

The Role of Transformational Leadership, High-Performance Work Systems, and Psychological Capital in Work Engagement

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Abstract

Purpose: This study examines the direct and indirect effects of Transformational Leadership (TL), High-Performance Work Systems (HPWS), and Psychological Capital (PsyCap) on Job Involvement (JI), with Work Engagement (WE) as the mediating mechanism.

Research Methodology: This study used a quantitative method and survey design. All 300 active personnel of the 461st Pasgat Battalion of the Indonesian Air Force who met the minimum service requirements were included as respondents. Data were collected using a structured questionnaire and analyzed using SEM-PLS with bootstrapping.

Results: TL, HPWS, and PsyCap significantly and positively influenced WE. Work Engagement (WE) also had a significant positive effect on JI. TL, HPWS, and PsyCap had significant direct effects on JI. The indirect effect results show that WE partially mediate the relationships between TL, HPWS, PsyCap, and JI, indicating that stronger leadership, better HR systems, and stronger psychological resources improve job involvement more effectively when they first increase engagement.

Conclusions: Job involvement in the studied military unit is strengthened directly by leadership, high-performance work systems, and psychological capital, and indirectly through work engagement. Therefore, WE function as a key explanatory mechanism in the model.

Limitations: The study is limited to one military unit, uses self-reported cross-sectional data, and does not include other contextual predictors such as job demands, leadership climate, or perceived organizational support.

Contributions: This study reinforces the importance of integrating TL, HPWS, and PsyCap development to improve WE and JI in military settings. It also encourages future studies to adopt mixed-method approaches.

Keywords: *High-Performance Work Systems, Job Involvement, Psychological Capital Transformational Leadership, Work Engagement*

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1. Introduction

Work engagement is a positive and fulfilling work-related state characterized by vigor, dedication, and absorption. Within the Job Demands-Resources (JD-R) framework, it reflects the motivational process through which job and personal resources generate persistence, energy, and adaptive functioning. This perspective is relevant to military organizations, where personnel face demanding conditions that require concentration, discipline, and readiness. In such contexts, engagement is not only a desirable attitude but also an operationally meaningful resource that supports reliable task execution and mission continuity ([Arnold B Bakker, Demerouti, & Sanz-Vergel, 2023](#); [Breevaart, Bakker, Demerouti, & Derks, 2016](#)).

Recent empirical evidence has confirmed the practical importance of work engagement. Meta-analytic findings show that engagement is positively associated with performance and negatively associated with absenteeism, suggesting that engaged personnel are more willing to invest energy and remain psychologically present at work ([Neuber, Englitz, Schulte, Forthmann, & Holling, 2022](#)). Other studies have likewise indicated that engagement is strengthened by supportive leadership, organizational support, and positive psychological conditions, particularly in high-pressure settings ([Trisnawati, Sianto, Seansyah, & Saputra, 2021](#)). These findings make engagement a meaningful focal mechanism for explaining why some employees remain energized and committed under demanding work conditions, while others do not.

Although work engagement has received extensive scholarly attention, job involvement has been examined less consistently in integrated explanatory models. Job involvement reflects the extent to which employees identify psychologically with their job and regard work as a central part of their self-concept. This construct is strategically important in high-demand organizations because strong job involvement is associated with deeper role identification, stronger cognitive focus, and greater willingness to prioritize duty-related responsibilities. However, contemporary research still shows fragmentation in the antecedents used to explain job involvement, especially when compared with the much larger body of research on performance, turnover intention, and organizational citizenship behavior ([Hngoi, Abdullah, Wan Sulaiman, & Zaiedy Nor, 2024](#)).

From an organizational behavior perspective, motivational outcomes such as engagement and job involvement are likely to be shaped jointly by leadership, Human Resource (HR) systems, and personal-psychological resources. Transformational leadership provides meaning, direction, and individualized support; HPWS offers structured and consistent organizational practices; and PsyCap equips employees with hope, efficacy, resilience, and optimism. JD-R theory supports this multi-source explanation because motivation becomes stronger when job resources and personal resources are simultaneously available and aligned with demanding work conditions ([Arnold B Bakker et al., 2023](#)). Prior evidence suggests that coherent HR systems and supportive supervisors intensify employee engagement and related positive work attitudes ([Trisnawati et al., 2021](#)).

First, in the leadership domain, transformational leadership is often associated with enhanced motivational states because it fosters inspirational meaning, intellectual stimulation, and individualized consideration. Empirical research indicates that transformational leadership can strengthen employee engagement by creating positive psychological conditions and increasing employees' willingness to invest themselves in their work roles ([Nawaz, Gajenderan, Manoharan, & Parayitam, 2024](#)). In high-reliability contexts, such leadership may be especially important because it can translate intense demands into a shared mission, thereby supporting sustained energy and dedication rather than disengagement or withdrawal. Supporting this pathway, evidence shows that transformational leadership can significantly enhance work engagement by strengthening employees' psychological attachment, energy, and commitment to job goals ([Wu & Lee, 2020](#)). Consistent with this practical relevance, [Trisnawati et al. \(2021\)](#) provide evidence that transformational leadership, together with empowerment, functions as a driver of employee outcomes in service organizations, suggesting that leadership-based resource provision is linked to beneficial work consequences compatible with engagement-oriented explanations.

Second, at the system level, high-performance work systems represent a bundle of HR practices, such as selective staffing, training, performance management, and involvement-enhancing practices, designed to build the ability, motivation, and opportunity for performance. Meta-analytic evidence suggests that high-performance work systems are positively related to engagement and various individual-level outcomes, supporting the view that integrated HR systems, rather than isolated practices, create resourceful environments that enable employees to consistently invest effort and attention ([Hansen, Usanova, & Geraudel, 2025](#)). In demanding settings, high-performance work systems may function as structural resources that reduce uncertainty, standardize expectations, and strengthen perceived support for high-quality performance. In HRM research, HPWS is often interpreted through the Ability Motivation Opportunity (AMO) lens, in which coherent HR bundles can strengthen engagement by building competence, creating incentives, and expanding opportunities for participation and voice ([L.-C. Huang, Ahlstrom, Lee, Chen, & Hsieh, 2016](#)). In hospitality and other service-intensive sectors, HPWS has been shown to enhance engagement as a proximal mechanism that translates HR investment into employee outcomes ([Karatepe & Olugbade, 2016](#)).

Third, at the personal-resource level, psychological capital, commonly framed as hope, efficacy, resilience, and optimism, has been shown to support positive work attitudes and behaviors while strengthening employees' motivation. Evidence indicates that psychological capital predicts work engagement, which in turn promotes desirable work related behaviors and outcomes ([Saleem, Isha, Yusop, Awan, & Naji, 2022](#)). In operationally demanding environments, personnel with stronger psychological capital are more likely to sustain their efforts, recover from setbacks, and maintain confidence under pressure, thereby supporting stable engagement and psychological investment in their work. Additional evidence suggests that psychological capital helps employees remain engaged by strengthening resilience and adaptive coping, which is especially important when role demands are high and uncertainty persists ([Grover, Teo, Pick, Roche, & Newton, 2018](#)). Recent evidence also indicates that PsyCap can shape engagement related outcomes through resource-based pathways, where efficacy and optimism support sustained career-related energy and performance-relevant behaviors, especially in demanding public service contexts ([Daswati, Wirawan, Hattab, Salam, & Iskandar, 2022](#)).

Against this background, this study addresses three specific gaps. First, job involvement remains underexamined as a focal outcome in integrated resource-based models, even though it is important for sustained role attachment in demanding organizations. Second, relatively few studies have simultaneously examined transformational leadership, HPWS, and PsyCap as antecedents of job involvement while modeling work engagement as the central mediating pathway. Third, evidence from military or quasi-military settings is still limited, even though such settings provide a strong context for testing whether resource-based explanations remain robust when task intensity and discipline are high. These gaps justify the development of a more focused model that links leadership, HR systems, and personal resources to job involvement through work engagement. Accordingly, this study investigates personnel from the 461st Pasgat Battalion of the Indonesian Air Force and tests an integrated model in which transformational leadership, HPWS, and PsyCap directly and indirectly predict job involvement through work engagement. This study is expected to contribute theoretically by clarifying the mediating role of work engagement in a high-demand military setting.

2. Literature Review and Hypotheses Development

2.1 Transformational Leadership on Work Engagement

Transformational leadership is frequently conceptualized as a leadership approach that elevates followers' motivation and development through inspirational influence, individualized consideration, and intellectual stimulation, which collectively shape how employees interpret work demands and organizational goals ([Arnold B. Bakker & Albrecht, 2018](#)). In this view, transformational leadership is not merely directive; it is meaning-oriented leadership that frames tasks as mission-relevant contributions and encourages employees to align their efforts with a compelling vision ([Lai, Tang, Lu, Lee, & Lin, 2020](#)). Supporting this premise in contemporary contexts, [Trisnawati et al. \(2021\)](#) found that transformational leadership exerts a positive influence on employee engagement, suggesting that

inspirational and developmental leadership behaviors help sustain engagement even amid changing work arrangements.

From a contemporary engagement perspective, transformational leadership is often treated as a key job resource because it provides clarity, support, and developmental cues that stimulate employees' energy and persistence. Leaders who communicate purpose and confidence can cultivate higher vigor and dedication, which are central dimensions of work engagement ([Arnold B. Bakker & Albrecht, 2018](#)). Relatedly, [Trisnawati et al. \(2021\)](#) show that leadership paired with empowerment is a driving factor for employee outcomes in service settings, reinforcing the argument that leadership that enables and develops employees is associated with beneficial motivational and behavioral consequences that are compatible with higher engagement.

Moreover, transformational leadership may increase engagement by strengthening employees' psychological readiness to invest effort, particularly when leaders reinforce self-efficacy through coaching and individualized feedback ([Lai et al., 2020](#)). This reasoning is aligned with the perspective that work engagement is a motivational state shaped by leader driven resources that stimulate enthusiasm, dedication, and absorption rather than mere compliance ([Arnold B. Bakker & Albrecht, 2018](#)). From this perspective, transformational leaders serve not only as sources of direction but also as providers of meaning, confidence, and developmental support that enable employees to interpret demanding tasks in a more positive and purposeful way.

Recent evidence also strengthens the argument that leadership can enhance work engagement through need-based motivational mechanisms. [Van Tuin, Schaufeli, and Van den Broeck \(2021\)](#) introduced the concept of engaging leadership, which shares important overlap with transformational leadership in its emphasis on inspiring, strengthening, and supporting employees. Their study showed that engaging leadership is positively associated with work engagement by promoting intrinsic values and fostering basic psychological need satisfaction (autonomy, competence, and relatedness). This is highly relevant for the transformational leadership–work engagement pathway because transformational leadership similarly encourages meaning, competence development, and relational connection, which are core drivers of engagement.

Empirical evidence supports the proposition that transformational leadership is positively related to work engagement. Transformational leadership predicts work engagement, which serves as an important psychological mechanism linking leadership to downstream work outcomes, supporting the placement of engagement as a proximal outcome of transformational leadership ([Lai et al., 2020](#)). [Breevaart et al. \(2016\)](#), showing that transformational leader behaviors can predict day-level fluctuations in work engagement and subsequent performance, underscoring leadership as a proximal job resource in high-demand roles.

H₁: Transformational leadership has a positive effect on work engagement

2.2 High-Performance Work Systems on Work Engagement

High-Performance Work Systems (HPWS) are typically conceptualized as coherent bundles of human resource practices, such as selective staffing, training, performance management, participation, and incentive-aligned rewards, that jointly enhance employees' ability, motivation, and opportunity to contribute ([Y. Huang, Ma, & Meng, 2018](#)). The system perspective suggests that the combined and consistent implementation of practices is more important than any single practice in isolation ([Kloutsiniotis & Mihail, 2020](#)). Cross sector evidence also supports the HPWS engagement linkage, indicating that integrated HR bundles are positively associated with job engagement because they create consistent signals of organizational investment and structured opportunities for involvement ([Arefin, Alam, Islam, & Rahaman, 2019](#)).

In engagement-focused scholarship, HPWS can be viewed as an organizational resource architecture that signals investment, fairness, and long-term support, thereby encouraging employees to reciprocate with deeper psychological energy and dedication at work. When employees perceive human resource systems as credible and beneficial, they are more likely to exhibit vigor and absorption as a form of

motivational reciprocation ([Y. Huang et al., 2018](#)). Consistent with the support signal interpretation, [Trisnawati et al. \(2021\)](#) show that perceived organizational support relates to work engagement, which is sensitive to organizational investment and is not compatible with the HPWS investment-oriented HR bundle.

HPWS may also promote engagement by shaping organizational climates, particularly climates of justice, support, and service quality, which influence whether employees feel safe and motivated to invest discretionary effort. In this logic, employees become more engaged when human resource systems create predictable expectations and reinforce that their efforts will be recognized and supported ([Kloutsiniotis & Mihail, 2020](#)). [Trisnawati et al. \(2021\)](#) further underscore the importance of a psychosocial safety climate, indicating that system effectiveness in producing engagement can depend on whether the work environment is perceived as psychologically safe and supportive.

In addition, longitudinal evidence suggests that HPWS can strengthen employees' motivational states by improving the relational and fairness-related conditions surrounding work. [Haider, De-Pablos-Herederó, and De-Pablos-Herederó \(2020\)](#) found that HPWS is associated with better employee outcomes through relational coordination, and that these effects are contingent on peer justice climate. This implies that integrated human resource systems not only build skills and provide incentives but also shape day-to-day coordination quality and perceptions of fairness conditions that are theoretically conducive to higher work engagement in demanding work settings.

Empirical findings support this hypothesis. [Y. Huang et al. \(2018\)](#); [Kloutsiniotis and Mihail \(2020\)](#) show that HPWS are positively related to engagement that shapes employee attitudes through climate-based mechanisms. By fostering perceptions of support, fairness, and developmental opportunities, HPWS creates conditions that encourage employees to invest greater cognitive, emotional, and behavioral energy in their work roles. Thus, HPWS functions as a strategic resource architecture that fosters support, fairness, developmental opportunities, and vitality, making it a relevant antecedent of work engagement ([Jiang, 2026](#)).

H₂: High performance work systems have a positive effect on work engagement

2.3 Psychological Capital and Work Engagement

Psychological capital is commonly defined as a positive psychological resource composed of hope, efficacy, resilience, and optimism that strengthens adaptive functioning and persistence in challenging conditions ([Alessandri, Consiglio, Luthans, & Borgogni, 2018](#)). As a personal resource, psychological capital supports employees in sustaining motivation and constructive interpretations of demanding tasks, which are core antecedents of engagement ([Giancaspro, Callea, & Manuti, 2022](#)). This also suggests that employees with stronger psychological capital are better equipped to remain psychologically present in demanding work situations. As a result, they are more likely to sustain the energy and positive focus needed to become fully engaged in their work.

Theoretically, psychological capital can increase engagement because hope strengthens goal-directed energy, efficacy increases confidence in managing task demands, resilience supports recovery from setbacks, and optimism sustains positive future expectations ([Alessandri et al., 2018](#)). These components directly align with the vigor and dedication dimensions of engagement by enabling employees to invest energy and maintain commitment over time ([Giancaspro et al., 2022](#)). Similarly, ([Mustajab & Darmayanti, 2024](#)) highlighted PsyCap's role in shaping positive work-related patterns, which conceptually aligns with engagement as an energized and persistent motivational state. Although [Laila \(2025\)](#) focused on grit and self-efficacy rather than PsyCap as a full construct, their findings are relevant because self-efficacy is one of the core components of psychological capital.

Importantly, psychological capital is often described as a capacity-like resource that can dynamically shape motivational states rather than functioning as a static trait. This perspective implies that employees who possess higher psychological capital are more likely to experience repeated episodes of absorption and dedication, gradually reinforcing engagement as a stable pattern of work-related

motivation ([Alessandri et al., 2018](#)). In occupations characterized by sustained pressure, PsyCap is often treated as a key personal resource that buffers strain while supporting positive motivational states, enabling individuals to remain engaged despite high task intensity ([Kotzé, 2018](#)).

Empirical evidence strongly supports this relationship between them. [Alessandri et al. \(2018\)](#) showed that psychological capital predicts work engagement and links personal resources to desirable discretionary outcomes. These findings reinforce the view that psychological capital is a critical personal resource for shaping motivational states at work. By enhancing employees' hope, efficacy, resilience, and optimism, psychological capital enables individuals to sustain greater cognitive, emotional, and behavioral investments in their work roles, thereby strengthening overall work engagement. Recent evidence also confirms that psychological capital remains a significant predictor of work engagement, particularly in demanding training and development environments, where positive psychological resources are essential for sustained motivation ([Harris, 2025](#)).

H₃: Psychological capital has a positive effect on work engagement

2.4 Work Engagement on Job Involvement

Work engagement is commonly understood as a positive motivational state characterized by vigor, dedication, and absorption, reflecting employees' energetic and psychological presence in their work roles ([Arnold B. Bakker & Albrecht, 2018](#)). In contrast, job involvement refers to the extent to which individuals cognitively and psychologically identify with their job and perceive work as central to their self-concept, representing a deeper form of role-based attitudinal attachment ([Hngoi et al., 2024](#)). Although conceptually distinct, the two constructs are closely related, as engagement captures an active motivational condition that may gradually strengthen employees' identification with their work.

From a theoretical standpoint, work engagement is expected to enhance job involvement because repeated experiences of dedication and absorption increase the personal significance attached to work and reinforce role identification ([Arnold B. Bakker & Albrecht, 2018](#)). This reasoning is consistent with [Mustajab and Darmayanti \(2024\)](#), who position job involvement as a meaningful attitudinal construct associated with psychological resources and positive work habits, thereby reinforcing its relevance as a deeper form of attachment to the work role. [Hossain, Khatun, and Shanjabin \(2024\)](#) further indicate that engagement is strengthened when employees experience a strong fit between themselves, their jobs, and their organizations.

Work engagement may also function as a motivational engine that shapes more enduring work attitudes by strengthening meaning, persistence, and cognitive investment, all of which are essential conditions for developing a job-cantered identity. In this respect, engagement should not be viewed solely as an outcome of job and personal resources, but also as a proximal mechanism through which these resources are translated into deeper attitudinal outcomes, including job involvement ([Arnold B. Bakker & Albrecht, 2018](#)). The more employees experience sustained energy and dedication in their work, the more likely they are to internalize their jobs as an important and valued part of who they are.

Empirical scholarship further supports this proposition by highlighting job involvement as an important work attitude that is sensitive to both contextual and psychological influences, including organizational support and insecurity dynamics, suggesting that it is also responsive to motivational states such as engagement ([Hngoi et al., 2024](#)). Accordingly, the relationship between work engagement and job involvement is theoretically well-grounded and empirically plausible. Recent evidence suggests that stronger identity-based resources are closely associated with higher work engagement ([Yu, 2025](#)). This supports the argument that engagement can deepen employees' psychological attachment to their work.

H₄: Work engagement has a positive effect on job involvement

2.5 Transformational Leadership on Job Involvement

Transformational leadership may directly influence job involvement by shaping employees' identity-relevant interpretations of work and strengthening their value alignment with their job roles ([Al Basyir, Madhakomala, & Handaru, 2020](#)). When leaders emphasize the mission, significance, and moral purpose, employees are more likely to internalize their work as meaningful and an important part of

who they are, thereby increasing their job involvement. In this sense, transformational leadership extends beyond directing performance as it helps employees construct a deeper psychological connection with their work roles.

From a motivational and attitudinal perspective, transformational leadership can strengthen job centrality by clarifying role expectations and elevating the perceived significance of employees' work contributions, thereby enhancing cognitive identification with their job ([Arnold B. Bakker & Albrecht, 2018](#)). This reasoning suggests that transformational leadership may influence job involvement not only indirectly through engagement but also directly because job involvement is inherently linked to job meaning, self-relevance, and identity-based attachment ([Hngoi et al., 2024](#)). As employees perceive their work as more purposeful and aligned with broader organizational values, they are more likely to define their job as central to their self-concept.

Moreover, the individualized consideration characteristic of transformational leadership can foster feelings of pride, recognition, and psychological ownership, all of which are closely associated with job involvement. Employees who feel personally valued, supported, and developed by their leaders are more likely to regard their work as personally significant and worthy of sustained psychological investment ([Al Basyir et al., 2020](#)). This further strengthens the argument that transformational leadership can exert a direct influence on job involvement, independent of its indirect role in work engagement ([Lai et al., 2020](#)).

Empirical evidence also supports this direct relationship. [Al Basyir et al. \(2020\)](#) report that transformational leadership is positively associated with job involvement within a broader explanatory framework, providing empirical support for the proposition that transformational leadership can directly enhance job involvement as a work-related attitude. Taken together, these arguments suggest that transformational leadership is likely to foster stronger job involvement by increasing the meaning, significance, and identity value that employees attach to their work. A recent evidence-based review suggests that transformational leadership has meaningful effects on a broad range of employee outcomes by strengthening meaning, development, and alignment at work, which is highly relevant to the direct formation of job involvement ([Deng, 2023](#)).

H₅: Transformational leadership has a positive effect on job involvement

2.6 High-Performance Work Systems on Job Involvement

High-Performance Work Systems (HPWS) are expected to increase job involvement because they enhance employees' competence development, participation opportunities, and perceptions of organizational investment, all of which can strengthen job role centrality and psychological identification with work ([Tripathi & Kumar, 2023](#)). When human resource systems provide training, voice mechanisms, and fair reward structures, employees are more likely to develop a stronger sense of job ownership and a deeper work-focused identity ([Y. Huang et al., 2018](#)). In this respect, HPWS should be understood not merely as a bundle of administrative practices but as a strategic organizational arrangement that fosters stronger psychological attachment to the job.

HPWS may shape job involvement by increasing employees' perceived autonomy, influence, and participation in work processes, which, in turn, supports a stronger cognitive and emotional attachment to the job. This reasoning is consistent with the view that job involvement grows when employees experience meaningful participation, skill development, and opportunities for contribution, all of which are central objectives of HPWS ([Y. Huang et al., 2018](#)). As employees perceive that the organization actively invests in their growth and involvement, they are more likely to define their work as significant and worthy of a sustained commitment.

Additionally, HPWS can create stable role expectations and consistent reward-performance linkages, thereby reinforcing the psychological importance of the job and strengthening self-role alignment ([Kloutsiniotis & Mihail, 2020](#)). Under coherent and well-implemented systems, employees are more likely to internalize their jobs as central to their identity because the work environment provides clarity,

fairness, and developmental support. This interpretation is further supported by ([Trisnawati et al., 2021](#)), who show that HPWS is associated with work engagement and that psychosocial safety climate and job satisfaction are relevant pathways through which system-level practices influence employee motivational states. Although their emphasis is on engagement, the same organizational conditions are highly relevant for explaining stronger job involvement.

Longitudinal evidence indicates that HPWS influences employee outcomes through relational and justice-related mechanisms. [Haider et al. \(2020\)](#) demonstrate that HPWS is linked to higher employee job satisfaction through relational coordination, and that this indirect effect depends on the justice climate. Although job satisfaction was the focal outcome in that study, the underlying mechanism is highly relevant to job involvement because HPWS strengthens cooperative coordination, reinforces fairness perceptions, and promotes more integrated role relationships. In high-demand settings, where coordination quality and justice perceptions are especially critical, these conditions may encourage employees to identify more strongly with their jobs and invest themselves more deeply in their work roles.

Empirical evidence supports this direct link. [Tripathi and Kumar \(2023\)](#) show that HPWS is positively associated with job involvement within a structured explanatory model, providing support for the inclusion of a direct HPWS-to-job involvement path alongside the indirect pathway through work engagement. Taken together, these arguments suggest that HPWS can enhance job involvement by creating supportive, fair, and development-oriented work conditions that strengthen employees' psychological connections to their jobs. This suggests that employees are more likely to internalize their roles when HR practices are implemented consistently. Such conditions can strengthen the sense that work is meaningful, valued, and worthy of a sustained personal commitment.

H₆: High-performance work systems have a positive effect on job involvement

2.7 Psychological Capital on Job Involvement

Psychological capital may increase job involvement because individuals who are hopeful, efficacious, resilient, and optimistic are more likely to invest cognitively and emotionally in their work roles, thereby strengthening their job identification ([Demir, 2018](#)). Self-efficacy enhances confidence in handling role demands and supports a stronger sense of role ownership, whereas hope and optimism foster sustained goal-directed effort and more positive meaning construction around work ([Alessandri et al., 2018](#)). In this regard, psychological capital can be understood as an important personal resource that enables employees to develop a deeper psychological attachment to their jobs.

From an attitudinal formation perspective, psychological capital may foster job involvement by reducing strain and allowing employees to allocate greater cognitive and emotional resources to role identity and job centrality rather than anxiety, uncertainty, or depletion processes. This suggests that psychological capital facilitates deeper job involvement by stabilizing psychological functioning and strengthening self-regulatory capacity in demanding contexts ([Demir, 2018](#)). Recent evidence further indicates that PsyCap may interact with contextual factors in shaping work-related motivational and attitudinal outcomes, implying that it can strengthen job involvement by sustaining positive appraisal processes under conditions of uncertainty ([Kuroki & Shirinashihama, 2025](#)).

Psychological capital may also enhance job involvement by promoting persistence, confidence, and interpretive optimism, all of which increase the likelihood that employees perceive their jobs as a meaningful platform for achievement and identity affirmation ([Alessandri et al., 2018](#)). As these positive psychological states are repeatedly reinforced over time, employees are more likely to internalize their work as central to their self-concept, thereby consolidating job involvement as a more stable and enduring work attitude ([Demir, 2018](#)). This perspective is particularly relevant in demanding organizational settings, where the ability to sustain positive interpretations and self-regulation is critical for maintaining a strong psychological attachment to work.

Empirical evidence supports the association between psychological capital and job involvement. ([Demir, 2018](#)) reports that psychological capital is positively related to job involvement and highlights

the psychological pathways through which PsyCap contributes to more favorable work attitudes. Taken together, these findings provide a strong basis for treating psychological capital as a direct antecedent of job involvement, as employees with higher levels of hope, efficacy, resilience, and optimism are more likely to develop a stronger identification with and commitment to their work roles. This suggests that stronger personal resources can deepen employees' psychological attachment to their work.

H₇: Psychological capital has a positive effect on job involvement

2.8 Transformational Leadership on Job Involvement Through Work Engagement

The mediation perspective suggests that transformational leadership may enhance job involvement, partly by first strengthening work engagement as a proximal motivational state ([Lai et al., 2020](#)). Leaders who provide meaning, inspiration, and individualized support are more likely to increase employees' vigor, dedication, and psychological energy at work, which in turn raises the likelihood that employees internalize their jobs as identity relevant and personally significant ([Arnold B. Bakker & Albrecht, 2018](#)). In this sense, transformational leadership may shape job involvement not only through direct value-based influence but also through the motivational condition it creates in employees' day-to-day work experiences.

Work engagement can be understood as a motivational bridge through which leadership influences deeper work role attachment. Repeated experiences of vigor, dedication, and absorption strengthen job centrality by reinforcing the personal significance of work and employees' cognitive and emotional investment in their role performance ([Arnold B. Bakker & Albrecht, 2018](#)). This suggests that engagement is not only an outcome of transformational leadership but also a key mechanism through which leadership shapes more enduring attitudinal outcomes, including job involvement ([Hngoi et al., 2024](#)). In this way, leadership-driven engagement can transform short-term motivational energy into a more enduring psychological bond with work.

From a theoretical standpoint, employees who experience high levels of engagement are more likely to interpret their work as meaningful, persist in the face of obstacles, and immerse themselves more fully in role-related activities. These experiences can gradually strengthen identification with the job, making work more central to the individual's self-concept and reinforcing job involvement over time ([Arnold B. Bakker & Albrecht, 2018](#)). Accordingly, work engagement represents a plausible explanatory pathway through which transformational leadership can generate a deeper psychological attachment to work ([Lai et al., 2020](#)).

Empirical evidence supports this mediation logic. [Lai et al. \(2020\)](#) provide an important precedent for modeling work engagement as a mediator within transformational leadership frameworks by showing that engagement transmits leadership effects to downstream work outcomes. Extending this reasoning, the present study proposes that work engagement mediates the relationship between transformational leadership and job involvement, such that leadership-driven motivational energy is translated into stronger psychological identification with the job. Additional evidence shows that leadership influences important employee outcomes through work engagement as a mediating mechanism, thereby strengthening the plausibility of engagement as the pathway through which transformational leadership fosters deeper job involvement ([Lee, 2019](#)).

H₈: Transformational leadership has a positive effect on job involvement through work engagement

2.9 High-Performance Work Systems on Job Involvement Through Work Engagement

High-Performance Work Systems (HPWS) may enhance job involvement indirectly by first strengthening work engagement through the provision of resources, fairness signals, and competence development opportunities ([Y. Huang et al., 2018](#)). Training improves employees' capabilities, participative practices expand voice and autonomy, and performance management clarifies expectations, all of which contribute to the development of work engagement as a positive motivational state ([Kloutsiniotis & Mihail, 2020](#)). From this perspective, HPWS does not merely shape employee

behavior through formal structures but also fosters the motivational conditions necessary for deeper psychological investment in work.

Empirical evidence supports the first stage of this mediation. ([Y. Huang et al., 2018](#); [Kloutsiniotis & Mihail, 2020](#)) demonstrate that HPWS is positively associated with employee engagement, while show that HPWS may operate through climate related pathways that are closely linked to employees' motivational experiences. These findings reinforce the argument that HPWS creates supportive and development-oriented work environments that encourage employees to invest greater cognitive, emotional and behavioral energy in their work. This indicates that employees are more likely to become engaged when HR systems consistently communicate support, fairness, and developmental values. Such motivational conditions can strengthen employees' willingness to invest themselves more fully in their work.

Evidence also supports a broader HPWS job involvement linkage. [Tripathi and Kumar \(2023\)](#) reported that HPWS is positively associated with job involvement within a structured explanatory framework, suggesting that the inclusion of work engagement as a mediator is theoretically and empirically consistent with the logic that human resource systems shape psychological states, which in turn influence deeper work attitudes. Accordingly, this study proposes that work engagement mediates the relationship between HPWS and job involvement. More recent evidence further confirms that employee engagement significantly mediates the relationship between HPWS and employee outcomes in knowledge-based service settings, reinforcing the suitability of engagement as the explanatory mechanism linking HPWS to stronger job involvement ([Srivastava, 2026](#)).

H₉: High-performance work systems have a positive effect on job involvement through work engagement

2.10 Psychological Capital on Job Involvement Through Work Engagement

Psychological capital is expected to influence job involvement indirectly through work engagement because personal resources typically manifest first as motivational states before shaping more stable work attitudes ([Alessandri et al., 2018](#)). Employees with higher levels of psychological capital tend to demonstrate greater confidence, persistence, resilience, and positive appraisal, all of which contribute to stronger vigor and dedication to their work, thereby enhancing engagement ([Giancaspro et al., 2022](#)). From this perspective, psychological capital does not only affect job involvement directly, but also through the motivational energy it helps generate in everyday work experiences.

As work engagement increases, employees are more likely to become deeply absorbed in their tasks and perceive their work role as meaningful, worthwhile, and consistent with their self-concept, which in turn fosters stronger job involvement ([Arnold B. Bakker & Albrecht, 2018](#)). This suggests that work engagement serves as a proximal motivational mechanism through which psychological capital is translated into a deeper identity-based attachment to work ([Hngoi et al., 2024](#)). Dynamic evidence supports this mediation. [Alessandri et al. \(2018\)](#) showed that psychological capital predicts work engagement over time, thereby supporting the first stage of the indirect pathway from psychological capital to engagement. Similarly, [Giancaspro et al. \(2022\)](#) reported that psychological capital is positively associated with engagement within explanatory models linked to favorable discretionary work outcomes. Taken together, these findings reinforce the argument that psychological capital contributes to work performance.

Moreover, psychological capital has been empirically linked to job involvement, suggesting that employees with stronger hope, efficacy, resilience, and optimism are more likely to develop a deeper attachment to their work roles ([Demir, 2018](#)). Given this direct association, work engagement represents a theoretically plausible and empirically meaningful intervening mechanism through which psychological capital fosters job involvement. Accordingly, this study proposes that work engagement mediates the relationship between psychological capital and job involvement. Recent empirical evidence has also shown that psychological capital positively influences work engagement, with additional psychological mechanisms helping to transmit this effect, which supports the argument that

engagement is a plausible pathway through which psychological capital can foster deeper work attitudes, such as job involvement (Trung, 2026).

H_{10} : Psychological capital has a positive effect on job involvement through work engagement

The research framework is illustrated in Figure 1.

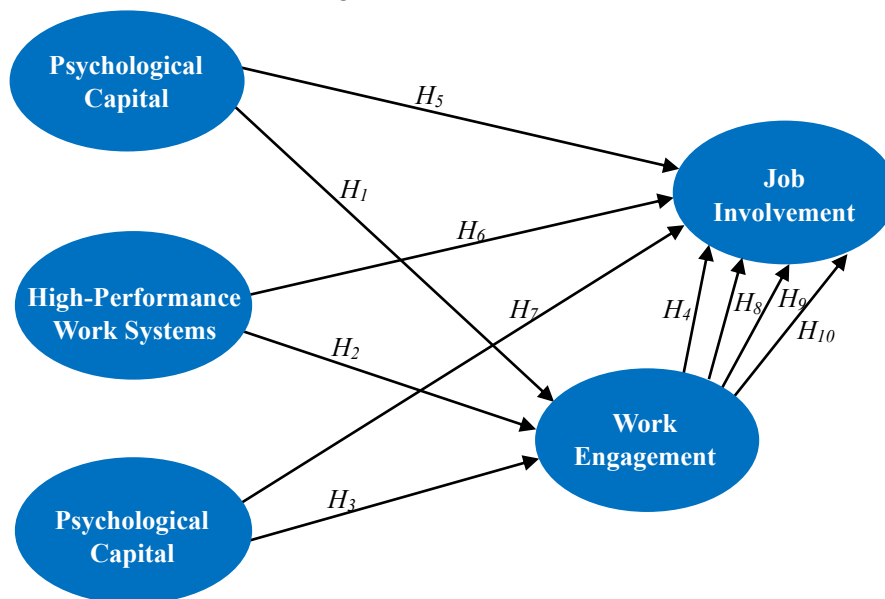


Figure 1. Research framework

3. Methodology

This study employed a quantitative method. Quantitative methods are commonly defined as a positivist/post-positivist approach that tests objective theories by examining relationships among variables, where variables are measured with instruments so that numerical data can be analyzed using statistical procedures (Creswell & Creswell, 2017). This study used an explanatory (causal) design to test the structural relationships among Transformational Leadership (TL), High-Performance Work Systems (HPWS), Psychological Capital (PsyCap), Work Engagement (WE), and Job Involvement (JI). The analytical approach uses Partial Least Squares Structural Equation Modeling (PLS-SEM) because the model contains multiple latent constructs, reflective indicators, and mediation paths that are estimated simultaneously.

The population comprised all 300 active personnel of the 461st Pasgat Battalion of the Indonesian Air Force who had served for at least two years. Because the population size was manageable and fully accessible, the study applied a census (total sampling) approach to data collection. Using a census strengthens the representativeness of the findings at the unit level because every eligible member of the population is included in the analysis. This design also reduces the sampling error within the investigated unit.

Data were collected using a structured questionnaire. Before completing the survey, respondents were informed of the purpose of the study, the voluntary nature of participation, and the confidentiality of their responses. Completed questionnaires were screened for completeness and consistency before being coded for further analysis. This procedure was intended to ensure data quality and minimize avoidable administrative errors in the dataset.

The instrument consisted of 22 items measured on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The questionnaire covered five reflective constructs: TL (four items), HPWS (seven items), PsyCap (four items), WE (three items), and JI (four items). Each item represented one conceptual indicator so that the instrument remained feasible for respondents working in an operational

environment while still preserving the conceptual coverage of each construct. Table 1 presents the operational definitions and the indicator domains used in this study.

Data analysis followed the standard PLS-SEM procedures. PLS-SEM analysis was conducted in two stages: the assessment of the measurement model and the assessment of the structural model. In the measurement model, outer loadings of 0.70 or higher were preferred; indicators between 0.60 and 0.70 were retained when theoretically important, and when the AVE and reliability values remained acceptable. Convergent validity was evaluated using the AVE with a minimum threshold of 0.50, while internal consistency reliability was assessed using composite reliability and Cronbach's alpha with recommended values of at least 0.70. Discriminant validity was examined using the Heterotrait-Monotrait ratio (HTMT), and structural paths were evaluated using bootstrapped coefficients, t-values, and p-values. A path was considered significant when $t > 1.96$ and $p < 0.05$ at a 95% confidence level.

Table 1. Operational definitions of variables

Variables (Code)	Role in Model	Operational Definition	Key Indicators	Scale	Items
Transformational Leadership (TL)	Independent (X_1)	Respondents' perception of supervisors' leadership behaviors that inspire, develop, and transform followers. Measured as the mean score of the TL items.	Idealized Influence; Inspirational Motivation; Intellectual Stimulation; Individualized Consideration	Likert 1–5	4
High-Performance Work Systems (HPWS)	Independent (X_2)	Respondents' perception of integrated HR/work practices designed to enhance skills, motivation, and involvement. It was measured as the mean score of HPWS items.	Selective Staffing; Training and Development; Performance Appraisal; Performance-Based Rewards; Participation and Empowerment; Information Sharing and Communication; Career Development	Likert 1–5	7
Psychological Capital (PsyCap)	Independent (X_3)	Respondents' positive psychological resources support goal pursuit and performance under pressure. It was measured as the mean score of the PsyCap items.	Hope; Self-efficacy; Resilience; Optimism	Likert 1–5	4
Work Engagement (WE)	Mediator (M)	Respondents' positive, fulfilling, work-related state reflected energy and immersion. Measured as the mean score of the WE item.	Vigor; Dedication; Absorption	Likert 1–5	3

Job Involvement (JI)	Dependent (Y)	Respondents' psychological identification with and active involvement in their job roles. It was measured as the mean score of the JI items.	Psychological Identification; Job Centrality; Active Participation; Work Meaningfulness	Likert 1–5	4
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4. Results and Discussions

4.1 Result

4.1.1 Respondent Characteristics

This study analyzed responses from 300 active personnel of the 461st Pasgat Battalion of the Indonesian Air Force, all of whom had completed at least two years of service. Respondents ranged in rank from officers, non-commissioned officers, and enlisted personnel, and their ages ranged from 23 to 47 years. Because the study used a census design, the respondent profile was identical to the accessible population profile in the unit. This is important for interpretation because the findings reflect the perceptions of the entire target group within the battalion rather than a selected subgroup. Accordingly, the results should be read as unit-level evidence for the military setting studied.

4.1.2 Construct Reliability and Validity

Construct reliability and convergent validity were evaluated using the PLS-SEM measurement model by examining the indicator outer loadings. Outer loadings indicate how strongly each observed indicator represents its corresponding latent constructs. As a general rule, indicators with loadings ≥ 0.70 are considered strong, while loadings in the 0.60-0.70 range may still be acceptable when theoretical relevance is maintained and overall construct quality is adequate. This step is essential because outer loadings provide initial evidence of indicator adequacy in representing latent constructs. It also helps determine whether each item is sufficiently aligned with the theoretical construct that it is intended to measure.

The outer loadings across indicators fell within an acceptable range, indicating that the measurement items adequately captured their intended constructs and provided sufficient support for further reliability and validity assessments. The detailed outer loading values for each indicator are presented in Table 2. These results indicate that the indicators are sufficiently robust to be retained for subsequent construct-level evaluations. Accordingly, the measurement model can be further assessed using convergent validity and internal consistency reliability criteria.

Table 2. Indicator loadings for the measurement model

Variables	Indicators	Outer Loadings
Transformational Leadership (TL)	TL1	0.802
	TL2	0.799
	TL3	0.848
	TL4	0.808
High-Performance Work Systems (HPWS)	HPWS1	0.770
	HPWS2	0.845
	HPWS3	0.662
	HPWS4	0.712
	HPWS5	0.733
	HPWS6	0.631
	HPWS7	0.740
Psychological Capital (PsyCap)	PC1	0.826
	PC2	0.779

Work Engagement (WE)	PC3	0.751
	PC4	0.803
	WE1	0.829
	WE2	0.827
Job Involvement (JI)	WE3	0.838
	JI1	0.844
	JI2	0.743
	JI3	0.784
	JI4	0.775

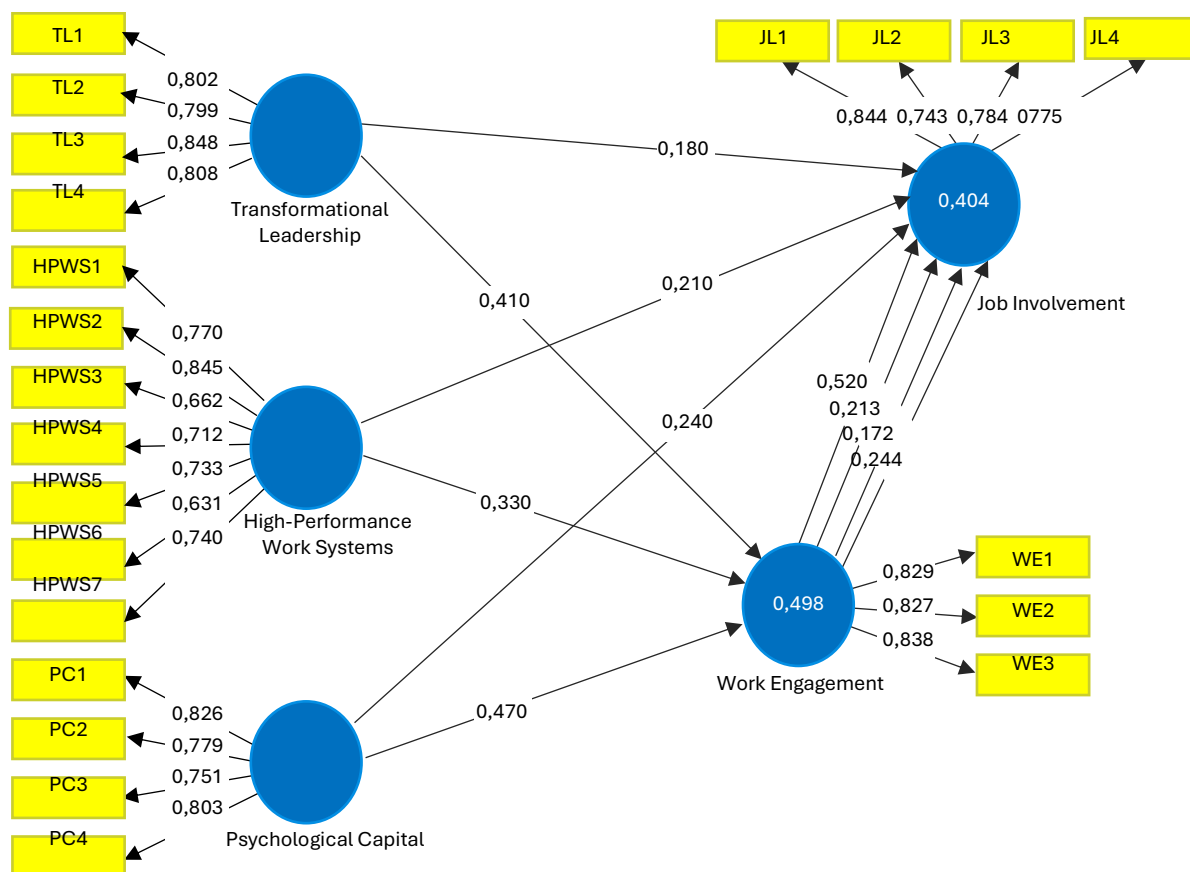


Figure 2. Outer loadings

Table 2 and Figure 2 show that all indicators met the acceptable loading requirements. Several indicators demonstrate strong representation of their constructs, such as TL3 (0.848), HPWS2 (0.845), WE3 (0.838), and JI1 (0.844). A few indicators, particularly HPWS3 (0.662) and HPWS6 (0.631), were lower than the ideal 0.70 threshold; however, they remained acceptable because they were theoretically relevant and supported by satisfactory construct-level AVE and reliability values. Overall, the indicator-level results suggest that the retained items are adequate to represent the latent variables in the model.

After the indicator level assessment, construct level convergent validity and reliability were evaluated using Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's alpha. These statistics provide a more comprehensive assessment of whether the latent constructs are measured consistently and whether the indicators converge on the same concepts. The results are shown in Table 3.

Table 3. AVE, composite reliability, and Cronbach's alpha

Variables	Average Variance Extracted (AVE)	Composite Reliability	Cronbach's Alpha
Transformational Leadership (TL)	0.663	0.887	0.887
High-Performance Work Systems (HPWS)	0.534	0.888	0.887
Psychological Capital (PsyCap)	0.624	0.869	0.869
Work Engagement (WE)	0.691	0.870	0.870
Job Involvement (JI) (Saleem)	0.620	0.867	0.866

Table 3 indicates that all constructs satisfy the recommended convergent validity criterion because each AVE value exceeds 0.50. Work engagement recorded the highest AVE (0.691), followed by transformational leadership (0.663) and psychological capital (0.624), indicating that these constructs explain a relatively high proportion of variance in their indicators. HPWS has the lowest AVE (0.534), but the value remains acceptable and does not threaten the adequacy of the measurement model. These results confirm that the indicators sufficiently converge on their intended constructs. The reliability statistics were also satisfactory. Composite reliability values ranged from 0.867 to 0.888, and Cronbach's alpha values ranged from 0.866 to 0.887, both well above the conventional threshold of 0.70. This indicates a strong internal consistency across all constructs and supports the conclusion that the measurement model is reliable. Taken together, the loading, AVE, and reliability results justify proceeding with the structural model assessment.

4.1.3 Structural Equation Model

Hypothesis testing was conducted using bootstrapping in the PLS-SEM. At a 95% confidence level, a hypothesis is supported when the t-value exceeds 1.96, and the p-value is below 0.05. In addition to statistical significance, the standardized path coefficients were examined to compare the relative strengths of the relationships in the model. The structural results are listed in Table 4.

Table 4. PLS-SEM path coefficients

Path	Std Coefficient	t-value	p-value	Test results
H_1 : TL $\rightarrow$ WE	0.410	7.850	0.000	Supported
H_2 : HPWS $\rightarrow$ WE	0.330	5.920	0.000	Supported
H_3 : PsyCap $\rightarrow$ WE	0.470	9.110	0.000	Supported
H_4 : WE $\rightarrow$ JI	0.520	10.240	0.000	Supported
H_5 : TL $\rightarrow$ JI	0.180	2.680	0.007	Supported
H_6 : HPWS $\rightarrow$ JI	0.210	3.210	0.001	Supported
H_7 : PsyCap $\rightarrow$ JI	0.240	3.890	0.000	Supported
H_8 : TL $\rightarrow$ WE $\rightarrow$ JI	0.213	4.020	0.000	Supported
H_9 : HPWS $\rightarrow$ WE $\rightarrow$ JI	0.172	3.540	0.000	Supported
H_{10} : PsyCap $\rightarrow$ WE $\rightarrow$ JI	0.244	4.880	0.000	Supported

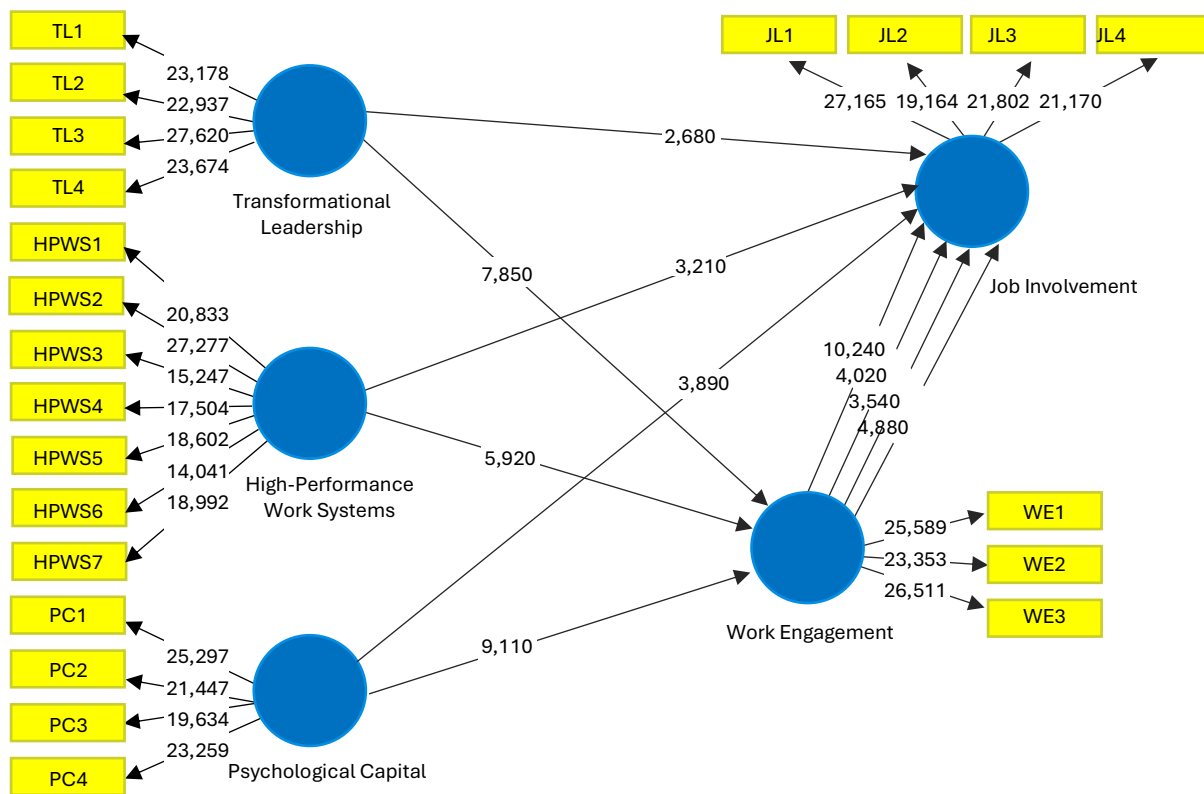


Figure 3. PLS-SEM path coefficients (t-values)

Table 4 and Figure 3 shows that all ten hypotheses are supported. Among the antecedents of work engagement, psychological capital had the strongest direct effect ($\beta = 0.470$), followed by transformational leadership ($\beta = 0.410$) and HPWS ($\beta = 0.330$). This indicates that personal psychological resources are especially important for sustaining engagement in the studied military unit, although leadership and HPWS also contribute significantly. Work engagement had the strongest direct effect on job involvement in the model ($\beta = 0.520$), confirming its central explanatory role. In comparison, the direct effects of TL ($\beta = 0.180$), HPWS ($\beta = 0.210$), and PsyCap ($\beta = 0.240$) on job involvement are weaker but remain significant.

The mediation results also strengthen this model. All indirect paths through work engagement were significant, with the PsyCap $\rightarrow$ WE $\rightarrow$ JI path showing the largest indirect effect ($\beta = 0.244$), followed by TL $\rightarrow$ WE $\rightarrow$ JI ($\beta = 0.213$) and HPWS $\rightarrow$ WE $\rightarrow$ JI ($\beta = 0.172$). Because both the direct and indirect effects were significant, the pattern indicated partial mediation rather than full mediation. Substantively, this means that job involvement is improved not only because personnel possess stronger resources, but also because those resources first energize them and increase their engagement with their work.

4.2 Discussion

The results show that transformational leadership, HPWS, and PsyCap make significant positive contributions to work engagement. This confirms that engagement in a military environment is shaped by a combination of leadership quality, supportive organizational systems, and positive personal resources, rather than by individual motivation alone. Among these antecedents, PsyCap emerged as the strongest predictor, suggesting that hope, efficacy, resilience, and optimism are especially important for maintaining energy and dedication under demanding work conditions. This finding is consistent with the JD-R theory, which posits that both job and personal resources are needed to sustain motivational states such as engagement (Arnold B Bakker et al., 2023).

The second major finding is that work engagement exerts the strongest direct effect on job involvement. Personnel who feel vigorous, dedicated, and absorbed in their duties are more likely to identify psychologically with their job and regard work as an important part of who they are. This result

strengthens the argument that engagement is not merely a short-term positive state but also a mechanism through which deeper role attachment is formed over time. In other words, engagement helps translate available resources into a more enduring form of work-related identification.

The direct effects of TL, HPWS, and PsyCap on job involvement remained significant even after work engagement was included in the model. This indicates that the model does not operate solely through engagement. Leadership can directly strengthen job involvement by clarifying purpose and reinforcing the significance of service; HPWS can directly shape involvement by creating fair, developmental, and participative work systems; and PsyCap can directly deepen role attachment by supporting employees' confidence and persistence. Therefore, job involvement in the studied unit is produced by both immediate motivational experiences and broader structural or psychological influences on the employees.

The mediation findings provide the clearest contribution to the study. Work engagement partially mediated the effects of TL, HPWS, and PsyCap on job involvement, demonstrating that engagement is a central but not exclusive pathway. The strongest indirect effect was generated by PsyCap, implying that positive psychological resources become especially consequential when they first stimulate vigor, dedication, and absorption. This mediated pattern helps explain why interventions aimed at strengthening leadership, HR systems, and PsyCap are more effective when they explicitly cultivate engagement.

This study also offers a specific element of novelty. Prior research has often emphasized performance, turnover intention, and organizational citizenship behavior as the principal outcomes of leadership, HPWS, and PsyCap. In contrast, this study places job involvement at the center of the model and tests it in a high-demand military context while simultaneously integrating leadership, HR systems, and personal resources into one framework. This combination extends the application of JD-R reasoning and provides a more comprehensive explanation of how personnel become deeply involved in their work roles.

Practically, the findings imply that military leaders should not rely on a single intervention. Leadership development, HPWS improvement, and PsyCap strengthening should be pursued in parallel because each of these resources contributes directly to job involvement and indirectly to work engagement. Programs that improve coaching quality, communication clarity, training access, recognition systems, resilience building, and psychological support are therefore likely to reinforce each other. For the 461st Pasgat Battalion, such integrated efforts are especially relevant because mission effectiveness depends not only on compliance but also on deep psychological involvement in work roles.

5. Conclusions

5.1 Conclusion

This study concludes that transformational leadership, HPWS, and PsyCap significantly improve work engagement, and that work engagement significantly improves job involvement. The results also show that transformational leadership, HPWS, and psychological capital have significant direct effects on job involvement. Thus, job involvement is explained by both direct resource effects and the mediating role of engagement. Among the tested relationships, PsyCap was the strongest antecedent of work engagement, and work engagement was the strongest direct predictor of job involvement.

5.2 Research Limitations

This study had several limitations. First, it focused on a single military unit; therefore, the findings should not be generalized to other organizations without caution. Second, the use of self-reported cross-sectional data increases the risk of common method bias and limits strong causal interpretations. Third, the model does not include additional contextual variables such as job demands, leadership climate, organizational support, or operational tempo, all of which may further explain the job involvement. These limitations should be considered when interpreting these findings.

5.3 Suggestions and Directions for Future Research

Several implications and future directions arise from these results. Practically, battalions should strengthen transformational leadership through coaching, inspirational communication, and individualized support; improve HPWS through transparent appraisal, continuous training, and stronger participation mechanisms; and develop PsyCap through resilience building, goal-setting, and peer-support initiatives. Because work engagement is a key mediating mechanism, interventions should not only improve resources but also ensure that these resources are experienced in ways that increase vigor, dedication, and absorption. Future research should test the model across multiple military or public service units, use multi-source or longitudinal data, and incorporate additional contextual variables or moderators to strengthen its explanatory power.

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Author Contributions

MR contributed to the conceptualization, study design model, instrument development, data collection and initial manuscript drafting. DF contributed to the theoretical framework, literature review, research model development, and hypothesis formulation. KM contributed to the data analysis, interpretation of findings, manuscript revision, and academic supervision. All authors have reviewed and approved the final version of the manuscript and agreed to be accountable for the integrity of the work.

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