Wong et al. (2015); Li and Zhou (2013) and Johannsdottir et al. (2015) validated stress in mediating role in cases of human resource interventions. They were of the view that change in human resources and its policies send employees on back foot and reinforces employee's turnover intention.

H7: Employee stress mediates the relationship between human resource interventions and employee turnover intention.

The Role of Stress as Mediator between Strategic Interventions and Employee Turnover Intentions

Strategies act as a guide for organizations both in good and difficult times. If changes are made to strategies employee face stress that ultimately leads to turnover intentions (Farler and Broady 2012; Tuzun and Kalemci 2012; Yuan et al. 2014).

H8: Employee stress mediates relationship between strategic interventions and employee turnover intention.

The final model on the basis of literature review can be drawn as presented in Fig. 1.

Research Methodology

There are a total of 177 universities / degree awarding institutes (DAI's) operating in Pakistan. Employees were selected from one of the top DAIs operating in Pakistan with campuses in over seven cities and one virtual campus in Islamabad. The population for the current study included employees working in the Islamabad campus of the DAI. The reason for selecting employees from the Islamabad campus is that they come from campuses located in all the other cities in the country. Further, faculty members were excluded from the population as they do not directly take part in the change interventions introduced as they focus mainly on academic issues only.

Data and Tools

The type of data that was used for this research was primary data collected through questionnaires. It contained questions for measuring variables that have been published in literature. For measuring resistance to all four type of change interventions, Oreg (2003) 15 item scale was used. It was adapted for all 4 types of changes in a way that same questions were repeated for all 4 change interventions. For instance, "Techno structural change made me upset", "human process change made me upset", etc. Van Dam (2008) 4 item scale was used to measure turnover intention. For stress, international stress management association (2013) questionnaire was used. It contained thirteen questions to measure stress on a five point Likert scale.

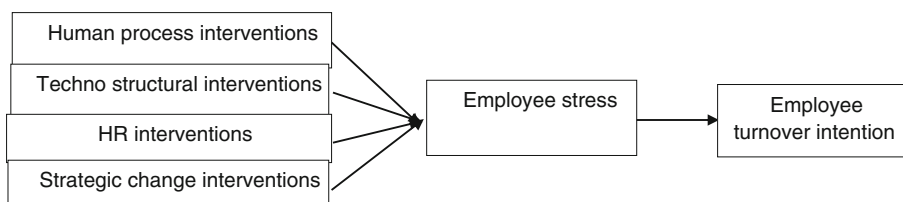


Fig. 1 Research model

Self-administered questionnaires were used for data collection of this study. A total of 250 questionnaires were distributed and 173 questionnaires were received back. The response rate was 69%. Out of these 173 questionnaires, 11 were discarded because of incomplete responses. So, a total of 162 questionnaires were available for analysis. Data for independent variables was collected at time T1. Data for mediating and dependent variable was collected at time T2 four weeks after the first round of data collection.

Sampling

The sampling technique used for data collection was snowball sampling. The same technique has been used for data collection in some of the recent studies on similar topics including (Worch et al. 2012) and Wang (2014). Most of the change interventions are implemented on group and organizational level. Employees in these interventions develop linkages with each other. Consequently, the chances for better data collection increases if the current respondents are requested to further identify the probable respondents. Data has been collected in a non-contrived environment following O'Halloran (2012); Krell (2012) and (Smith et al. 2011) technique for data collection in similar studies.

Analysis and Techniques

Correlation analysis was used to find the strength of the relationship between the independent and dependent variables. Statistical package for social sciences (SPSS) was used for conducting the data analysis. For mediation, Preacher and Hayes' (2008) Bootstrap analysis was used. For this purpose, INDIRECT Macro (for SPSS) was used.

Results

Results were accepted as significant at $p \leq .05$. Table 1 provides results of correlation analysis of the four types of change interventions with employee turnover intention. Human process interventions were significantly positively correlated with employee turnover intention ($r = .255$ $p < .01$), techno structural interventions were significantly positively correlated with employee turnover intention ($r = .306$ $p < .01$), human resource interventions were significantly positively correlated with employee turnover intention ($r = .422$ $p < .01$), and strategic interventions were significantly positively correlated with employee turnover intention ($r = .346$ $p < .01$).

Apart from these, human process interventions were moderately positively correlated with human resource interventions ($r = .158$ $p < .05$), significantly positively correlated with strategic interventions ($r = .302$ $p < .01$). Techno structural interventions were significantly positively correlated with human resource interventions ($r = .233$ $p < .01$), as well as with strategic interventions ($r = .356$ $p < .01$). Human resource interventions were significantly positively correlated with strategic interventions ($r = .330$ $p < .01$). Following these results, hypothesis 1, 2, 3 and 4 were accepted as all the change interventions were significantly positively correlated with employee turnover intention.

Mediation analysis was conducted using bootstrap test presented by Preacher and Hayes (2008). Mediation analysis was run in SPSS Statistical package for social

Table 1 Bivariate correlations

	1	2	3	4	5
1. Human process interventions	1				
2. Technostructural interventions	.091	1			
3. Human resource interventions	.158*	.233**	1		
4. Strategic interventions	.302**	.356**	.330**	1	
5. Employee turnover interventions	.255**	.306**	.422**	.346**	1

* $p < 0.05$ ** $p < 0.01$

sciences using INDIRECT Macro for SPSS. The mediation analysis was run separately for each independent variable to check for indirect effects of employee stress. Table 2 shows direct effect, total effect and bootstrap results for the indirect effects of the four change interventions on employee turnover intention.

From Table 2, it can be seen that the indirect effects of all four change interventions (human process, techno structural, human resources and strategic) via employee stress on dependent variable (employee stress) fell between $-.0053$ and $.0399$, $-.0054$ and $.0311$, $-.0076$ and $.0276$, $-.0237$ and $.0425$. In all the four values, zero was present in the 95% confidence interval. This shows that the effects of human process interventions, techno structural interventions, human resource interventions, and strategic interventions on employee turnover intention were not mediated by employee stress. Hypothesis 5, 6, 7 and 8 were therefore not supported (and therefore rejected).

Findings and Discussion

This study has produced some results that are aligned with the findings of previous researchers, but a few of this study's findings are contrary to expectations. Among the change interventions that were included in the model, human resource interventions

Table 2 Effects of Employee stress as a mediator (M) between IVs and DV

IVs	Effects of IVs on M	Effect of M on DV	Direct effect	Total effect	Boot strap results for indirect effect	
					LL 95% CI	UL 95% CI
Human process interventions	.1603	.0290	.1381	.1427	-.0053	.0399
Techno structural interventions	.1705	.0167	.1210	.1239	-.0054	.0311
Human resource interventions	.1609	.0145	.2711**	.2735**	-.0076	.0276
Strategic interventions	.2990	.0085	.1960**	.1985**	-.0237	.0425

IV Independent variable M Mediator DV Dependent variable LL Lower limit UL = Upper limit. CI Confidence interval

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

have the most impact on employee turnover intention. Similar results have been reported in previous studies (Rahman and Nas 2013; Guimaraes 1997). This suggests that whenever organizations want to introduce any change intervention that alter the human resource policies, employee turnover intention increases. It can be due to the fact that human resource policies provide the very basis on which employees interact with organizations. Issues related to employees' promotion, development, training and demotion depend on the HR policies of organizations.

If, for some reason management of the organization decides to bring change in these policies, the intensity of employee turnover intention increases. It can be due to fear that the change in HR policies might negatively affect employees. It is the responsibility of change agents and management implementing change to make sure that employees are assured that changes in HR policies will not affect them negatively. If an organization does this successfully, it can reduce employee turnover intention. Human process interventions also increase the turnover intention of employees. Human process is fundamentally related to group functioning, group norms and rules that are followed in group settings.

If the organization wants to change these settings, it is important that employees are engaged and taken in to confidence. Upon the failure of effective actions employee turnover intention increases. Similar results have been reported in studies (Li and Zhou 2013; Willcocks 2011). Techno structural interventions also create fears and doubts in mind of employees. Hierarchy plays a very important and influential role on how employees operate. When interventions are brought that change the chain of command and span of control, employees' intention to switch organization increases. Worch et al. (2012) found similar results and said that involving employees in the techno structural interventions can reduce employee turnover intention.

Strategic interventions also impact employee turnover intention as strategies have trickle-down effect. Strategies are made at the top level and mostly implemented from the top but have impact at group and individual levels as well. Consequently, every time strategic change interventions are announced, employees start revamping their CV's. Similar results can be found in previous studies (Riot and de la Burgade 2012; Stensaker et al. 2014).

However contrary to our expectations and the hypotheses that were proposed, employee stress was not found to mediate any of the change interventions proposed in the model. A number of studies have been conducted showing the mediating effect of employee stress (Enshassi et al. 2015; Strutton and Tran 2014; Thunman 2015). After evaluating the organization from which sample was taken, it was identified that continuous improvement and total quality management are part of the mission, values and norms communicated with employees on a daily basis. Consequently, it has become an everyday issue where improvement and changes processes are introduced in the organization. Consequently, employees have become used to change processes and do not feel too stressed.

Moreover, the organization from which the sample was taken has seen fast paced growth over the last few years. Therefore, it has become a norm for employees to be influenced by the change processes directly and indirectly. Consequently, since employees are always expecting change interventions, it greatly reduces stress in the organization. Literature also reinforces that if an organization is able to effectively manage stress, it leads to increased employee commitment and motivation to be a part

of the change process (Aladwan et al. 2014). Having said this, lower stress does not decrease employee turnover intention due to different change interventions. One possible reason for this can be the perception of negative impact of change interventions.

The study conducted can be used in local and international context. In Pakistani context, this research can help organizations effectively implement change. This research can also help in developing change interventions and understanding their connection with employee turnover intention. Change agents can make use of it to develop change interventions and deal with the employee turnover intentions because of those change interventions.

Limitations and Future Direction

The time available to conduct this research was limited. Moreover, data was collected from a sample based in one organization. Sample consisting of respondents from more geographically dispersed areas can help to develop a more generalized results. Moreover, the study is conducted on a very general level with respect to change interventions. In future, more specific change interventions can be targeted and studies can be conducted.

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