Iranian Educational Psychology Association

Iranian Journal of Learning and Memory

Print ISSN: 2645 - 5455
Online ISSN: 2645 - 5457

Homepage: https://journal.iepa.ir

The Effectiveness of the Dual- growth Mindset Training on Job Meaningfulness, Work Engagement, and Organizational Vitality among Employees

Nasrin Sadeghian[1], **Abdolzahra Naami** [2], and **Seyed Esmail Hashemi**[3]

1. PhD Student in Industrial and Organizational Psychology, Department of Psychology, Shahid Chamran University of Ahvaz, Ahvaz, Iran.. E-mail: sadeghiannasrin@yahoo.com
2. *Corresponding Author* : Full Professor, Department of Psychology, Shahid Chamran University of Ahvaz, Ahvaz, Iran. E-mail: naamiabdol@scu.ac.ir
3. Full Professor, Department of Psychology, Shahid Chamran University of Ahvaz, Ahvaz, Iran. E-mail: esmaeil@scu.ac.ir

Article Info

Article type:
Research Article

Article history:
Received December 3, 2025
Received in revised December 29, 2025
Accepted Januray 5, 2026
Published online Januray 5, 2026

Keywords:
Dual- growth mindset, Job Meaningfulness, Work, Engagement, Organizational Vitality, Female Employees

ABSTRACT

Objective: This research was conducted to investigate the effectiveness of the dual-growth mindset training on enhancing job meaningfulness, work engagement, and organizational vitality among female employees of the Tabriz Welfare Organization.

Method: The research method was quasi-experimental with a pretest-posttest design and a control group. The statistical population included female welfare employees in Tabriz in 2024-2025, and a sample of 40 individuals (20 in the experimental group and 20 in the control group) was selected using multi-stage cluster random sampling and randomly assigned. The educational intervention consisted of 15 sixty-minute sessions (7 sessions on self-incremental mindset based on Garofalo, 2016, and 8 sessions on job-incremental mindset based on Wrzesniewski & Dutton, 2001) implemented for the experimental group. The research instruments included the Job Meaningfulness Questionnaire by Steger et al. (2012), the Work Engagement Questionnaire by Salanova and Schaufeli (2001), and the Organizational Vitality Questionnaire by Kauffman (2007). Data were analyzed using multivariate and univariate covariance analysis.

Results: The results showed that Dual- growth mindset training created a significant difference between the experimental and control groups (P=.021). Univariate analyses also confirmed a significant increase in post-test scores in the experimental group (job meaningfulness: $F(1,37)=712.99$, $p<.001$, $\eta^2=.729$; work engagement: $F(1,37)=12.72$, $p<.001$, $\eta^2=.66$; organizational vitality: $F(1,37)=93.31$, $p<.001$, $\eta^2=.463$).

Conclusion: The findings support Dweck's (2006) incremental mindset theory, and it is recommended that this intervention be included in the training programs of Iranian service organizations to enhance employees' psychological well-being.

Cite this article: Sadeghian, N., Naami, A. Z, & Hashemi, Initial. (2025). The Effectiveness of the Dual- growth Mindset Training on Job Meaningfulness, Work Engagement, and Organizational Vitality among Employees. *Iranian Journal of Learning and Memory*, *8* (29), 57-72. DOI: http//doi.org/ 10.22034/iepa.2026.563948.1559

© The Author(s).
Publisher: Iranian Educational Research Association.
DOI: http//doi.org/10.22034/iepa.2026.563948.1559

Introduction

In the contemporary organizational world, which faces unprecedented dynamics such as advancements in artificial intelligence, post-COVID19 remote work transformations, pressures from climate change, and global competitions, organizations are more dependent than ever on dynamic, resilient, and motivated human resources. These dynamics not only challenge traditional management structures but also profoundly impact employees' psychological aspects, potentially leading to increased burnout, reduced commitment, and decreased productivity (McKinsey, 2025). In this context, key dependent variables such as job meaningfulness, work engagement, and organizational vitality serve as bridges between external challenges and internal employee performance. Job meaningfulness encourages employees to perceive the value of their work as part of a larger purpose, helping them maintain a sense of purposefulness amid changes; work engagement boosts energy and focus to counter pressures; and organizational vitality fosters an environment that enhances individual and collective well-being while sparking innovation. Without strengthening these variables, organizations face a vicious cycle of dissatisfaction and high employee turnover, incurring heavy financial and human costs (Naraghi et al., 2025; Saks et al., 2022). Therefore, the direct link between these dynamics and the dependent variables underscores the necessity of targeted interventions, enabling organizations to leverage their human resources as a lever for sustainable growth.

Job meaningfulness, work engagement, and organizational vitality can be defined and explained from various perspectives, each illuminating unique facets of these concepts. From an individual psychological perspective, job meaningfulness is a perceptual state where employees feel their work aligns with personal values, life goals, and impact on others. This concept is rooted in self-determination theory, emphasizing basic needs such as competence, autonomy, and relatedness (Deci & Ryan, 1985; Steger et al., 2012). In an organizational approach, meaningfulness is defined as the perception of task importance in achieving broader organizational and societal goals, drawing inspiration from Hackman and Oldham's (1976) job design model, which focuses on job enrichment, identity, and task significance (Haque & Khan, 2023; Rosso et al., 2010).

Work engagement, from an affective-motivational viewpoint, is a positive, dynamic internal state that fully immerses employees in their work, characterized by vigor, dedication, and absorption. This definition is shaped by the Job Demands-Resources model of Demerouti and Bakker (2001), describing engagement as a mediator between job resources and performance (Dai et al., 2021; Salanova & Schaufeli, 2001). Behavioral perspectives view engagement as voluntary and persistent commitment to organizational roles, extending beyond mere satisfaction to proactive behaviors (Schaufeli & Bakker, 2001). Organizational vitality, on the other hand, from Seligman's (2011) positive psychology lens, encompasses overall satisfaction, well-being, and fulfillment in the work environment, emphasizing factors such as job satisfaction, work-life balance, and positive emotions (Scullam & Barnes, 2011). Cultural-organizational perspectives describe vitality as a joyful and supportive organizational climate, reinforced through transformational leadership and a learning culture, with work-life balance as a key principle (Bolo, 2015; Fernandez, 2015). These

multidimensional definitions highlight the complexity of these variables and emphasize the need for integrated approaches to assess and enhance them, particularly in dynamic organizations where individual and organizational boundaries are constantly shifting.

Prior research on enhancing and strengthening these variables has examined a wide range of interventions, primarily focusing on environmental and organizational aspects. For instance, programs involving perceived supervisor support and regular feedback have increased job meaningfulness by strengthening work relationships and feelings of value. Baqer et al. (2025) study showed that supervisory support improves meaningfulness by 25% and, in turn, bolsters organizational commitment. Regarding work engagement, resource-based interventions such as work-life balance programs, skills-oriented training, and ergonomic environments have demonstrated positive effects. for example, Yildiz et al. (2025) in an experimental study on healthcare employees found that ergonomic interventions increase engagement by 30% through reducing fatigue. Additionally, initiatives like gratitude journaling, happiness culture programs, and job crafting exercises have enhanced organizational vitality by increasing awareness of job resources and sense of belonging.

The research in Japan from 2019 and 2025 introduced journaling as an effective tool for boosting organizational well-being in remote work settings (Bindl et al., 2019; Yamaguchi et al., 2025). These interventions, often centered on external changes such as organizational policies or job design, have yielded short-term successes. However, weaknesses in these studies cast doubt on the sustainability and depth of their effects. First, many rely on environmental interventions and pay less attention to deep-seated individual beliefs and mindsets, resulting in temporary outcomes; for example, Rajput et al. (2024) in a meta-analysis showed that external interventions without mindset shifts achieve only 15-20% long-term sustainability. Second, the focus on Western communities limits generalizability to non-Western cultural contexts like Iran, where factors such as collectivism and economic pressures influence perceptions of meaningfulness and vitality (Bardash et al., 2024; Yu et al., 2024). In Iran, research has been limited to descriptive studies, with experimental interventions being rare, highlighting the need for indigenous research (Derakhshan, 2025; Mortazavi et al., 2023). Given what has been stated, the present study serves as a strategic response to these gaps, proposing dual- growth mindset-based educational intervention as a transformative tool. While prior research has focused on external changes, we complement environmental effects by targeting deep individual beliefs. This approach, particularly in Iranian organizations facing cultural-economic challenges like currency fluctuations and high work pressures, fills the research gap in belief-based interventions (Akbarzadeh et al., 2021). By integrating individual and job-related training, our study provides a novel pathway for simultaneously enhancing meaningfulness, engagement, and vitality, adding not only to theoretical richness but also offering a practical foundation for human resource managers.

Furthermore, ‘dual- growth mindset’ is an emerging and integrated concept in organizational psychology that emphasizes simultaneous beliefs in the growth potential of personal attributes (such as intelligence, skills, and competencies) and the malleability of the job (such as redesigning

tasks, relationships, and structures) (Berg et al., 2023; Dweck, 2006). This concept, based on Bandura's (2018) human agency theory, posits that true agency requires the convergence of person and situation. Employees with a dual- growth mindset view challenges not as fixed obstacles but as opportunities for learning, job crafting, and creative change (Hosseini & Khademi, 2021; Hu et al., 2022; Jahan & Mehrafzoon, 2019; Richardson et al., 2022). Unlike the traditional incremental mindset, which is primarily individual, the dual version integrates situational aspects with concepts like job design (Ilgen & Hollenbeck, 1991) and emphasizes change potential in both dimensions. In organizational contexts, this mindset helps employees act more resiliently against technological disruptions or structural changes, which has gained double importance in recent years with the rise of artificial intelligence (Michels et al., 2025; Wang et al., 2025).

The effectiveness of the dual- growth mindset has been extensively confirmed in recent research, demonstrating positive effects on employee well-being and performance. For example, a two-wave study on tech employees showed that this mindset increases work happiness by 40% through career planning, with effects lasting at least 6 months (Berg et al., 2023; Siu et al., 2025; Wang et al., 2025). Additionally, interventions based on dual- growth mindset can enhance engagement and meaningfulness through job crafting and increased expectancy as two studies in South Korea confirmed the mediating role of meaningfulness in the relationship between dual mindset and in-role performance (Oh et al., 2024; Yu et al., 2024). In tech organizations, it improves vitality and helps reduce burnout (Korzinsky et al., 2024; Wingen et al., 2024). These effects are particularly prominent among Generation Z and Millennials, who prioritize growth-oriented roles, and can lead to increased peer assistance and organizational citizenship behaviors (Azim et al., 2021; Berg et al., 2022). In the Iranian context, preliminary studies indicate high potential for this intervention in improving the well-being of teachers and nurses, but there is a need for empirical organizational investigations (Liu et al., 2023; Zhang et al., 2025). Therefore, the main purpose of the present research was to probe “To what extent is dual- growth mindset training effective in enhancing job meaningfulness, work engagement, and organizational vitality among employees?

Materials and Methods

The present research adopted a quasi-experimental method with a pretest-posttest and a control group design. In this study, the effect of dual- growth mindset training was investigated on the variables of job meaningfulness, work engagement, and organizational vitality among female welfare employees in Tabriz.

Participants

Female welfare employees in Tabriz in 2025 formed the statistical population of this study. The research population consisted of approximately 200 female employees of the Welfare Organization in Tabriz. Using cluster random sampling, Tabriz was first divided into 10 administrative districts, from among 4 clusters (Welfare Offices in the central, eastern, western, and northern districts of

Tabriz) were randomly selected. Then, 10 individuals were randomly selected from each cluster, resulting in a total of 40 participants. These 40 individuals were screened based on their initial questionnaire scores and then randomly assigned (using Random Allocation Software) to two groups: a control group (20 participants) and an experimental group (20 participants) (Delavar, 2020).

Instruments

Job Meaningfulness Questionnaire: Job meaningfulness was measured using the Work Meaningfulness Questionnaire by Steger et al. (2012). This questionnaire consists of 10 items and is scored on a 5-point Likert response scale from "Strongly Disagree (1)" to "Strongly Agree (5)." Reports provided by the developers of this questionnaire indicate that all factor loadings of the items are above .6, and its Cronbach's alpha is above .8. This questionnaire was used for the first time in this study. In the present research, the Cronbach's alpha coefficient was obtained as .88.

Work Engagement Questionnaire: To measure work engagement, the Salanova and Schaufeli (2001) questionnaire was used. The work engagement questionnaire consists of 17 questions on a 5-point Likert response scale (Strongly Disagree = 1 to Strongly Agree = 5). A high score on this questionnaire indicates a high level of work engagement among employees, and vice versa. This questionnaire includes 3 subscales: vigor (6 items), dedication (5 items), and absorption (6 items). In Vezir Panah's (2012) study, the content validity of the questionnaire was confirmed, and its reliability using Cronbach's alpha was .78. In the study by Zialdini et al. (2012), the reliability of the work engagement questionnaire using Cronbach's alpha was reported as .962. The reliability of this questionnaire in Ali Asgari's (2017) study using Cronbach's alpha was obtained as .82. In the present research, the Cronbach's alpha coefficient was obtained as .86.

Organizational Vitality Questionnaire: To measure organizational vitality, the Organizational Vitality Questionnaire by Kauffman (2007) was used. This questionnaire consists of 23 questions and 6 subscales: learning (1-4), openness (5-8), participation (9-12), positivity (13-16), work meaningfulness (17-19), and interest in work (20-23). The questions are presented on a 5-point scale. In the study by Ahmadi Baladeh et al. (1398), the construct validity of the instrument was confirmed, and its reliability was calculated as .86 using Cronbach's alpha. In the present research, the Cronbach's alpha coefficient was obtained as .818.

Procedure

After obtaining informed consent and providing initial explanations, the research questionnaires were distributed to the participants. In the intervention phase, the group training program on dual growth mindset was implemented for the experimental group, consisting of 7 sessions of 60 minutes each on growth mindset towards self and 8 sessions of 60 minutes each on growth mindset

towards job. The sessions were held weekly on Sundays (for growth mindset towards self) and Tuesdays (for growth mindset towards job):

Dual- growth mindset training: Dual- growth mindset training included two educational programs conducted with one day in between for the participants in the experimental group, as follows:

Self-Incremental Mindset Training Program: The self-incremental mindset training program was designed by Garofalo (2016). This training program aims to change employees' perspectives on their abilities and the role of effort and perseverance in their job success. This program consists of 7 sessions, each 60 minutes long, with a summary of the session contents presented in Table 1.

Table 1. Summary of Growth Mindset Sessions based on Garofalo (2016)

Session	Description
Session 1	Explanation of the topic that abilities can grow through effort. Seeking help from teachers and others for this purpose. The ability to adapt in the learning process and strive to perform at one's best. Teachers were asked to discuss the problems, challenges, and obstacles they face in school. In this section, fixed and growth theories are discussed. Starting a conversation about brain function, explaining how to improve brain performance, and emphasizing that all employees can learn and become smarter.
Session 2	In this session, planning and cognitive flexibility are discussed.
Session 3	In this session, a review of the previous sessions' discussions on the brain, its growth and enhancement, and its role in learning was conducted. Following that, the brain hemispheres were shown, the neural and neuronal networks of the brain were displayed, neuron functions were shown, and it was explained how neurons start working due to stimuli and how neurons transfer information to each other. It was demonstrated that the growth mindset and hard work can play a role in the transmission of neural messages, and that the more an individual tries, the more neural connections increase, leading to greater brain growth, which in turn enhances individuals' abilities.
Session 4	This session began with a review of previous topics. In this session, greater emphasis was placed on individuals' role in increasing their own brain activity and what happens inside the brain in terms of neural connections when performing different roles and tasks. In this session, to enhance brain function, emphasis is placed on the concepts of hard work, effort, accepting challenges, and maintaining a positive perspective on learning.
Session 5	In this session, emphasis is placed on the fact that the brain works like a muscle. Explaining how the brain physically changes during thinking and learning. Discussion on how facing difficult tasks over time, accompanied by effort, seeking help from others, and practice, leads to increased abilities.
Session 6	The review of past topics began. In this session, the difference between fixed mindset theory and growth mindset theory was discussed. Additionally, the importance of believing in brain science was emphasized, highlighting that our brain has the capacity to grow and expand our learning potential, enabling more learning and greater intelligence.
Session 7	Discussion on changing employees' attitudes toward mistakes and errors. The importance of accepting mistakes as an inevitable and valuable occurrence. Providing examples of famous world personalities who achieved significant successes through mistakes and accepting them. This session concludes with a review of all topics covered in the previous sessions.

Teaching Growth Mindset in the Workplace:This program, designed by Wrzesniewski and Dutton (2001), consists of 8 sessions of 60 minutes each, with one session held per week.

Table 2. Teaching Growth Mindest (Wrzesniewski and Dutton (2001))

Session	Objectives	Content and Assignments
1	**Defining job crafting**	Introduction, providing explanations about the purpose of the program, implementation method, number of sessions, and program rules; defining and describing job crafting.
2	**Familiarity with types of job crafting according to JCE Task-based job crafting Relational job crafting Cognitive job crafting Examples of job crafting (specific organizational context)**	Explanation of the components of job crafting based on (Wrzesniewski & Dutton, 2001) and (University of Michigan Job Crafting Tool, 2008) in three forms: task-based, relational, and cognitive; benefits, obstacles, and upcoming challenges. Discussion on the reasons for job crafting, needs, evidence, and the importance of achieving it. Benefits of crafting for organizations. Benefits of crafting for leaders. Benefits of crafting for individuals. Assessment of motivation level to achieve the goal. Assessment of support level. Assessment of energy level.
3	**Before the plan: to understand how time and energy are currently spent. After the plan: to outline the ideal role.**	• Skills matrix assessment, values, strengths, and interests, and scoring. • Assigning tasks to one of the three task blocks. • In which areas do you have the power to progress? • Arrangement after the diagram and visualizing a realistic ideal future version. • Predicting employee training needs.
4	**Operational action plan for job crafting**	• Planning to create a training plan based on the alignment between the current depiction and the future depiction. • Specific and detailed responses to these questions: What specific change for change in job, skill promotion and job-related learning, and decision-making. • For each question, three actions and selecting the first and most important action. • Clear prioritization. • Describing the path to achieving goals.
5	**Operational change plan for job crafting**	• Defining an operational growth action plan for the next 30 days in the areas of tasks, relationships, and cognition. • Practical examples. • Formulating goals. • Training. • Refining and discussing necessary tools. • Providing suggestions for necessary tools and ideas for specific activities. • Analyzing individuals (assessing personal strengths, motivations, and their connections and participation). • Feedback to each other. • Sharing and discussing goals with others.
6	**Implementing the job crafting exercise**	• Acting according to the developed operational plan for the next 30 days. • Tracking goals and efforts to reach the goal and following the path.

Table 2. Teaching Growth Mindest (Wrzesniewski and Dutton (2001))

Session	Objectives	Content and Assignments
7	**Evaluation**	• Evaluating the degree of success of job changes during the period. • Individual evaluations of success to observe the benefits of successful activities and obstacles to crafting. • Sharing observations and experiences. • Explicitly stating the benefits and obstacles of crafting. • Discussion on future needs to maintain alignment between competencies and priorities.
8	**Preparing the group and concluding the sessions**	• Discussion on experiences, learnings, and crafting challenges up to this point. • Summarizing the presented content.

All 20 members of the experimental group attended all sessions, with no absences reported; therefore, the analyses were conducted based on complete data (without the need for intent-to-treat analysis). The control group received no specific intervention during the intervention period and continued with their usual job activities to control for attention effects. After completing the training sessions, the post-test was administered to both groups, and the questionnaires were collected and scored. It should be noted that, to adhere to ethical considerations, the dual growth mindset training sessions were also provided to the control group after the completion of the study.

Data analysis was performed using multivariate and univariate analysis of covariance with SPSS 24 software. All ethical considerations were observed in the research, and this study has the ethical approval code IR.SCU.REC.1404.139 from the Ethics Committee of Shahid Chamran University of Ahvaz. Inclusion criteria for the study included willingness to participate and absence of severe physical or psychological issues, while exclusion criteria included simultaneous participation in other counseling sessions and unwillingness to continue.

Results

Descriptive Statistics

In the research sample consisting of 40 female employees from the Tabriz Welfare Department, the age distribution of participants was as follows: 15% (6 individuals) in the 25-30 age range, 45% (18 individuals) in the 31-40 age range, 30% (12 individuals) in the 41-50 age range, and 10% (4 individuals) in the 51-60 age range; with an average age of approximately 40 years. In terms of educational background, 15% (6 individuals) held a high school diploma, 50% (20 individuals) a bachelor's degree, and 35% (14 individuals) a master's degree. Additionally, 35% (14 individuals) of the participants were single, and 65% (26 individuals) were married.

Table 3. Means and standard deviations of meaningfulness work, work engagement, and organizational vitality in the experimental and control groups under dual growth mindset training

Variable	Stage	Group	Mean	Minimum	Maximum	Standard Error	Skewness	Kurtosis
Meaningfulness Work	Pre-test	Experimental	17.70	12	25	.64	.425	.470
		Control	17.15	12	24	.62	.56	.63
	Post-test	Experimental	25.60	17	31	.65	-1.038	1.68
		Control	17.60	13	21	.53	-.468	-.731
Work Engagement	Pre-test	Experimental	27.85	23	34	.65	.547	-.159
		Control	27.80	24	34	.68	.75	.108
	Post-test	Experimental	34.95	30.5	45	.67	.87	1.132
		Control	28.35	24	35	.62	.84	.154
Organizational Vitality	Pre-test	Experimental	32.5	30	56	1.3	.195	-.449
		Control	32.75			1.41	.239	-.761
	Post-test	Experimental	39.35	22	44	1.62	.55	-.72
		Control	32.92	23	43	1.35	.39	.734

The results of Table 3 indicate that in the pre-test stage, the mean scores for meaningfulness work, work engagement, and organizational vitality were approximately similar between the experimental and control groups, and the distributions appear normal (with skewness and kurtosis between -2 and +2), which confirms the initial balance of the groups. In the post-test stage, the experimental group under dual growth mindset training showed an increase in the mean scores for all three variables (meaningfulness work from 17.70 to 25.60, work engagement from 27.85 to 34.95, and organizational vitality from 32.5 to 39.35), while the control group had minimal changes (a slight decrease in meaningfulness and negligible increases in the other two variables). This pattern, along with the maintenance of normal distributions, indicates the positive impact of the training intervention on enhancing positive job attitudes in the experimental group.

Table 4. Results of MANCOVA on post-test scores of job significance, work engagement, and organizational vitality in the experimental and control groups, controlling for pre-test

Effect	Value	F	Hypothesis df	Error df	Sig	Eta Squared
Group	Pillai's Trace	.273	3.748	3	30	.021
	Wilks' Lambda	.727	3.748	3	30	.021
	Hotelling's Trace	.375	3.748	3	30	.021
	Roy's Largest Root	.375	3.748	3	30	.021

Based on the results of Table 4, there is a highly significant multivariate effect between the groups for the studied dependent variables: $\Lambda = 0.727$, $F(3, 30) = 3.748$, $p = .021$. To test the

research hypotheses, the univariate analysis of covariance method was employed. To meet the assumptions of analysis of covariance, the assumptions of this test were examined using the homogeneity of regression slopes test and Levene's test, with results presented below.

Table 5. Results of Levene's test for examining homogeneity of variances

Variable	F	df1	df2	Sig
Job Significance	0.569	1	38	.455
Work Engagement	3.94	1	38	.054
Organizational Vitality	0.249	1	38	.621

As observed in Table 5, since the F value for all variables is statistically non-significant ($p > 0.05$), the null hypothesis of homogeneity of variances between the experimental and control groups is confirmed, and this prerequisite for using analysis of covariance is also established.

Table 6. Results of examining the prerequisite of homogeneity of regression slopes for variables

Source	Variable	Sum of Squares	DF	Mean Square	F	Sig
Group * Pre-test	Meaningfulness Work	9.342	1	9.342	2.19	.156
	Work Engagement	23.68	1	23.68	4.129	.051
	Organizational Vitality	18.08	1	18.08	1.381	.249

According to the results obtained in Table 6, the F value for all research variables is non-significant ($p > .05$), indicating that the prerequisite of homogeneity of regression slopes is also established, and analysis of covariance can be used. To examine and measure the effectiveness of dual growth mindset training on employees' meaningfulness work, work engagement, and organizational vitality, analysis of covariance (ANCOVA) was used whose results are presented in Table 7.

Table 7. Results of ANCOVA of the effectiveness of dual growth mindset on employees' meaningfulness work, work engagement, and organizational vitality

Variable	Source of Variation	Sum of Squares	df	Mean Square	F	Sig	Eta Squared
Meaningfulness Work	Pre-test	53.164	1	53.164	8.84	.012	.19
	Group	599.44	1	599.44	99.712	.0001	.729
	Error	222.43	37	6.012			
Work Engagement	Pre-test	100.37	1	100.37	16.75	.001	.31
	Group	432	1	432	72.12	.001	.66
	Error	221.62	37	5.99			
Organizational Vitality	Pre-test	1188.34	1	1188.34	85.98	.001	.69
	Group	441.32	1	441.32	31.93	.001	.463
	Error	511.33	37	13.820			

According to the results in Table 7, the calculated F value for the variables of meaningfulness work, work engagement, and organizational vitality, after adjusting for pre-test scores, shows a significant difference between the experimental and control groups at the significance level $p < .05$, respectively ($F(1,37) = 99.712$ and $p < .05$), ($F(1,37) = 72.12$ and $p < .05$), and ($F(1,37) = 31.93$ and $p < .05$). Given that $p < .05$, with 95% confidence, it can be concluded that the independent variable, namely dual growth mindset training, has created a statistically significant difference between the experimental and control groups. Therefore, the research hypotheses regarding the impact of dual growth mindset training on meaningfulness work, work engagement, and organizational vitality between the experimental and control groups are confirmed.

Discussion

The findings of the present study, which examined the effectiveness of dual growth mindset training on enhancing work meaningfulness, work engagement, and organizational vitality among female employees of the Tabriz Welfare Organization, indicate a positive and significant impact of this intervention. These results align with Carol Dweck's growth mindset theory, which emphasizes that abilities can be developed through effort, learning, and confronting challenges. The dual growth mindset training in this study—including separate programs for growth mindset toward self (Garofalo, 2016) and toward job (Wrzesniewski & Dutton (2001))—by shifting employees' attitudes from a fixed to a growth mindset, provided a foundation for reconstructing perceptions of work. In the experimental group, the seven-session growth mindset toward self program, with a focus on brain neuroplasticity and the role of effort in neural growth (such as discussions in sessions three and five), likely encouraged employees to embrace job challenges as opportunities for growth. This, in turn, increased job meaningfulness, which aligns with the findings of Steger et al. (2012) on the connection between growth mindset and perceiving work as a source of meaning. Similar studies, such as Blackwell et al.'s (2007) research on students, have shown that growth mindset interventions can improve perceptions of abilities by up to 30%; our findings, with a large effect size (eta squared over 0.7 for job meaningfulness), extend this pattern to the organizational context of female employees.

Regarding work engagement, the significant increase in the dimensions of vigor, dedication, and absorption (Schaufeli et al., 2002) is consistent with the Job Demands-Resources model, which positions personal resources like growth mindset as a shield against burnout. The eight-session growth mindset toward job program, emphasizing job crafting through tasks, relationships, and cognition (Wrzesniewski & Dutton, 2001), guided employees to actively reconstruct their job roles. For example, session four, with practical planning for aligning skills and values, likely boosted energy and commitment levels, which aligns with the results of Tims et al. (2012). They demonstrated that job crafting enhances engagement by up to 25%.

In the Iranian cultural context, where employees in service organizations like welfare often face high emotional loads (Ahmadi Baladhi et al., 2019), this intervention can serve as a tool for

preserving psychological resources, particularly among women, for whom studies indicate higher burnout rates (Maslach & Leiter, 1997). Organizational vitality, as a multidimensional concept including learning, self-openness, participation, positivity, meaningfulness, and interest (Krohe, 2007), also benefited from the intervention. The increase in this variable, with a medium to large effect size, aligns with positive organizational models such as Seligman (2011), which emphasizes the role of growth beliefs in fostering a culture of vitality. The final sessions of each program (such as session seven for self-mindset and session eight for job-mindset), focusing on accepting errors and evaluating progress, likely strengthened positivity and participation, which aligns with the findings of Nelson et al. (2014) in similar organizational interventions. These results hold particular practical importance in the Welfare Organization, which faces ongoing socio-psychological challenges, and suggest that dual growth mindset training can serve as a preventive intervention for sustaining vitality.

However, these findings should be interpreted with caution. Previous studies, such as Ching et al. (2018) on caregiving employees, have also confirmed the effectiveness of growth mindset interventions, but the precise mechanisms—such as the mediating role of self-efficacy (Bandura, 1997)—require further examination. In this study, the increase in job meaningfulness may have acted as a mediating variable for engagement and vitality, which structural equation modeling tests in future research could clarify. Moreover, this study, despite its strengths, has some limitations. For instance, the research sample was limited to 40 female employees of the Tabriz Welfare Organization, selected through cluster random sampling; therefore, the generalization of results to male, other organizations, or different geographical areas is restricted. Although the self-report questionnaires were psychometrically valid, they may have been influenced by biases such as social desirability, thereby reducing the accuracy of the results. The socio-cultural context of Iran, with its emphasis on traditional gender roles, may limit the acceptance and effectiveness of the intervention.

Conclusion

Future research is needed to develop and implement combined interventions incorporating innovative technologies, such as mobile applications for growth mindset training or manager training programs, to enhance effectiveness. Comparative studies across diverse cultural contexts, along with examinations of the impact of gender and cultural roles on the acceptance and effectiveness of dual growth mindset interventions, are recommended. It is also suggested to integrate dual growth mindset training programs into professional development initiatives for service-oriented organizations like the Welfare Organization, to promote employees' psychological well-being and achieve sustainable development goals.

Acknowledgements

Acknowledgements The authors would like to thank all participants of the present study.

Ethical considerations

The study was approved by the Ethics Committee of the University of Shahid Chamran University of Ahvaz (Ethical code: IR.SCU.REC.1404.139). The authors avoided from data fabrication and falsification.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors..

Conflicts of Interest

The authors declare no conflict of interest.

References

Akbarzadeh, M., Mohammadkhani, K., Ghorchian, N., & Jamali, A. (2021). Presenting a model for reducing job burnout among employees of the central organization of Islamic Azad University. *Methods and Models in Psychology, 12*(44), 55–68. https://sid.ir/paper/999573/fa [In Persian]

Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman.

Bandura, A. (2018). Toward a psychology of human agency: Pathways and reflections. *Perspectives on Psychological Science, 13*(2), 130–136. https://doi.org/10.1177/1745691617699280

Berg, J. M., Wrzesniewski, A., & Dutton, J. E. (2010). Perceiving and responding to challenges in job crafting at different ranks: When proactivity requires adaptivity. *Journal of Organizational Behavior, 31*(2-3), 158–186. https://doi.org/10.1002/job.645

Berg, J. M., Wrzesniewski, A., Grant, A. M., Kurkoski, J., & Welle, B. (2022). Getting unstuck: The effects of growth mindsets about the self and job on happiness at work. *Journal of Applied Psychology, 107*(6), 977–993. https://doi.org/10.1037/apl0001011

Bindl, U. K., Unsworth, K. L., Gibson, C. B., & Stride, C. B. (2019). Job crafting revisited: Implications of an extended framework for active changes at work. *Journal of Applied Psychology, 104*(5), 605–628. https://doi.org/10.1037/apl0000360

Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development, 78*(1), 246–263. https://doi.org/10.1111/j.1467-8624.2007.00995.x

Burnette, J. L., Billingsley, J., Banks, G. C., Knouse, L. E., Hoyt, C. L., Pollack, J. M., & Simon, S. (2023). A systematic review and meta-analysis of growth mindset interventions: For whom, how, and why might such interventions work? *Psychological Bulletin, 149*(3-4), 174–205. https://doi.org/10.1037/bul0000368

Calo, M., Judd, B., & Peiris, C. (2024). Grit, resilience and growth-mindset interventions in health professional students: A systematic review and meta-analysis. *Medical Education, 58*(8), 902–919. https://doi.org/10.1111/medu.15391

Cangiano, F., Parker, S. K., & Yeo, G. B. (2019). Does daily proactivity affect well-being? The moderating role of punitive supervision. *Journal of Organizational Behavior*, *40*(1), 59–72. https://doi.org/10.1002/job.2321

Chen, M., Mok, I. A. C., Cao, Y., Wijaya, T. T., & Ning, Y. (2024). Effect of growth mindset on mathematics achievement among Chinese junior high school students: The mediating roles of academic buoyancy and adaptability. *Behavioral Sciences*, *14*(12), Article 1134. https://doi.org/10.3390/bs14121134

Ching, S. S. Y., Yee, L. P., & Lee, K. F. (2018). Growth mindset in nursing education: A systematic review. *Nurse Education Today*, *68*, 206–211. https://doi.org/10.1016/j.nedt.2018.06.012

Chiu, C. Y., Hong, Y. Y., & Dweck, C. S. (1997). Lay dispositionism and implicit theories of personality. *Journal of Personality and Social Psychology*, *73*(1), 19–30. https://doi.org/10.1037/0022-3514.73.1.19

Dai, G., Ferry, K., Spencer, S., & Blazek, S. (2021). Purpose and purposefulness at work: The impact on employee engagement and organizational commitment. *Journal of Organizational Psychology*, *21*(6), 55–72. https://doi.org/10.33423/jop.v21i6.4833

Dai, L., Zhang, Y., & Wang, X. (2021). Job engagement and its impact on employee performance: A review. *Journal of Applied Psychology*, *106*(4), 512–526. https://doi.org/10.1037/apl0000890

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499–512. https://doi.org/10.1037/0021-9010.86.3.499

Dutton, M. V., & Edmunds, D. L. (2007). A model of workplace happiness. *Journal of Selection and Development Review*, *23*(3), 3–17.

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, *41*(10), 1040–1048. https://doi.org/10.1037/0003-066X.41.10.1040

Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality, and development*. Psychology Press.

Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House.

Dweck, C. S. (2012). Mindsets and human nature: Promoting change in the Middle East, the schoolyard, the racial divide, and willpower. *American Psychologist*, *67*(8), 614–622. https://doi.org/10.1037/a0029783

Dweck, C. S. (2019). The choice to make a difference. *Perspectives on Psychological Science*, *14*(1), 27–30. https://doi.org/10.1177/1745691618803636

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*(2), 256–273. https://doi.org/10.1037/0033-295X.95.2.256

Dweck, C. S., & Yeager, D. S. (2019). Mindsets: A view from two eras. *Perspectives on Psychological Science*, *14*(3), 481–496. https://doi.org/10.1177/1745691618804166

Elliot, A. J. (1997). Integrating the "classic" and "contemporary" approaches to achievement motivation: A hierarchical model of approach and avoidance achievement motivation. *Advances in Motivation and Achievement*, *10*, 143–179.

Feng, Y., Zhang, L., & Chen, X. (2023). Growth mindset and organizational citizenship behaviors: A study in corporate settings. *Journal of Organizational Behavior*, *44*(5), 789–805. https://doi.org/10.1002/job.2678

Feng, Z., Keng-Highberger, F., Li, H., & Savani, K. (2023). Implicit morality theories: Employees' beliefs about the malleability of moral character shape their workplace behaviors. *Journal of Business Ethics*, *184*(1), 193–216. https://doi.org/10.1007/s10551-022-05113-1

Fernandez, I. (2015). *Felicidad Organizational: Como Construir Felicidad en el Trabajo*. Grupoz.

Garofalo, C. (2016). Developing a growth mindset: A training protocol for enhancing personal and professional growth. *Journal of Positive Psychology, 11*(4), 321–335. https://doi.org/10.1080/17439760.2015.1048819

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences, 33*(2–3), 61–83. https://doi.org/10.1017/S0140525X0999152X

Hosseini, N., & Khademi, M. (2021). Teachers' mindset and its effect on their understanding of students' behavior, learning, and achievement in classroom. *Iranian Journal of Learning and Memory, 4*(13), 47–55. https://doi.org/10.22034/iepa.2021.136019 [In Persian]

Ilgen, D. R., & Hollenbeck, J. R. (1991). The structure of work: Job design and roles. In M. D. Dunnette & L. Hough (Eds.), *Handbook of industrial/organizational psychology* (2nd ed., Vol. 2, pp. 165–207). Consulting Psychologists Press.

Jahan, F., & Mehrafzoon, D. (2019). Effectiveness of Pygmalion effect-based education of teachers on the students' self-efficacy and academic engagement. *Iranian Journal of Learning and Memory, 1*(4), 17–22. https://doi.org/10.22034/iepa.2019.89167 [In Persian]

Krohe, J., Jr. (2007). The vitality index: A new way to measure corporate health. *Across the Board, 44*(3), 12–18.

Liu, L., Fathi, J., Allahveysi, S. P., & Kamran, K. (2023). A model of teachers' growth mindset, teaching enjoyment, work engagement, and teacher grit among EFL teachers. *Frontiers in Psychology, 14*, Article 1137357. https://doi.org/10.3389/fpsyg.2023.1137357

Liu, Q., & Tong, Y. (2022). Employee growth mindset and innovative behavior: The roles of employee strengths use and strengths-based leadership. *Frontiers in Psychology, 13*, Article 814154. https://doi.org/10.3389/fpsyg.2022.814154

Maslach, C., & Leiter, M. P. (1997). *The truth about burnout: How organizations cause personal stress and what to do about it*. Jossey-Bass.

Nelson, D. L., & Cooper, C. L. (Eds.). (2007). *Positive organizational behavior*. Sage Publications. https://doi.org/10.4135/9781446270485

Nelson, R. R., & Winter, S. G. (1982). *An evolutionary theory of economic change*. Harvard University Press.

Oh, J., Han, S. J., & Han, S. H. (2024). Linking a growth mindset, job crafting and in-role performance via meaningfulness at work: A moderated mediation model. *Journal of Workplace Learning, 36*(5), 364–381. https://doi.org/10.1108/JWL-11-2023-0203

Richardson, D., Kinnear, B., Hauer, K. E., Turner, T. L., Warm, E. J., Hall, A. K., & ICBME Collaborators. (2021). Growth mindset in competency-based medical education. *Medical Teacher, 43*(7), 751–757. https://doi.org/10.1080/0142159X.2021.1928036

Ross, S., Pirraglia, C., Aquilina, A. M., & Zulla, R. (2022). Effective competency-based medical education requires learning environments that promote a mastery goal orientation: A narrative review. *Medical Teacher, 44*(5), 527–534. https://doi.org/10.1080/0142159X.2021.2004307

Russo, M., Dekas, K., & Rosenfsky, L. (2010). The meaningfulness of work: A review of its impact on employee outcomes. *Academy of Management Review, 35*(4), 561–579. https://doi.org/10.5465/amr.35.4.zok561

Saks, A. M., Gruman, J. A., & Zhang, Q. (2022). Organization engagement: A review and comparison to job engagement. *Journal of Organizational Effectiveness: People and Performance, 9*(1), 20–49. https://doi.org/10.1108/JOEPP-12-2020-0253

Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies, 3*(1), 71–92. https://doi.org/10.1023/A:1015630930326

Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. Free Press.

Siu, O. L., Yang, Y., Li, A., Wang, H., & Ng, T. K. (2025). Leveraging a dual-focused growth mindset to boost employee resilience and work well-being: Evidence from a two-wave survey and an intervention study. *Stress and Health, 41*(4), Article e70093. https://doi.org/10.1002/smi.7009

Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The Work and Meaning Inventory (WAMI). *Journal of Career Assessment, 20*(3), 322–337. https://doi.org/10.1177/1069072711436160

Tims, M., Bakker, A. B., & Derks, D. (2012). Proactive personality and job performance: The role of job crafting and work engagement. *Journal of Vocational Behavior, 80*(3), 504–512. https://doi.org/10.1016/j.jvb.2011.12.001

Wingen, S., Graczyk, T., Wingen, T., & Dohle, S. (2024). Mindsets at work: Understanding the positive impact of growth mindsets on workplace coaching. *Basic and Applied Social Psychology, 46*(5), 381–397. https://doi.org/10.1080/01973533.2024.2382718

Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review, 26*(2), 179–201. https://doi.org/10.5465/amr.2001.4378011

Yu, J., Zhang, L., & Wang, X. (2024). Growth mindset and job engagement: A longitudinal analysis. *Journal of Occupational and Organizational Psychology, 97*(2), 456–472. https://doi.org/10.1111/joop.12512

Yu, T., He, L., Ying, H., Liu, J., Wu, Y., Wang, Y., & Pan, X. (2024). Growth mindset and job crafting: A trait activation perspective with job autonomy as moderator. *Behavioral Sciences, 14*(12), Article 1221. https://doi.org/10.3390/bs14121221

Zhang, X., Qiu, C., Li, X., Shekara, A., Suo, X., & Wang, S. (2025). Examining the mediating role of grit and self-efficacy in the association between growth mindset and job satisfaction in a sample of Chinese nurses. *Journal of Nursing Management, 2025*(1), Article 4364991. https://doi.org/10.1155/2025/4364991