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# PSYCHOLOGICAL EMPOWERMENT, COGNITIVE FLEXIBILITY, AND WORKFORCE AGILITY IN EMPLOYEES

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## ABSTRACT

*The current study was aimed to explore correlations between psychological empowerment, cognitive flexibility, and workforce agility in the employees. It was hypothesized that psychological empowerment and cognitive flexibility would be positively correlated with workforce agility; both would be able to significantly predict workforce agility, and that would be gender differences in psychological empowerment, cognitive flexibility, and workforce agility. For data collection, The Psychological Empowerment Scale (Spreitzer, 1995), Cognitive Flexibility Inventory (CFI) (Dennis & Vander, 2010), and Workplace Agility Scale (Muduli, 2013) was employed on the 200 employees which were recruited through purposive sampling technique. For the purpose of data analysis, the Pearson correlation, multiple regression, and independent sample t-tests have been used. Findings from the study revealed a positive relationship between the psychological empowerment, cognitive flexibility, and workforce agility. Furthermore, Psychological empowerment and Cognitive flexibility were found to positive predictor of Workforce agility. Besides this, the independent sample t-test revealed that men have greater cognitive flexibility than women. These findings emphasize the need for organizations to gear up for the implementation of policies aimed at psychological empowerment and cognitive flexibility in order to achieve workforce agility.*

***Keywords.*** *Psychological empowerment, Cognitive flexibility, Workforce agility, Employee*

## INTRODUCTION

Today organizations are constantly challenged by uncertainties, disruptions in technology, and transformations in their structure. Such challenges require employees who can adapt and perform proactively, and become valuable assets for the company. Workforce agility refers to the ability of individuals to quickly-change their skills, focus, and behavior to meet new requirements and this is becoming one of the most important factors for determining organizational resilience (Alviani et al., 2024). Workforce agility is the skill and quality that make up workforce agility include a certain disposition, flexibility, endurance and a learning orientation that help people to be able to change as per the requirements of the organizational changes (Tessarini Junior & Saltorato, 2021; Alviani et al., 2024). At the organizational level, a psychotherapeutic climate, leadership empowering, job redesign, result in a flexible way by which conditions agile behavior is created (Fitriana et al., 2025; Khattak et al., 2025; Baraei & Mirzaei, 2020). At the individual level, attitudinal change, belief in one's own capacity, and a strong orientation towards learning are the

most usual factors (Varshney & Varshney, 2024). Muduli and Choudhury (2025) see that the nurturing of an agile mindset, digital skills, and behavior of sharing knowledge both contribute to an increase of technology adoption in Industry 4.0-type environments, suggesting workforce agility as a driver of organizational capability under the condition of disruption. In terms of theory, according to the Dynamic Capabilities Theory (Teece & Pisano, 1994), agility is the human-level equivalent of organizational sensing and reconfiguration, whereas the Theory of Planned Behavior (Ajzen, 1991) demonstrates how attitudes, perceived control, and organizational norms together influence agile behavior.

Cognitive flexibility essentially promotes the adaptive behaviors that workforce agility demands. The findings of Tiara et al. (2023) indicated that there were significant positive correlations between growth mindset, cognitive flexibility, and workforce agility within the same sample. This observation implies that the mental structure facilitating flexible thinking and the set of behaviors characterizing agility are very much interconnected. Similar evidence from parallel fields substantiates this: cognitive flexibility has been associated with performing adaptively under constraint (Ouellette et al., 2024) and with learning agility (Egner et al., 2024), both of which are conceptually quite close to workforce agility as a more inclusive concept. Altogether, these findings indicate that psychological empowerment and cognitive flexibility are two different but positively related aspects of workforce agility, thereby advocating the necessity of their investigation as separate variables.

However, agility cannot be developed in a psychological vacuum. In many ways, employees who produce agile results are also empowered: they feel their work is meaningful, they rely on their own skills, they have the freedom to work independently, and they think their work brings results. These beliefs make up psychological empowerment, a concept that is at the origin of job satisfaction, less burnout, and organizational commitment (Bouche et al., 2025).

Psychological empowerment is a motivational state in which a person simultaneously experiences four different cognitive states: meaning (the work is personally important), competence (one's ability to do the work), self-determination (one's free to do the work in the way one wants), and impact (feeling that the work will have an impact) (Siegall & Gardner, 2000). In fact, empowerment is not only a matter of structure, but rather it is made up of the perspective that employees have about their work (Monje-Amor et al., 2021; Desta & Mulie, 2024). Transformational and participative leadership styles mostly energize the feeling of meaningfulness and also the feeling of impact by the way they spread the vision and call the employees to act (Steinmann et al., 2018; Vu et al., 2025), whereas trust and openness as culture supply the social settings without which empowerment cannot start (Iddrisu, 2025). On a personal level, internal locus of control, self-esteem and conscientiousness are factors through which experiencing empowerment becomes strengthening of self-determination and sense of competence (Llorente-Alonso et al., 2023; Botha & Dahmann, 2023) Through results of large-scale study, it has been found that empowerment has the ability to produce very positive outcomes which include a person's satisfaction with work, their decision to stay with the organization, and their innovative behavior with effects being even stronger in Asian companies and health care organizations ( Sagheer & Qureshi, 2023; Gu et al., 2022; Yasir et al., 2021). Importantly, empowerment is working as a mediator and it is connecting the structural antecedents with the distal performance and agility outcomes (Khan & Ali, 2023; Hernawaty & Syahrani, 2022).

In fact, the relationship between psychological empowerment and workforce agility is considered to be the strongest pairwise connection in this literature. For example, Amanda et al. (2024) showed that empowerment alone explained 56.2% of the variance in workforce agility, which is a huge effect and definitely indicates how deep is the association between the two concepts. Similarly, Shetty et al. (2023) revealed that the route from empowerment to employee

performance significantly involved agility, thereby inferring that the advantages of empowerment for performance are partially due to its ability to foster agile behavior. Putri and Mangundjaya (2020) introduced a new factor changing the game by revealing that empowerment deepens the relation between organizational learning and agility, on the other hand, Hernawaty and Syahrani (2022) regarded empowerment as the main channel through which leadership style and culture impact producing agile behavior in organizations.

The current research explores all three factors simultaneously: psychological empowerment, cognitive flexibility, and workforce agility. Based on Self-Determination Theory and the Conservation of Resources framework, employees whose needs for meaning, competence, and autonomy are fulfilled create psychological resources that lead to their flexible thinking. This, in turn, leads them to exhibit agile behaviors at work.

This research is based in Pakistan, an emerging market where the organizational norms are predominantly collectivist and yet the workforce agility literature has paid very little attention to this type of cultural context (Khan & Ali, 2023). Thus, the study adds to the pool of culturally diverse sources.

There has been less research on psychological empowerment and cognitive flexibility, but their connection makes sense from a theoretical point of view. The resource-based rationale is quite simple: those employees who consider their work to be significant, view themselves as efficient, and experience freedom of choice develop psychological resources that liberate them from the kind of threat-focused self-regulation which leads to rigid thinking. Once the load of self-doubt and anxiety about procedures is lifted, the brain capacity for exploratory and flexible thinking will be activated (Malkoc & Mutlu, 2019). Rathore et al. (2024) presented direct empirical evidence of this by demonstrating that cognitive flexibility is a positive predictor of empowerment in youth. On the other hand, Indrayanti (2024) revealed that empowerment serves as a mediator in the relationship between flexible work arrangements and innovative behavior, which is a cognitively flexible outcome. These results, even though not always written specifically in terms of the empowerment-flexibility link, fit well with the idea that the two constructs are positively associated with each other.

So far, the academic literature has not come up with a research that deals with all three elements together, within the same framework, and in a cultural environment other than Western one. Features of psychological empowerment, cognitive flexibility, and workforce agility had so far belonged to separate streams of the research, with pairwise relationships mostly getting the spotlight one at a time. Taken as a whole, the story, how empowerment and cognitive flexibility combined relate to agility, and if their individual impacts are different, has been mainly overlooked. The missing part is large, especially since most of the existing evidence comes from Western and developed-economy settings, where work organizational norms, power relations, and the social significance of worker autonomy differ substantially from those of collectivists, hierarchy-oriented settings like the ones common in Pakistan (Khan & Ali, 2023; Saeed et al., 2022). Besides the big question of whether the relationships found elsewhere also exist here, and to what extent, this is also a matter carrying real practical importance for the local businesses.

**Rationale of the Study**

Over and over again the research has been highlighting the importance of staff get empowered mentally, have high cognitive flexibility, and the agile workforce in order that they enjoy well-being, and become engaged and the performance of the organization become well. The prior studies have revealed that psychological empowerment is positively associated with job satisfaction, mental health, and employee retention, particularly in healthcare and service industries (Bouche et al., 2025; Gu et al., 2022). Similarly, cognitive flexibility has been reported to be linked with learning, goal-directed behavior, emotional regulation, and innovative work behavior, as a key adaptive trait (Egner & Siqi-

Liu, 2024; Malkoç & Mutlu, 2019; Indrayanti, 2024). Moreover, workforce agility has been reported to as a factor linked with effective adoption of technological and managerial changes that are impacting organizational success in which psychological empowerment often acting as a mediator or moderator in these dynamics (Amanda et al., 2024; Shetty et al., 2023; Muduli & Choudhury, 2025).

Despite the years of research, critical gaps remained in the existing literature. The prior studies have majorly examined these constructs alone, ultimately neglecting their combined and interactive effects. Moreover, the predominant focus has been paid to Western or developed economies, leading to a lack of evidence on how these variables function within Pakistani work culture, as emerging economies, where socio-cultural factors are strongly shaping workforce behaviors (Khan & Ali, 2024; Siddique et al., 2024). Addressing these gaps, the present study aimed to investigate psychological empowerment and its relationship with two key employee outcomes: cognitive flexibility and workforce agility. By conducting the present study in Pakistan, it is contributing to contextualize these relationships within a non-Western culture and emerging economy.

**Hypotheses of the Study**

- There would be positive relationship between psychological empowerment cognitive flexibility and workforce agility in employees.
- The psychological empowerment, cognitive flexibility would be positive predictors of workforce agility in employees.
- There is likely to be gender differences in terms of psychological empowerment cognitive flexibility and workforce agility in employees.

## Method

This section includes research design, sample and sampling technique, assessment measures, operational definition, procedure, and ethical considerations for this study.

### Research Design

A correlational cross-sectional research design was employed to study the relationship between psychological empowerment, cognitive flexibility, and workforce agility in employees.

### Sample and Sampling Technique

The sample size of *N*=200 was recruited through non-probability purposive sampling to ensure the selection of specific participants who met the research criteria. The data was collected from employees of different industries including men (*n*=108) and women (*n*=92) on the behalf of they must be currently employed as managers and head of the departments and they must be proficient in the language of the study materials while participants with any kind of physical or psychological problem and with a history of substance abuse were excluded.

### Assessment Measures

#### Demographic sheet

A demographic sheet is a tool for gathering participants' essential background data that is used as a basis for analysis and interpretation of the findings of the research. It contains demographics such as gender, age, educational level, marital status, employment status, place of residence, Family type, and general health rate. This information assists in understanding results and revealing trends in the various sections of the population.

#### Psychological Empowerment Scale (Spreitzer, 1995)

The scale was developed by Spreitzer (1995) which contains 12-items that aims to evaluate the four psychological empowerment dimensions in the workplace: the experience of meaning, competence, self-determination and impact. A 7-point Likert scale with 1 (very strongly disagree) to 7 (very strongly agree) is used to rate the items. It shows very good psychometric properties, with test-retest reliability and validity estimates of approximately 0.80, indicating high reliability and construct validity (Spreitzer & Quinn, 2001).

#### Cognitive Flexibility Inventory (CFI) (Dennis & Vander, 2010)

The scale was developed by Dennis & Vander (2010) which contains 20-Items to assess three

dimensions of cognitive flexibility: the skill of recognizing various multiple alternatives for life situations, the skill of creating various numbers of answers for difficult situations, and the disposition to visualize circumstances as being controllable. It has two subscales; (i). Alternatives (ii). Control. The Alternatives subscale consists of 13 items and the Control subscale consists of 7 items. A 7-point Likert scale was employed (1=strongly disagree to 7=strongly agree) and items 2, 4,7,9,11,17 were reversed items. The previous internal consistency of the total CFI was indicated by Cronbach's alpha values ranging from .84 to .91 (Dennis & Wal, 2009).

**Workplace Agility Scale (Muduli, 2013)**

The scale was developed by Muduli (2013) that measures in several personality traits and behaviors that indicate a person's adaptability and flexibility in the working environment. This scale was rated on a 3-point Likert scale (1 means low and 3 means high). The total workplace agility score is generated by averaging these subscale scores, which thus gives the overall view of a person's agility attributes. The instrument has internal consistency coefficients .71 (Muduli, 2013).

**Procedure**

All the scales prior there use, the permission was obtained from relevant authors. A permission letter was obtained from the supervisor to get the data from their employees. Prior to data collection from employees, an inform consent was signed. The primary data collection was done for pilot testing. The main objective of pilot testing was to evaluate the employed research methods and recognize any possible biases that might have an impact on the data collection process. The piloting was done to check the scales that were employed, the sample size, the time needed, and data handling. The main goal of this was to adjust the research design so that the researcher could use resources more efficiently. The survey was presented in paper format to the participants. All the demographic data and the figures from the scales were recoded into and processed using SPSS.

**Ethical Consideration**

The following ethical considerations were ensured during the present study

- The head of the department and the supervisor provided an official approval for the research topic.
- The permission was obtained from the authors of scales before the data collection.
- The participation of participants was kept voluntarily and an informed consent was obtained from every participant.
- The collected data from participants was kept confidential and anonymous.

**Results**

Descriptive and reliability statistical analyses were perform to access the Psychometric properties of the scales. Pearson product-moment correlation analysis was carried out to find the relationship between psychological empowerment, cognitive flexibility, and workforce agility in young adults. Multiple regression analysis was carried out to investigate the role of psychological empowerment, cognitive flexibility in predicting workforce agility in young adults. Lastly, an independent sample t-test was performed to compare the means group gender in terms of study variables.

**Table 1**
**Psychometric Properties of Scales and Subscales (N=200)**

| Measures | K | M(SD) | Range | Cronbach α |
|---|---|---|---|---|
| Psychological Empowerment Scale | 15 | 61.62(13.22) | 20-154 | .74 |
| Cognitive Flexibility Scale | 20 | 96.78(14.93) | 51-174 | .65 |
| (a). Alternative | 13 | 66.28(12.66) | 37-161 | .64 |
| (b). Control | 7 | 31.26(6.69) | 16-49 | .68 |

| | | | | |
|---|---|---|---|---|
| Workforce Agility Scale | 7 | 15.69(2.65) | 8-21 | .65 |

Firstly, Pearson product moment correlation analysis was performed to see the relationship between psychological empowerment, cognitive flexibility, and workforce agility in young adults (see Table 2).

**Table 2**
**Correlation between Study Variables (N=200)**

| Variables | M | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 1. Age | 25.36 | 4.76 | - | .16* | .33** | .13 | -.26** | .11 |
| 2. Psychological Empowerment | 61.62 | 13.22 | | - | .46** | .55** | .23** | .48** |
| 3. Cognitive Flexibility | 96.78 | 14.94 | | | - | .79** | -.12 | .35** |
| 4. Alternative | 66.28 | 12.66 | | | | - | .44** | .31** |
| 5. Control | 31.26 | 6.69 | | | | | - | .06 |
| 6. Workforce Agility | 15.69 | 2.65 | | | | | | - |

Note: *p<.05, **p<.01

Results presented in table 2 revealed that age was positively related with psychological empowerment and cognitive flexibility while negatively correlated with control. In addition, psychological empowerment was positively correlated with cognitive flexibility, alternative, control, and workforce agility. Further, cognitive flexibility was positively related to alternative and workforce agility. Alternative was also positively related to control and workforce agility.

Secondly, Multiple Regression analysis was performed to see psychological empowerment and cognitive flexibility as predictors of workforce agility in young adults (Table 3).

**Table 3**
**Multiple Regression Analysis Predicting Workforce Agility in Young Adults (N=200)**

| Predictors | B | SE | B | p | 95%CI |
|---|---|---|---|---|---|
| Psychological Empowerment | .08 | .01 | .40 | .001 | [.05, .10] |
| Cognitive Flexibility | .09 | .01 | .16 | .01 | [.00, .05] |
| $R^2$ | | .25* | | | |
| F (2,193) | | 32.08 | | | |

Note: *p<.05, **p<.0.1., ***p<.001

Table 3 showed that the overall variance explained by the model is 25% with F (2, 193) = 32.08, p <.001. The results showed that psychological empowerment (β =.40, p <.001) and cognitive flexibility (β =.16, p <.001) were found to be the positive predictors of workforce agility in young adults.

Thirdly, Independent sample t-test was performed to explore the gender differences in psychological empowerment, cognitive flexibility, and workforce agility in young adults (Table 4).

**Table 4**
**Independent Sample t-test Comparing Gender Differences (N=200)**

| | Men (n=108) | | Women (n=92) | | | | |
|---|---|---|---|---|---|---|---|
| Variables | M | SD | M | SD | t | p | Cohen's d |
| Psychological Empowerment | 62.22 | 14.39 | 61.31 | 11.19 | .48 | .27 | .07 |
| Cognitive Flexibility | 99.15 | 17.02 | 93.77 | 11.54 | 2.54 | .001 | .36 |
| Alternative | 66.47 | 14.51 | 65.95 | 10.26 | .29 | .04 | .05 |
| Control | 30.09 | 7.02 | 32.61 | 6.14 | -2.65 | .26 | .38 |
| Workforce Agility | 15.91 | 2.84 | 15.47 | 2.42 | 1.15 | .25 | .16 |

The results indicated higher cognitive flexibility in men (M=99.15, SD=17.02) than women (M=93.77, SD=11.54) and alternative also higher in men (M=66.47, SD=14.51) then women (M=65.95, SD=10.26). No significant gender difference was seen in terms of psychological empowerment and workforce agility.

**Discussion**

The present study aimed to explore the relationships among psychological empowerment, cognitive flexibility, and workforce agility among employees. The first hypothesis of the present study stated that there would be a positive relationship between psychological empowerment, cognitive flexibility, and workforce agility. Results revealed that there was positive relationship between psychological empowerment, cognitive flexibility, and workforce agility in the employees. It indicates that psychologically empowered employees at work are cognitively flexible (Dhanpat, & Mkhwanazi 2024), meaning that they are always receptive to new solutions and ways of thinking to solve the issues and, furthermore, adapting the strategies as needed. Besides, such thought flexibility is actually very important in today's work environment that is constantly changing (Yu et al., 2019) with all the technological developments and the changing organizational needs. Consequently, those employees who are empowered, and as a result, more self-assured and who give off an independent vibe, are inclined to bring to the fore greater work agility (Muduli & Pandya, 2018), which refers to the adaptability, a rapid reaction, and the continuous learning process. More to the point, the employees who power themselves up psychologically showed higher cognitive flexibility and therefore displayed better work agility Muduli (2017). This discovery is consistent with previous findings Amanda et al. (2024) and Rathore et al. (2024) which talk about the characteristics of empowered employees as being adaptable and inclined to change, which is mainly due to their increased motivation, autonomy, and confidence in their roles.

Next hypothesis of the current research stated that psychological empowerment and cognitive flexibility would be predictors of the agility of the workforce among employees. The predictive relationship highlights that both psychological and cognitive aspects have importance in increasing agility among employees. If the

employees feel that they have the power, then, they will more probably be engaged in activities, started new approaches, and handle changes in the organization efficiently (Satwika et al. 2025). In the same manner, greater cognitive flexibility enables the employees to change their viewpoints, accept new data, and come up with original solutions which are needed in agile work settings. These findings are supported by literature where the research like Cyfert et al. (2022) conducted a study and revealed that employees who are empowered and have mental flexibility are more capable of responding quickly to changes in the organization, which in turn boosts workforce agility. Eventually, these two factors are significantly predicting the workforce agility.

The third hypothesis of the present study stated that there would be significant gender differences exist in psychological empowerment, cognitive flexibility, and workforce agility among employees. This hypothesis was testified by conducting the independent samples t-test and the results partially supported this hypothesis. These result showed that there are significant differences between the men and women in the point of their cognitive flexibility levels. These differences reveal that gender is a factor that influences how a person changes his or her thinking in the environment that is constantly evolving. These findings are in line with literature, a study conducted by García-Fernández et al. (2025) revealed that male and female have differences in ability to perceive same things and situations differently. Moreover, statistically, there is no difference between the both sexes in terms of psychological empowerment and workforce agility. A study by Richardson et al. (2021) showed that contextual factors in the organizational setting mitigate gender disparities. Hence, it means, both male and female employees in general feel that they are equally empowered and therefore, they are equally capable of responding to the change in the workplace with agility.

**Limitations**

The study, in spite of providing useful insights, has some limitations. Firstly, the cross-sectional study design is a potential limitation as it does not account for cause-and-effect relationship. Secondly, the sample was employees from few renowned organizations which implies that the findings cannot be applied to a wider context. Hence, the extent of generalizability of these findings in different populations is limited. Thirdly, the use of self-report measures solely may give rise to response bias. The bias can be in the form of social desirability bias, which can lead to inaccurate accounts of psychological states and behaviors. Lastly, the research focused solely on a limited number of variables and excluded some that may have had a significant impact on the issue, such as emotional intelligence, work motivation, leadership style, and organizational support.

**Future Recommendations**

Future research should adopt longitudinal research designs to better examine how psychological empowerment and cognitive flexibility influence workforce agility over time. Researchers are also encouraged to include more diverse demographic and organizational samples to enhance the generalizability of findings. Additionally, integrating objective performance indicators and third-party evaluations may reduce the potential bias associated with self-report measures. Future studies should further explore additional influencing factors, including emotional intelligence, motivation, and organizational culture, while examining potential mediating and moderating mechanisms to better understand how and under what conditions these variables affect workforce agility.

**Implications**

The results of this study open a new perspective in theory and have practical implications for organizations that are willing to develop the agility of their employees. The results of this study contribute to the general context of research, which maintains that among the various factors, workforce agility is one of those elements which can be influenced by the correct implementation of the psychological empowerment process and cognitive flexibility.

Moreover, the findings of the present study give organizations a clearer understanding of the areas that they need to work on in order to increase the employee agility. This emphasis indicates the need to empower employees psychologically so that they become more proactive, less doubtful, and more adaptable to changes and also develop cognitive flexibility by offering them planned skill development programs and engaging them in challenging tasks. In addition, these gender differences in cognitive flexibility that have been identified can be utilized to emphasize the need for the interventions to be inclusive. The interventions should not only be used to remove disparities but also ensure that employees of any gender have equal opportunities to develop skills that will make them more agile.

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