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Development of Resistance to Change Scale in White Collar Employees

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Abstract

The aim of the present study was to develop and authenticate the self-report inventory for evaluating the employee's reaction in form of resistance to organizational change. The scale is helpful for organizations to recruit the perfect employees and develop beneficial policies for the betterment of the company which would positively affect Pakistan's economy. The items for scale were generated empirically. Factorial validity of scale was determined on the sample of 200 white collar employees. In Resistance to Change Scale factor analysis resulted in six factors i.e. Cognitive Rigidity, Fear of Failure, Autonomy, Reluctance to Lose Control, Intolerance to Adjustment and Vested Interest; which yielded satisfactory KMO value of .79 at p<.000 and reliability of .91 Cronbach's alpha. The convergent validity was estimated by correlating with Change Resistance Scale. The resulting correlation of α=.55 was significant, which added to the validity of Resistance to Change Scale. Discriminant validity was assessed by correlating the scores with Perceived Stress Scale, which showed inverse relationship. Hence RCS is reliable and valid measures to assess employees' resistance to change in indigenous context.

Keywords: *Organizational Change, Resistance, Autonomy, Fear of Failure, Cognitive Rigidity, Vested Interest.*

Introduction

In this global time industries faces different political, economic and technological changes while they trying to adapt them to get benefits and this has become curiosity for the researchers. The modern market has instant changes in economic business environment and strict reservations which forces industries to embracing the principles of organizational changes. To enhance their internal and external markets companies modernizes their strategies and personnel to get higher outputs and efficiencies (Alshahrani, 2019).

Organizational change is endures and repeated procedure as it enhances employee's adaptation trends. It is valuable to increase organizational positive communications for concrete and positive reaction of employees towards change. Through job trials, doubts and job stresses employee's deal with challenges of organizational changes. Correspondingly, few employees' responds changes made by organizations in positive creative ways through they can improve their work regulations, commitments and tractability (Petrou, Demerouti & Schaufeli, 2018). According to Odor (2018) generally employees are not prepared to face organizational changes in result they resist so it is duty of senior administration and human resource department to coordinate with company's personnel while developing organizational policies. It is important for organization to stay in competitive market atmosphere and take care of organizational behavior significances through reasonable practical planning's and successful implementation of organizational changes.

A study claimed that change recognition and organizational establishment has positive correlation. Employees are responsible for challenging external markets and competitiveness. Moreover, employees are valued strength of any organization and organization can increase their capabilities and commitment through appraisals, relevant technical trainings and incentives (Samah, 2018). Similarly societal values and norms can be a hurdle for personnel against organizational changes and result could be in form of resistance (Cummings, Bridgman & Brown, 2016). According to Li and his colleagues (2019) management plays an important role in organizational setups as in companies employees have confidence on their executives and company's policies have more workplace commitment, inventiveness, and resourcefulness and modernize in all aspects. However, skilled and experienced senior employees and administrators can make the workplace and work force productive and innovatory that may enhance the workplace engagement and creativity in employees.

Employee's job involvement and insight have an impact on productivity of the firm and through skilled administration their proficiencies, philosophies and insights can be replaced with obedience, adaptableness and innovativeness. In successful productive industry the importance of human resource department cannot be denied because they are the personnel who make the policies and successfully implementing the changes in the organization with coordination with the workforce teams. Similarly, high level of organizational changes can negatively impact upon the capabilities and trust of human resource department in form t of employees that can be leads towards less productivity (Kim & Choi, 2020).

Moreover, different employees can react differently to organizational change in form of resistance or acceptance. Employee's positive reaction towards change can gain their job satisfaction and adaptability and negative reaction can leads the firm towards critic and less innovative work environment (Bulinska-Stangrecka & Bagienska, 2021). Further explanation and estimation of resistant employee can be explained as follows:

Resistance

Resistance is the biggest and expected barrier the organizations faced when implementing any alterations or modifications. It is an individual's automatic response when faced with new and unfamiliar situations (Hendrickson & Gray, 2012). According to Jeffery and Sandusky (2012), resistance to change is an unwillingness to admit an order or directing a movement by their own self. This type of reluctance emerges in: how to use data effectively, how desired procedures can be achieved, or even what kind of machinery and technique be used to complete a task. Basically the change is made by any reason; if that person has any issue regarding that's change would be resistance to change. Also resistance is termed as illogical and undesired reaction (Fleming & Sewell, 2002).

Further resistance has been added in individual production during last century where it is linked with long line of research. It is explained as inevitable and imminent psychological response to any change which could be mild to moderate improvements, future transformations or organizational changes. It also entails

the explanation for why efforts to initiate the changes in an organization i.e. technological, production, procedural, methodological or practices falls below expected scale or fails completely (Oreg, 2006). According to Skold and Karlsson (2012) people adopt divergent behaviors i.e. resistance, when their self-esteem and self-sufficiency at workplace is not appreciated. In case environment does not match with their work demands and needs. Employer's loads and demands which lead towards competence, production & outcome have conflict with worker's self-worth and dignity; that results into resistance.

Moreover some studies also suggest that resistance is the consequence of the employees' perception about how change will affect their personal and work life. While other studies have also argued that the individuals are not resistant to change in nature, but resistant occurs in terms of how the change imposed or the change processes. Therefore the employees develop preconceived notions about the change processes. They evaluate and develop beliefs about it with limited understanding provided, which cause resistance (Hendrickson & Gray, 2012).

Similarly Zhao and his colleagues (2016) proposed a psychoanalytical framework to explain the employee resistance towards organizational change. According to them resistance in individuals is deep rooted and at unconscious level. Such individuals demonstrate concealed behaviors that impede the flow of change. It is also been suggested that when the resistance is deep rooted, it appears in overt behaviors of employees when the executors of change do not prompt the change effectively. The interaction gap between leaders and promoters of change i.e. employees usually gave a way out to employee's resistance (Sharif & Scandura, 2014).

Theoretical Perspective of Resistance

In core, the resistance is not usually towards the change itself, but towards the employees' perception and belief of personal loss or the possibility of it. This is explained by the following theories:

Irrational approach of resistance

This approach is also called irrational perspective. It is given by Metselaar in 1997. According to this approach, all the social, psychological or political perspective describes the resistance in employees to change as a rational process; although resistance could also be irrational in nature. In this approach, resistance is considered as undesirable, unavoidable but expected behavioral response to change. The irrational believes about change results into negative feelings and behaviors such as fear of progress, sadness to leave old practices, doubt about one's willingness to accept change, anger towards the change agents and not being able to fully accept the change (Metselaar & Cozijnsen, 1997).

Individual differences approach of resistance

This approach highlights the importance of individual differences in causing employee's resistance to change. According to this point of view, individuals have homeostasis tendencies. Excessive and unexpected change generates commotion and doubts; whereas absence of change leads to boredom and monotony. Some individuals tend to have certainty and perfection in their already develop expertise; whereas some individuals prefer excitement and growth that uncertain situations will provide. This difference depends on individual characteristics, personality and past experiences (Metselaar & Cozijnsen, 1997).

Antecedent model of employees' resistance to change

This model highlights the antecedents or causal factors that lead to resistance in employees. It also proposed that nature of resistance directly depends on category of its cause. These categories include psychological, materialistic, employee's constant capabilities and their concern for the firm (Dubrin &

Ireland, 1993; Dent & Goldberg, 1999). Firstly the psychological causes explain the employees' negative perception and faulty cognitive patterns towards their firm. It may also include their frustrati2on, anxiety, fear and past experience of failure. Cynicism, uncertainties and mistrust in the leading management of the organization by the employees leads to psychological resistance (Val & Fuentes, 2003).

Further Bryant (2006) added another antecedent of the resistance in employees to change. He believed that conflict of goals between the organization and employees also leads to resistance. For this purpose he explained that commonly the goal of a firm to bring change is materialistic in nature; while the employees' goals are mostly self-satisfactory in nature. This antecedent is added on the basis of following theory:

Principal agent theory

It is also called agency theory, where Shankman-Neil (1999) explained that resistance is the result of divergence between interests of the owners i.e. principal and employees i.e. agents. The theory elaborated that the owners are the maximizers of wealth and profit, whereas employees maximize the utility functions. The owners or principal interest lies in increasing the profits by lessening the pay and expenses. While the employees or agents interest lies in getting high pay but working less and putting low efforts provided within the good working environment.

Types of Resistance

Coch and French (1948) were the pioneers to find out the changing levels of resistance (Sandusky, 2012).

Non acceptance

It is also termed as active resistance, real resistance, front stage resistance, formal and direct resistance. It is a form of denial, dramatic and strong reluctance towards the change. In this type of resistance, individual attempts to get back their control over situation by reacting negatively. It also means that employees tend to struggle with the reality and do not want to acknowledge it. These behaviors are mostly the resultants of negative fee8lings which include anger, rage, fear towards the situation (Nakamura & Orth, 2005). It is been observed that employees initial reaction to change is mostly resistance because of their fear for job security and lack of trust in their management (Harding, 2005).

Similarly employees that engage in this type of resistance voice their opposition openly and engage in rebellious activities. They take definite and exhaustive oppositional stance against organizational change. This type of resistance ranges from participating in situation8al to strategic regular maneuvers against change, such as strikes, sabotage, go-slow (Pfeiffer, 2016).

Organization faces many problems due to non-acceptance or active resistance. The front stage resistance increases the cost and delays the change mechanisms. By the shift of researchers approach in understanding of resistance, not as an obstacle of change processes; but a valuable source of information and critique to change plan (Andiopoulos & Dawson, 2009). Studies have started to analyze the organizational change agents and addressing the influence of resistance on change program. They have highlighted that active resistance is strongly influenced by individual predisposition, employee's considerations of cost and benefits of change, communication and their role in change processes. Also the management styles and employees trust in their management affects the severity of resistance (Erwin & Garman, 2010).

Passive resistance

It is also termed as mild resistance, informal resistance, pseudo opposition, subtle resistance, backstage and indirect resistance. It is a silent act of resistance, less dramatic and viewed as false compliance. In this type of resistance, employees pretend ignorance; defame the change process through humor, cynicism or gossip.

It is also characterized as decaffeinated resistance, because it threatens or hurt no one and produces little change (Contu, 2008; Courpasson & Vallas, 2016). They usually hide their opposition behind a façade or benign appearance such as displaying that they are never opposed to it. They usually display their frustration towards change processes through indifference, criticism or inaction. Thus the employees display agreeable type of outward appearance but resistance in backstage. That's why it is also called as resistance through compliance (Pfeiffer, 2016).

It provided insight about how the employees' personality, expectations, concerns differs and how the organization can control these change agent appropriately.

Causes of resistance

The causes of employee resistance highlighted by the studies include the feelings of resentment, frustration, fear of failure and low motivation (Jones et al., 2008). Also it is observed that experienced employees develop a lack of desire to learn new things and prefer stability which results into resistance when they are faced with organizational changes (Hall, 2008). Studies also proposed that uncertainty of future and concern over personal loss are the significant causes of employee resistance towards change. It is also been observed that employees tend to follow the lead of their executives. If they perceive their higher management is unconvinced about the new processes, they learn their behaviors (Smylie, 2010).

Moreover, the employees' ill confidence in their administration and awareness of drawbacks in the change action plan develop resistance. It is also highlighted that resistance is a learned phenomenon, when the employees observed their fellow colleagues to be unsure about the change process; they themselves will imitate those feelings (Creemers, 2011). This is the very first kind of instrument that been developed in Pakistan. It will be open new horizons to future researchers. The study objectives include,

- To evaluate the psychometric properties of the instrument as: resistance to change scale
- It measures the employee's reactions towards organizational change/s in form of resistance
- It is for use to help organizations which consequently would certainly be beneficial for the economy of Pakistan.

Literature Review

Resistance mostly considered in readiness to change perspective but in this study resistance studies as the employee's reaction towards organizational change. Many researches have been done on resistance in western culture but in our culture we have very less work done on resistance as a reaction to change. Therefore, this study is very valuable as it isn't not only contribute to additional literature on these variables as well as it develops culturally valid instrument to measure employee's reaction in form of resistance while facing organizational change.

Also studies examined that presence of unexceptional and circuitous effort leads towards obedience, dialogue and regeneration of invention which is afferent. The studies main focus was to analyze how resistance and compliance respond in different kind of circumstances. According to some experts, casual and circuitous demos of disobedience are indicators of resistance. Another group of researchers believe that some workers get anxious when they are evaluated on their creativity and performance, but with time their resistance can be re-evaluated as compliance. Accordingly there is a difference between these front-stage resistances; infers its subversive potential from mixing open protest with implicit complaisance, and backstage resistance; functions as innocuous appearance of carefully staged compliant behavior (Alvesson, Kärreman & Ybema, 2017).

In organization cultural values and flexibility matters a lot for rest of the personnel. Organizations with inflexible culture have trust issues in employees that result into resistance and do not comply with policies

and rules (Khan, Raza & Mujtaba, 2016).Moreover changes in an organization affects the commitment of the employees. In order to thrive the continuous challenges, an organization have to focus on innovations and cannot afford to have employees with rigid mindset and not adaptable enough towards change. As the organizational change can be larger or smaller in scale, may focus of groups or individual employees, might include one or multiple divisions, or target the whole organizational environment or maybe the entire institute (Nickols, 2016). Consequently Bradutanu (2015) revealed that resistance is affected by and managed through change agents, the culture of an organization, their structure and policies. Also management style, information systems and the organization's economic environment plays a significant role.

Also a quantitative research proposed and analyzed the conceptual relationship between organizational justice and employees' personal resistance to suggested change. In this study, the directors and all employees of the three governments and private sector organizations were considered where the sample size was 1050 employees. Data was collected by means of questionnaires. Result indicated that resistance derives from low motivation for change and incomplete understanding provided by the organization of change processes (Ja'farpoor & Sehhat, 2012).

Similarly a qualitative study in Pakistan's non-governmental organizations revealed a number of variables that inflict resistance to change in their employees. The one hundred percent frequent variable that employees reported to be the cause of resistance in them is the poor communication. The reason provided is that if the change mechanics are top-down and are not properly communicated to them, they are unable to fully comprehend it. Also it also unintentionally sent the message to the employees that the company may not enough trust their employees to share the information of change and they are the ones who would be affected by it. As a result they develop resistance as a defense (Khan, Raza & Mujtaba, 2016).

Furthermore Asian exploratory studies have associated the role of transformational leadership displayed by the organizations with their employees' compliance characteristics. The dimensions of transformational leadership i.e. idealized influence, individual consideration, motivation through inspiration and intellectual stimulation significantly relates to employees reaction of compliance. As transformational leadership goal is to enhance the motivation of their employees. Thus when an organizational upper management adopts these dynamics they motivate and influence their employees to readily accept the change. It also helps in controlling their uncertainties that arises from change process at bay (Al-Tahitah, Abdul Muthaliff, Abdulrab & Al-Maamari, 2018).

Henceforth international as well as indigenous literature depicted that change is a subtle process that require care of organization's as well as employee's needs. The effectiveness of change and preventing resistance largely depends on the adopted communication strategy and top management confidence given to their employees. The need for change must be understood by all the members; that could be possible by highlighting to the employees about the cost and time invested in change initiative, ensuring and demonstrating them that their procedures would be modified but in best possible way. Also nurturing a culture that has adaptability and accepting ability is also needed to enhance compliance. For this purpose pre and post change trainings also helps to update employees' skills and their apprehensions regarding change processes (Erkutlu, 2011). Therefore the present study aimed to develop an instrumental measure to recognize compliance and resistance in employees.

Methodology

It explains processes about data collection and data analysis. The aim to develop this instrument is to measure employee's reaction as "resistance" while facing organizational change in the firm. Introduction and literature defines the importance to develop resistance to change scale (RCS). Additionally it provides explanations about sample, sampling techniques, other instruments used in the study, procedure and statistical analysis been used to clearly define objectives of this study.

It contains two stages those are developmental stage and validation stage. Firstly, developmental stage of scale contains three main steps those are Item generation through literature review, in-depth-interviews and thematic analysis. Through content validity index taken expert's view of preliminary blueprint and pre-testing psychometric properties taken for pilot study was analyzed.

Second step scale's validation process contains six main steps: sample explanation, sample size, research material and design, procedure, other instruments used in study and planned statistical analyses.

Development Stage

Items Generation

Items for scale development derived from literature review, in-depth-interviews and content validity index. Through expert's reviews a test blueprint and preliminary assessment developed.

Literature Review

Original and global literature reviewed comprehensively regarding employee's reaction as resistance to organizational change. Previous relevant literature to all related variables and scales was also measured to get the right calculations.

In-depth Interviews

Through purposive sampling technique eight individuals of both genders with five and more years work experience from four different organizational sectors as industrial, educational, banking and teaching were selected. To examine participant's reaction in perspective of resistance towards organizational change interviews were conducted with all individuals separately. Every interview was recorded, transcribed and analyzed with ethical code of conduct. Interview contains open-ended questions such as an employee, how you react when faced organizational changes? But later participants were requested to answer the questions in detail. They were probed and encouraged accordingly such as *it could be anything that you have faced; try to remember a change that you have faced in your organization in past*…; *that's understandable. But can you explain your emotions of fear and insecurity…; basically you want the…; can you elaborate it….; try to focus on your reactions at that time*… The main focus of the researcher was on probing and relevant questions to resistance to change, its nature, past experiences, impact of reaction on personal and professional life etc.

Thematic analysis used to generate themes and items by analyzing the in-depth interview transcripts of eight participants.

Table 1: Main Themes

Sr. No	Themes	Sub Themes
1	• **Insecurities**	○ Adjustment issues ○ Psychological resilience ○ Pressures ○ Uncertainty ○ Fear of workplace ○ Uncomfortable ○ Distress ○ Emotional reactions ○ Loss of power

2	• **Fear of adjustment**	○ Fear of loss ○ Individual characteristics ○ Capacity ○ Personal goals ○ Lack of support
3	• **Autonomy**	○ Social relations ○ Work family conflict ○ Cost-reward ○ Status quo ○ Political and cultural deadlocks ○ Involvement
4	• **Creative thinker**	○ Compatibility ○ Advocating ○ Cost reward ○ Trainings ○ Challenge seeker ○ Task oriented ○ Compatibility

Insecurities

The findings shows that first theme of resistance to organizational change is fear or insecurities. According to participants employees are the main asset of any company who are working for the long run benefits of the company. So, when management make changes in their policies that may affect the satisfaction and routine of the employees it makes them insecure and dissatisfied.

"Organizational change can raise questions about job security and satisfaction or survival with new management. Because every new management have their own behavior with employees and they may be directly hit you or may change your comfort level within organization or may have communication gap with new ones. Its human nature that no one wants to 2leave theirs comforts level" (P 2)

Fear of adjustment

In this global era where every organization is trying to get more benefits and competitiveness in markets they have to make changes according to the needs of time. When organizations make changes for their betterment that can decrease the employee's productivity and performance.

"If the organizational changes consist of more sick rules then for sure the level of production from employee's side will be reduced and resistance would take place" (P 4).

Any type of change in the organization without informing or getting suggestion with employees can make it doubtful for the employees and this communication gap can; leads towards negativity and adjustment issues of the workforce.

"My first reaction is I doubt the change that has to occur. Mostly because of the fact that maybe the change will affect my job, makes me uncomfortable. The usual reaction is why the change must be implemented and if it is worth the efforts. The change may affects my daily routine and it usually upsets me as I am a meticulous person" (P2.)

Autonomy

The term autonomy refers to self-directive freedom, in which employee wanted to be in comfort zone and do not accept change suddenly. Any sudden change that may affect the work-family life of employees like shifting, late work hours etc, it can affect the autonomy of employee that can lower the employee's performance and make them resistant to adopt changes.

"Most of the organizations have some issues regarding late sitting, poor management, politics etc. In this scenario your family time is almost dead. So from my opinion you should spend some quality time with family. It will refresh you also you can understand expectations of your family and friends. If any organizational change affects the quality and quantity of my family relationships then I would be reluctant to adopt it"(P 6).

Creative thinker

Participants explained that when organizations changes its policies for the competitiveness and better productivity and it is responsibility of the work force to act accordingly to be a professional. Resistant employee can be beneficial than of compliant employee, if he/she is creative and innovative with latest technical and growing ideas. Administration and executives always gave importance and power to their loyal and motivated employees in spite of obedient rule follower employee.

"If the changes include such technicalities and procedure that is out of my skill then obvious reaction would be reluctance to adopt it. New things always generate the feelings of fear and u2ncertainty of unknown" (P 7).

According to AERA (2002) the test blueprint confirms about test content when it signifies the content domain. Hence strong correlation ensured in blueprint's content and the anticipated construct. Lastly through literature review, in-depth interviews of eight employees and content validity index (CVI) researcher developed 28 self-reported statements which represent resistance. Preliminary blueprint assessed by the experts in terms of relevance, ambiguity, language, accuracy, age appropriateness etc. Finally after expert's feedback items were pre-tested on small group of sample.

Experts Review of Preliminary Blueprints

The preliminary blueprint of resistance to change scale with 28 items checked by fifteen professionals of psychology content experts with professional research skills. To evaluate the adequacy and signify content of preliminary blueprint evaluation reports distributed to the experts. Then requests experts to evaluate and examine it on evaluation form based on 5point Likert Scale (1=strongly disagree to 5=strongly agree) for analyzing content validity index (CVI) to develop resistance to change scale. Moreover items with ratings of 3 and above considered having sufficient level of validity and request experts to suggest changes in the items having less than 3ratings. The experts suggestions for changes in items and the column in the form stated, if anything missing in blueprint according to the resistance to change scale or experts wanted to add something related to scale's construct was also considered in revision of scale.

Furthermore, language experts requested to make changes in the preliminary blueprint in terms of language, grammar, content and relevance of all 28 items of the scale. The experts suggests six language changes in resistance to change scale as: item 1 (the most common reaction of every employee while facing organizational change is fear or insecurity) became (while facing organizational change my reaction is of fear); item 4 (with organizational change, I may have to step out of my comfort zone) became (with organizational change, I may have to step out of my comfort zone and that makes me reluctant to accept it) etc.

Content Validity Index

The resistance to change scale was given to 15 experts in order to calculate content validity index (CVI) of both scales. 5 experts were provided with the item statements to analyze the relevance to content, 5 other experts were requested to analyze the relevance to clarity whereas; 5 experts were to determine the relevance to factors for scale. Further Item Content Validity Index (I-CVI) was also calculated for every item by dividing the number of agreements to the total number of experts. As suggested by literature, if the total number of experts are 5 or less than 5 than I-CVI should be 1 (Lynn, 1986).

CVI for Resistance to Change Scale

Content validity index of resistance to change scale is measured in terms of relevance to content, clarity and factors which is as follows:

The Scale Content Validity Index (S-CVI) for relevance to content is as below:
S-CVI = Total Item CVIs / Total No. of Items
S-CVI = 26 / 28
S-CVI = 0.92

The Scale Content Validity Index (S-CVI) for relevance to clarity is as below:
S-CVI = Total Item CVIs / Total No. of Items
S-CVI = 26.2 / 28
S-CVI = 0.93

The Scale Content Validity Index (S-CVI) for relevance (Cognitive Rigidity, Fear of Failure, Autonomy, Reluctance to Lose Control, Intolerance to Adjustment, Vested Interest) to factors is as below:
S-CVI = Total Item CVIs / Total No. of Items
S-CVI = 26.8 / 28
S-CVI = 0.95

Therefore, CVI of the scale is acceptable and adequate which permits us to utilize the scale for pilot testing (Lynn, 1986). Finally, 25 items were carefully chosen for final version of Resistance to change scale. Items have 100% independent experts agreement included in the instrument and approximately three items were deleted in the final blueprint of resistance to change scale.

Pre-testing

The scale after revision, evaluation and finalization administered on 30 white collar employees (*N=30)* from represented targeted population (*M*=39.10, *SD*=7.55). The reliability and validity were measured through psychometric properties as mentioned below. The results and findings from pilot data make some valuable additions in the RCS. The psychometrics properties of 30employees Includes Descriptive statistics, reliability and validity were examined in this field testing as convergent validity of RCS with CRS is ** p<.01 and discriminant validity with RCS and PSS is **p<.01.

Table 2: Reliabilities of Scales

Scales	No. of items	α
RCS	24	.90
CRS	25	.94
PSS	10	.83

Note. α = Cronbach's alpha, RCS=Resistance to Change Scale, CRS=Change Resistance Scale, PSS=Perceived Stress Scale

Validation Process

Participants

To evaluate the psychometric properties of RCS 200 white collar employees (*N=200*) with 110 males and 90 females included in the sample. A study confirmed that when results have high loading marker variables as >.08 then 150 cases should be sufficient and not require to give larger sample size as solution with lower loadings (Tabachnick, Fidell & Ullman, 2007).Similarly a study claimed that one sample should be five times the number of variables (Bryant & Yarnold,1995).The sample was selected from four organizational sectors as industrial, banking, education and medical; employees were divided in three categories according to their designations as executive managers (n=82), middle management (n=64) and operational employees (n=54).The data was collected from employees having atleast5 years and above job experience and those having less than 5 years of services excluded from the study.

Design

In this study Correlational research design used to evaluate psychometric properties of Resistance to Change Scale.

Materials

The testing materials consisted of informed consent, demographic information form, Change Resistance Scale (Conner, 2011), Perceived Stress Scale (Cohen, 1983), Resistance to Change Scale (Rasheed, Atta & Sohail, 2021-appendix).

Procedure

The aim of present study is to develop and validate the resistance to change scale. The research proposal was approved by Research committee, Lahore College for Women University Lahore, Pakistan (LCWU). In order to collect data 200white collar employees with minimum 5years work experience included in the sample and initially permissions were taken from concerned departments of companies and employees to collect right data. Initially, researcher described the aims and purpose of the study and debriefs the participants about their rights and confidentiality. They have right to quit anytime without any explanation whenever they felt uncomfortable. All the participants signed the consent form to participate in the study and saved all their rights for confidentiality and anonymity was highlighted. Instructions about filling the questionnaires were given to the participants and request them to fill the demographic form containing gender, age, qualification, marital status, job designation etc. Then administration of three scales were followed i.e. Change Resistance Scale (Conner, 2011), Perceived Stress Scale (Cohen, 1983), Resistance to Change Scale (Rasheed, Atta & Sohail, 2021-appendix). However the average time to fill all three questionnaires was 15-20 minutes but participants were free to take their time comfortably.

Description of Measures

Resistance to Change Scale

RCS (Rasheed, Atta & Sohail, 2021-appendix) is a 25 items inventory of employee's reaction of resistance towards organizational change. It is composed of self-reported statements of employees. This scale was designed for the use in adult population who are currently working in any organization. It has 5 point Likert scale (1=strongly disagree to 5=strongly agree). Scoring can be done by totaling the answer of each item which ranges from 25 to 125. It is basically designed to provide the total score of resistance among employees regarding organizational change/s. High score represents high risk of resistance which may results in failure of successful change implementation.

Change Resistance Scale

CRS (Conner, 2011) is a 25 items scale designed to measure human aspect of resistance factor in organizational adaptation to change. It can be used as a diagnostic tool to determine overall resistance and its contribution in the implementation of change. Conner (2011) highlighted the usage of this inventory during initial planning, before change process is initiated and also after change process is started. It could be used to assess early potential for resistance problems, employees' predisposition traits towards resistance, analyze resistance and take precautionary measures during change process by identifying nature of problems regarding resistance of employees. Further 25 items of this inventory profiles perceptions of employees towards organizational change. These items correspond to twenty five ways in which people can respond to change. It has 10 point rating scale. Scoring can be done by total the responses of each items and then dividing it by 25. Then the answer should be multiplied by 10 to get the final answer of resistance factor. High score i.e. 66 and above is called danger, which represents the high risk of disruption and failure of change implementation process. Moderate risk is also called caution where score lies from 35 to 65, which represents the guarded prognosis for change implementation. Low risk is also called opportunity range where scores lies below 35, which represents a positive prognosis for successful implementation of change (Conner et al., 2004).

Perceived Stress Scale

PSS (Cohen, 1983) is a 10 items scale designed to assess level of personal stress. This inventory helps to understand how various situations and circumstances affects one's feelings and thoughts, thus resulting into stress. The items in this scale analyze the stress level of the last one month. It has 5 point Likert Scale (0=never to 4=very often) where scores can be range from 0 to 40. Scoring can be done by firstly reversing the scoring of four items i.e. 4, 5, 7, 8 and then totaling the responses of each items. High score represents high level of perceived stress. Scoring which range from 0-13 falls in category of low perceived stress, 14-26 means moderate perceived stress and 27-40 means high perceived stress (Cohen et al., 1983).

Statistical Analyses

To enter and analyze the data, SPSS Version 20.00 was used. The statistical analysis package of Resistance to Change Scale included descriptive statistics of demographic variables, exploratory analysis to assess content validity of scales, factor analyses of items of RCS to identify underlying structure of factors, measurement of Cronbach's alpha to assess internal consistencies, convergent and discriminant validity through correlation matrixes.

Results

This section includes the results of present study. Along with the demographic information form, scale was developed by the researcher and two scales were used to assess the psychometric properties of the developed scale. Change Resistance Scale (CRS) was used to assess employee's adaptation towards organizational changes. Lastly Perceived Stress Scale (PSS) was used to analyze how various situations affect employees' feelings and perceived stress.

This part is comprised of two sections. First section includes the description of demographic variables of research sample; while the second section encompasses psychometric properties of newly developed Resistance to Change Scale (RCS).

Participants

The research participants of present study were approached from educational, industrial, medical and banking sectors organizations. Table 3 and Table 4 show the demographic characteristics of the sample in

terms of frequency, percentage, mean and standard deviation. The demographic variables included age, gender, qualification, designation etc.

Table 3: Descriptive Statistics of Demographic Variables (N =200).

Characteristics	*F*	*%*
Gender		
Male	110	55.0
Female	90	45.0
Marital Status		
Single	56	28.0
Married	123	61.5
Divorced	12	6.0
Separated	9	4.5
Organization		
Industrial	83	41.5
Banking	36	18.0
Education	52	26.0
Medical	29	14.5
Qualification		
graduate	92	46.0
Postgraduate	108	54.0
Designation		
Executive Management	82	41.0
Middle Management	64	32.0
Operational Employee	54	27.0
Employment Status		
On Contract	97	48.5
Permanent	103	51.5

Table 4: Summary of Demographic Characteristics (N =200).

	M	*SD*
Age	38.38	7.36
Years of Service	7.69	3.46
Total Work Experience	12.67	6.12
Monthly Income2	70500.00	66998.31

Note. M=Mean, SD=Standard Deviation

Table 3 show that out of 200 participants most of them were males (n=110). The table also shows that most of the participants were married (f=123) and working in industrial organizations majorly (f=83). The majority of participants were post graduated (f=108) with executive management posts (f=82) and have permanent positions (f=103). Furthermore table 4 shows that mean age of participants was 38.38 and they have mean total working experience of 12.67 years, while their mean of years of service on the current post was 7.69 with mean monthly income of 70500.00.

Psychometric Properties of Resistance to Change Scale (RCS)

Content Validity

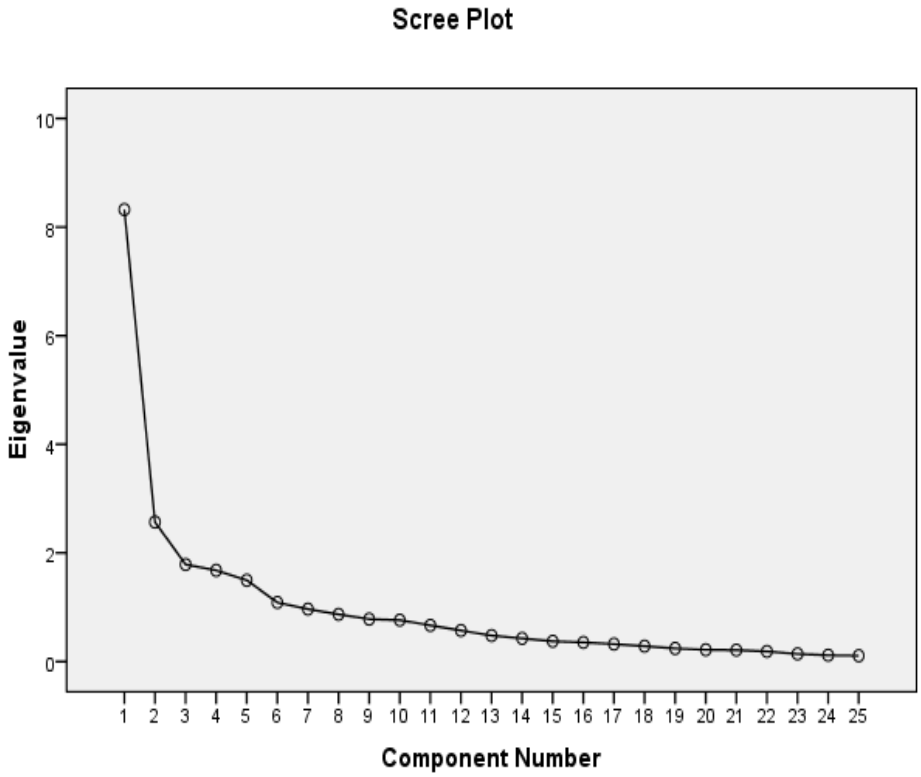
In order to determine the psychometric properties especially content validity of scales, factor analysis was administered. This analysis helps the researcher to better understand the scale and what it is measuring. Further factor analysis helps in determining inter-item correlation. A principle component analysis followed by Varimax rotation for 200 participants' responses of both scales was carried out for assessing

factorial validity. Eigen values were considered to be greater than 1 in order to retain factors of the scales. To identify structure and number of factors in both scales, Eigen values from Scree plot was considered. Other psychometric properties of both scales such as internal consistency of each factor, internal consistency of overall scales were also assessed.

Factor analysis of RCS

The aim of factor analysis was to reduce the items of scales into factors. Further exploratory factor analysis was administered with Kaiser-Meyer-Olkin KMO and Bartlett's test of specificity on 25 items of RCS. To get the clear picture of factors principle component and Scree plot was used. Factors which have Eigen values greater than 1 and clearly observed in Scree plot are retained. After factor analysis, 24 items were retained on 6 factor solution for Resistance to Change Scale. KMO value for Resistance to Change Scale was .79 at p<.000. Below is the Graph 1 of Scree plot of RCS.

Graph 1



Graph 1. Scree Plot for Factor Structure of Resistance to Change Scale on 200

Graph 1 show six factors of RCS with cross loading items from .50 and above. One item was excluded from the scale of 25 items because it did not load on factor analysis. With the help of extraction method, six factors were concluded according to the theme and content of each factor items. Factor 1 has 8 items, factor 2 has 6 items, factor 3 has 4 items, factor 4 has 3 items, factor 5 has 2 items and factor 6 has 1 item.

Further Table 5 illustrates the factor loadings of each factor items of Resistance to Change Scale.

Table 5: Factor Loadings of RCS with Varimax Rotation (N=200).

Sr. No.	*Item No.*	*F1*	*F2*	*F3*	*F4*	*F5*	*F6*
1	20	.86					
2	23	.75					
3	21	.69					
4	22	.68					
5	25	.56					
6	17	.54					
7	24	.53					
8	13	.51					
9	1		.82				
10	2		.74				
11	8		.62				
12	7		.62				
13	11		.55				
14	12		.53				
15	10			.79			
16	6			.73			
17	14			.64			
18	9			.57			
19	4				.76		
20	3				.72		
21	5				.69		
22	15					.79	
23	16					.69	
24	19						.85

Note. Factor loading >.50 have being boldfaced. F1=Cognitive rigidity, F2=Fear of failure, F3=Autonomy, F4=Reluctance to lose control, F5=Intolerance to adjustment, F6=Vested interest

Eigen Values for Factors of Resistance to Change Scale (RCS)

Table 6: Eigen Values and Variance Explained by 6 factors of Resistance to Change Scale (RCS)

Factors	Eigen Values	% of Variance	% of Total Variance
1	8.32	33.29	33.29
2	2.57	10.27	43.56
3	1.79	7.15	50.71
4	1.68	6.72	57.43
5	1.49	5.99	63.41
6	1.09	4.35	67.76

Table 6 shows Resistance to Change Scale's six factors factorial structure which has also been indicated in Scree plot. Factor 1 has Eigen value of 8.32, factor 2 has 2.57 Eigen value, factor 3 has 1.79, factor 4 has 1.68, factor 5 has 1.49 and factor 6 has 1.09 Eigen value. These six factors explain 33.29, 10.27, 7.15, 6.72, 5.99 and 4.35 percent variances respectively. Moreover each factor was given a label according to the theme and content of its corresponding items.

Factors Description of Resistance to Change Scale (RCS)

Through in-depth discussion, researcher assigned each factor of RCS with a label on the basis of the theme and content of its respective items.

Factor 1: Cognitive Rigidity

The first factor of resistance scale includes 8 items. The shared themes of these items were denial of readily acceptance of change, feelings of uncertainty, distress, uncomfortable and fearfulness of work and general life being affected. The items revolve around the theme of mental inflexibility majorly because of not knowing what to expect from possible changes.

Factor 2: Fear of Failure

The second factor of RCS includes 6 items. This factor was labeled as fear of failure because the common themes that emerged from the items were emotional reactions of insecurities, anger, discordance with perceptions and fear for survival.

Factor 3: Autonomy

The third factor of this scale includes 4 items which illustrates self-sufficiency and self-governance in work characteristics. Quality and quantity of family and work relationships, work politics, timings, rules and regulations were emerging themes.

Factor 4: Reluctance to Lose Control

The fourth factor consisted of 3 items which shows reluctance to come out of comfort zones, give up old habits, questioning the change and its importance and lastly making efforts to halt the implementation.

Factor 5: Intolerance to Adjustment

The fifth factor has 2 items which highlighted the themes of focusing on ethical nature of change process and questioning the training as well as one's capacity to deal with changes.

Factor 6: Vested Interest

This factor includes only 1 item that illustrates expression of personal disapproval and expectations when change is not in-line with personal goals or values.

Discussion

The present study is about the development of scale Resistance to Change Scale. There are many factors that may affect the performance and capabilities of the employees. Further, management of an organization must possess the cognitive skills and experience to manage the varying degree of uncertainties and level of tolerance when faced with organizational change (Lane & Klenke, 2004) As stated in World Bank group-policy 2019 that employees are the main strength of any organizations although there are many factors that may affect the firm's productivity, market competitiveness and economic solidity. Organizational change and high level of resources beyond the economy are very important for Pakistan's rapid economic growth. According to a report there are many factors that may affect the organizational production rate, economic stability and market's value as employees are the main asset of any organization. A study held in Yemen in which they claimed that change implication takes time and struggle and if administration does not show patience and communication then results could be in form of resistance. According to Ahmad and Gelaidan (2011) population in Asia does accept the change suddenly and they showed active resistance though this problem can be addressed through their political leaders, organization's administrations and human resource department.

In development procedure of Resistance to Change Scale four main sectors banking, Industrial, Education and medical sectors were invited to participate in the study. In fact, there was not a single specific scale to measure the level of resistance in the employees to analyze their behavior about changing policies. Current study was conducted in three main phases; In-depth interviews, Item generation and validation of the scale. This study been conducted on 200 participants from 4 different sectors (White Collar employees) of Lahore city, Pakistan. The most hectic part of the study was collecting data as it takes 14months to collect valid and accurate data from white collar employees. In psychometrics process Varimax rotation factor analysis been used to find out the main factors of scale. The Resistance to Change scale has 6main factors as; Cognitive Rigidity, Fear of Failure, Autonomy, Reluctant to Lose Control, Intolerance to Adjustment and Vested interest.

To calculate psychometric properties of the scale's convergent validity of the Resistance to change scale, measure the scales with same construct but from different instruments. Change Resistance Scale was used to measure convergent validity coefficients of scale. The discriminant validity of the scale RCS was measured with opposite construct instruments as Perceived Stress Scale. As the strong psychometric properties of these scale indicates that Resistance to Change Scale can be used in further studies. These scales can be helpful for organizational psychologists, researchers and students. It will be helpful for human resource department of any organization before recruitment and policy making. So they can analyze the employee's according to their needs and demands that may positively affect upon the performance of the employees that may leads towards high level productivity of the firms.

Limitations

- The major limitation of this study was data been collected from educated and highly qualified population (white collar employees).
- The data was very short to validate the scale.

Recommendations

- The further research work should be done on rest of the other part of the population to find out the economic impact upon the performance of employees.
- Further studies should be done on large population to analyze correctly.
- It is recommended for future researchers to work on it to develop more valid and reliable instrument.

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Appendix 1

Resistance to change Scale (RCS)

As an employee you face with many organizational changes. Below are some statements about your reaction towards any organizational change. Consider each of the following statements about your reaction and readiness for change in your current work situation. Choose a number that fairly reflects your views for each of the following items.

1=Strongly Disagree	2= Disagree	3= Neutral	4= Agree	5= Strongly Agree

1) While facing organizational change my reaction is of fear or insecurity.
2) Organizational change raises questions about my survival with new management.
3) With organizational change, I may have to step out of my comfort zone and that makes me reluctant to accept it.
4) I will submit memos regarding bad effects of organizational change.
5) "Why this change" will be my first and foremost reaction.
6) I will question any organizational change and its implementation.
7) If the organizational change is against my thoughts, then I will get uncomfortable and reluctant.
8) If the organization change does not lead to raise factor, I will switch the job.
9) I will resist the change that causes issues regarding late sitting, poor management, politics etc.
10) If any organizational change affects the quality and quantity of my family relationships, then I would be reluctant to adopt it.
11) As an employee, I feel anger and fear when faced with organizational change.
12) If I will be suffering from transition period, then my mind will have some fearful thoughts.
13) Initially I deny accepting the change.
14) If the organizational change consists of more sick rules, then for sure the level of production from employee's side will be reduced and resistance would take place.
15) If organizational changes are not ethical in nature, then I would talk to upper management.
16) If the changes include such technicalities and procedure that is out of my skill then my obvious reaction would be reluctance to adopt it.
17) New changes always generate the feelings of fear and uncertainty of unknown.
18) If I find change not acceptable then I with other members who think in the same line, we will plan and raise the voice in collective yet righteous manner.
19) My first reaction is I doubt the change that has to occur.
20) Mostly I fear that change will affect my job and make me uncomfortable.
21) My usual reaction is "why the change must be implemented and if it is worth the efforts".
22) If the change affects my daily routine, then it would upset me as I am a meticulous person.
23) The instigation of organizational change makes me uncertain.
24) I resist the change when I don't know what to expect and how to adapt to it.

Scoring:

Total the items of respective subscale. Higher the score will determine the dominant subscale for everyone.