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| RESEARCH ARTICLE

Emotional Intelligence Abilities and Work Engagement among Salespersons: A Conservation of Resources Theory Perspective from Germany's Pharmaceutical Industry

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| **ABSTRACT**

Sustaining salespersons' work engagement has become a critical concern amid intensifying professional demands and increasing turnover within the German pharmaceutical B2B sector. Guided by the Conservation of Resources (COR) theory, this study examines how four distinct abilities of emotional intelligence—self-emotion appraisal, others' emotion appraisal, emotion utilization, and emotion regulation—affect salespersons' work engagement. Employing a quantitative design, data were collected from 340 pharmaceutical sales representatives in North Rhine-Westphalia and analyzed using partial least squares structural equation modeling (PLS-SEM). The results reveal that all four emotional intelligence abilities exert significant positive effects on work engagement, confirming the hypothesized relationships. Among these, the utilization and regulation of emotion emerged as the most influential predictors, underscoring their pivotal role in sustaining engagement within emotionally demanding sales environments. Overall, the four abilities of EI explained 68% of the variance in work engagement, affirming its value as a psychological resource that enhances motivational energy and mitigates emotional strain. This study enriches the sales management literature by demonstrating the strategic importance of developing emotional competencies to foster work engagement of salespersons in competitive B2B markets.

1. Introduction

Within the contemporary world of economics, characterized by volatility, accelerated digitization, and increased knowledge sharing, firms face relentless pressures that derive from globalization, technological breakthroughs, and rapidly changing customer demands (Hitka et al., 2019). These dynamic forces placed human capital at the top of the list of crucial strategic assets, making it a foundation of sustained competitive advantages and long-term organizational effectiveness (Alhindaassi et al., 2025; Elsharnouby & Elbanna, 2020). In such a dynamic landscape of strategic human resource management (HRM), employees were viewed not only as operating actors but as full-rounded value creators whose cognitive, emotional, and relational competencies form the foundation of organizational adaptability and strategic renewal (Alhindaassi et al., 2025; Kiran et al., 2022). This new orientation placed employee work engagement as the key topic of both scholarly inquiry and managerial approaches, being known as the key psychological state that drives organizational vitality, employee resilience, and personal flourishing (Boccoli et al., 2023; Hu et al., 2024).

Work engagement, as conceptualized by Schaufeli et al. (2002), refers to a positive, fulfilling, and work-oriented mental state of vigor, dedication, and being absorbed. Workers with high engagement report higher energy, enthusiasm, and strong

psychological involvement in their task requirements—factors that critically enhance task performance, organizational citizenship behavior, and customer satisfaction (Andrlić et al., 2023; Kossyva et al., 2023). However, on a global basis, engagement is still critically low (Kişi, 2023). Gallup (2025) cites that only 21% of workers worldwide are actively engaged in their professions, with Europe scoring an egregious rate of just 13%, and Germany, in particular, ranking 27th among 37 European nations with just 12% engagement. Such statistics indicate a worldwide disengagement crisis that threatens organizational health, innovation, and sustainability. Consequently, the development of measures that can revive employee engagement has become a key research and management imperative, particularly in knowledge-intense industries such as pharmaceuticals, for which national economies critically depend (Ahmed, 2024; Hu et al., 2024).

The business-to-business (B2B) pharmaceutical sector is a highly complex and stressful professional environment. Pharmaceutical industry sales representatives operate in the intersection of scientific knowledge, approval of laws, and customer relations, thus bridging pharmaceutical manufacturers with healthcare entities (Alshurideh et al., 2023; Nasution et al., 2024). Their regular interaction contributes to bridging gaps of mistrust, maintenance of ethics, and boosting competitiveness (Khan et al., 2020; Khwaja et al., 2024). Nevertheless, such a sector is characterized by significant pressures, including rigorous demands for performance, complex product offerings, and stringent approval regimes—conditions that often reduce motivation and increase burnout as well as attrition rates (Lyngdoh et al., 2021; Senćanski et al., 2024b). To better understand, in such contexts, employees maintain motivation and performance, Conservation of Resources (COR) theory emerges as the central guiding principle. COR theory proposes that individuals strive to attain, protect, and allocate valued resources as a way of reducing stress as well as maintaining engagement and performing (Demerouti, 2025; Li et al., 2020). In such a case, emotional intelligence (EI) competencies emerge as an important complement of personal resources that help employees manage emotional demands and maintain engagement in stressful work settings (Alhindaassi et al., 2025; Senćanski et al., 2024a).

Emotional intelligence, defined as the ability to recognize, understand, use, and manage emotions in oneself and in others, was identified as a key factor that determines effective functioning in the workplace (Alhindaassi et al., 2025; Devi et al., 2023; Mayer et al., 2016). In the case of people who work in pharmaceutical sales, these emotional abilities constitute important psychological resources that foster resilience, fortify confidence, and sustain motivation in highly stressful settings (Good et al., 2021; Kidwell et al., 2021; Senćanski et al., 2024a). Empirical research findings also support the proposition that workers with high emotional intelligence better transform emotional labor into positive engagement and, as such, display energy, commitment, and immersion in spite of uncertainty and pressure (Mérida-López et al., 2023; Widowati & Satrya, 2023). Nevertheless, despite the rising theoretical acknowledgment of emotional intelligence as a personal resource, there is limited empirical literature that links specific emotional intelligence competencies with work engagement in the German B2B pharmaceutical sector (Khoddami et al., 2023; Sawasdee et al., 2020). This specific context, with long sales cycles, intricate decision-making processes, and intense compliance standards, offers a unique opportunity to explore the complex ways through which emotional abilities shape engagement (Dugan et al., 2024; Hu et al., 2024).

Moreover, earlier studies have frequently framed emotional intelligence as a unidimensional construct, leaving aside the distinctive roles of its primary abilities: appraisal of one's own emotions, appraisal of emotions in others, application of emotion, and emotion regulation. More recent works propose that implementing a multidimensional strategy better captures the variability in outputs of engagement and lends deep theoretical insights into the emotional mechanisms that underpin motivation and performance (Barreiro &Treglown, 2020; D'Amico et al., 2020). Adopting COR theory as a base, this investigation aims to examine the effects of EI abilities—Self-Emotion Appraisal (SEA), Others' Emotion Appraisal (OEA), Use of Emotion (UOE), and Regulation of Emotion (ROE) on salespersons' work engagement in Germany's pharmaceutical products companies. Transmitting increased clarity regarding personal emotional abilities, building vigor, commitment, and absorption, the current study aspires to expand theoretical knowledge of personal resources in engagement dynamics and further COR theory by empirically verifying emotional intelligence as a multicomponent mechanism of personal resources in a stressful, knowledge-intensive B2B industry. Finally, the present study also offers practical applications for sales leaders and HR managers in their efforts to design emotionally intelligent, resilient, and highly motivated sales forces skillful in maintaining performance amidst regulation and competitor pressure.

2. Literature Review
2.1 Theoretical Framework
The Conservation of Resources (COR) theory provides an elaborate conceptual framework for the processes individuals expend to access, maintain, and allocate resources by means of coping with stress and realizing improved well-being (Hobfoll et al., 2018). It asserts that individuals are driven by acquiring and safeguarding resources—cataloging them as objects, personality traits, circumstances, or energies—whilst loss felt or the possibility of loss occasions stress, the accretion of resources generates the desired outcomes (Hobfoll et al., 2018). Applying to the organizational setting, the COR theory describes the job demands

versus individual resources dynamics as well as contextual resources dynamics, eventually influencing principal employee outcomes such as employee engagement, commitment, as well as performance (Bon & Shire, 2022; Dåderman et al., 2023). In the challenging setting of German B2B pharma sales, where the sales reps are forced under strict requirements and the performance expectations level is very high, the COR theory describes the process where people allocate and conserve key resources to maintain their work engagement (Anwar et al., 2022; Bongers et al., 2021; Dåderman et al., 2023).

Emotional intelligence (EI) is one of the key individual abilities under this theoretical framework, comprising four but interconnected competencies: self-emotional appraisal (SEA), others' emotional appraisal (OEA), utilization of emotion (UOE), and regulation of emotion (ROE), as per the Wong Law model (2002). SEA makes individuals able to perceive as well as know their feelings, contributing to the awareness of stress early in time as well as the preservation of the stores of energy to provide for the maintenance of vigor (Barreiro & Treglown, 2020; Mérida-López et al., 2023). OEA entails a better awareness of others' emotions, creating confidence as well as cooperation serving "resource passageways" during professional interactions (D'Amico et al., 2020; Mayer et al., 2016). UOE provides for the deliberate placement of pleasant feelings to encourage industry as well as motivation during elaborate sales processes (Devi et al., 2023; Kidwell et al., 2021). Lastly, the regulation of emotion (ROE) alleviates burnout as well as recovery, preventing downward spirals while maintaining motivation (Barreiro & Treglown, 2020; Mayer et al., 2016).

These combined EI abilities work together as reciprocal inputs into the "resource gain cycle" of COR theory, generating individual "resource caravans" that buffer stressors and generate enduring work engagement (Abaker et al., 2025; Sudiro et al., 2023). In the German pharma market competitiveness arena, sales reps with emotional intelligence apply these skills to maintain resilience, build productive client connections, generate greater satisfaction, and maintain work engagement (Sawasdee et al., 2020; Senćanski et al., 2024b). The present study's theoretical background conceptualizes SEA, OEA, UOE, and ROE as distinguishable, accumulable individual resources that incumbent salespeople's work engagement autonomously maintains by generating resource safeguarding, spirals of resource gain and buffering environmental demands for enhancing their work engagement. Figure 1 below provides the conceptual model behind the present work.
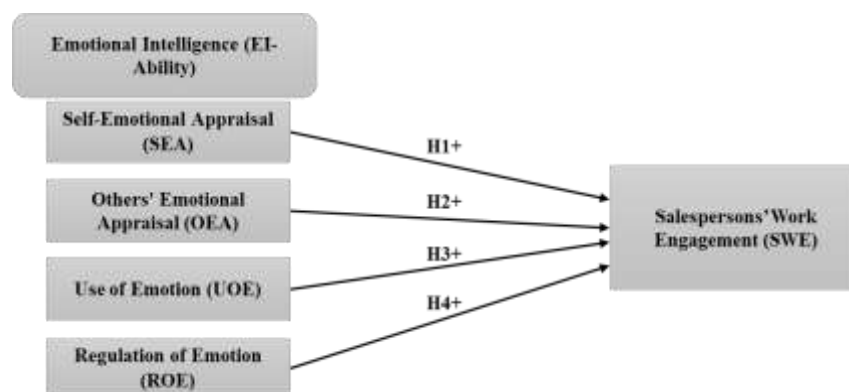
Figure 1. The Conceptual Model

2.2 Emotional Intelligence Abilities and Salespersons' Work Engagement

In the business-to-business (B2B)-based drugs industry, formulated by relationship-based sales, rigorous regulation, and communication with customers based on scientific rationale, ability-based emotional intelligence (EI-ability) gained acclaim as an effective individual ability determining employee motivation and work performance (Rifaya & Dayarathna, 2019; Senćanski et al., 2024b). EI-ability is defined as a set of cognitive-emotional skills to perceive, utilize, acknowledge, and regulate emotions (Mayer et al., 2016), for this intelligence to be most valued among sales personnel employed under emotionally driven and cognitively challenging settings like drug sales (Khoddami et al., 2023; Leonidou et al., 2021). Studies provide evidence that employees with high levels of emotional competency have high work engagement, a positive mental state consisting of vigor, dedication, and absorption (Schaufeli et al., 2002), since such competencies decrease psychological distress as well as develop interindividual relations (Barreiro & Treglown, 2020; Alhindaassi et al., 2025). Further empirical proof provides support that regulation of emotion, empathic awareness, and intrinsic motivation serve to increase engagement as well as performance (George et al., 2022; Selvi & Aiswarya, 2023). Schlaegel et al. (2022) reported that EI-ability significantly influences compliance-based culture nations' satisfaction and performance, like Germany, where systematic regulation of feelings aligns with professional needs.

Existing studies advocate for a multifaceted conception of EI-Ability to justify varied responses in engagement (Barreiro & Treglown, 2020; D'Amico et al., 2020; Chen & Fellenz, 2020). Self-Emotional Appraisal (SEA), also the ability to recognize one's emotions, is an underlying one's own resources, helping salespeople regulate emotive strain and retain energy, producing vigor (Mérida-López et al., 2023). Others' Emotional Appraisal (OEA), the ability to recognize the customers' Emotional Appraisal, lifts communicative adaptability and rapport management through the development of relational resources such as the level of client trust and customer satisfaction that sustain the level of engagement (Devi et al., 2023; Kidwell et al., 2021). Moreover, the Use of Emotion (UOE)—using emotions to achieve outcomes—turns affective energy into motivational force, strengthening dedication and absorption (Mallin et al., 2025). Finally, the regulation of Emotion (ROE) strengthens the regulation of the negative feelings during the stress from negotiation refusal or the stress from negotiation refusal, preventing anemia by saving engagement (Ahmad et al., 2022; Selvi & Aiswarya, 2023; Senćanski et al., 2024b). As individual components, the facets of one's own EI-ability form accumulating one's own resources able by themselves to increase salespeople's work engagement under hard B2B pharma conditions. From this, the following hypotheses are presented.

H1: Self-emotional appraisal positively affects work engagement among B2B salespersons in Germany's pharmaceutical products companies.
H2: Others' emotional appraisal positively affects work engagement among B2B salespersons in Germany's pharmaceutical products companies.
H3: Use of emotion positively affects work engagement among B2B salespersons in Germany's pharmaceutical products companies.
H4: Regulation of emotion positively affects work engagement among B2B salespersons in Germany's pharmaceutical products companies.

3 Methodology

3.1 Data collection

In order to fulfill the aims of this study, a quantitative research methodology grounded in a positivist epistemological framework was utilized. This methodology is consistent with the deductive reasoning paradigm, whereby hypotheses formulated from an established theoretical model—in this instance, the COR theory—are subjected to empirical examination (Creswell & Creswell, 2017). The individual salesperson was designated as the unit of analysis, as personal competencies and psychological factors, such as emotional intelligence (EI) and work engagement, are best represented through self-report instruments (Good et al., 2021; Mérida-López et al., 2023). A cross-sectional survey methodology was employed to gather data from 375 frontline sales representatives operating within B2B pharmaceutical companies situated in North Rhine-Westphalia, Germany—a region recognized for its high concentration of pharmaceutical firms. To improve the external validity of the study and reduce selection bias, simple random sampling techniques were applied (Bougie & Sekaran, 2019). After obtaining ethical approval, questionnaires were distributed via email, complemented by targeted field visits aimed at promoting participation and optimizing response rates. Of the surveys circulated, 344 were returned, and subsequent data screening, along with the exclusion of multivariate outliers resulted in 340 valid responses remaining for analysis. This final sample size satisfied the statistical power criteria recommended for Partial Least Squares Structural Equation Modeling (PLS-SEM), thereby ensuring the reliability of the ensuing analyses (Hair et al., 2021).

Table 1 outlines the socio-demographic details of the 340 salespeople who responded from German B2B pharmaceutical organizations. A large majority of the respondents (83.5%) were men, primarily aged between 25 and 40 years, corresponding to the young adult age cohort. A majority (64.7%) of the participants were married. Other demographic details such as education, years of B2B pharmaceutical sales experience, industry sector, and function within the job can be seen in Table 1 for further background.

Table 1. The Information of Respondents' Profile (n= 340)

Item	Category	Frequencies	Percentage
Gender	Male	284	83.5
	Female	56	16.5
	Total	340	100
Age Group	25-30 Year	63	18.5
	31-35 Year	99	29.1
	36-40 Year	65	19.1

	41-45 Year	59	17.4
	46-50 Year	46	13.5
	Over 50 Year	8	2.4
	Total	340	100
Social Status	Single	102	30.0
	Married	220	64.7
	Divorced/Widowed	18	5.3
	Total	340	100
Education Level	Diploma	143	42.1
	Bachelor	150	44.1
	Master	42	12.4
	Doctorate	5	1.5
	Total	340	100
The length of work as a salesperson in the B2B pharmaceutical firms.	3-5 years	56	16.5
	6-10 years	112	32.9
	11-15 years	102	30.0
	More than 15 years	70	20.6
	Total	340	100
The Current Position	Non-Executive Level	310	91.2
	Executive Level	30	8.8
	Total	340	100

3.2 Measures

For the measurement of the research's constructs, psychometrically established measurement scales borrowed from the literature were utilized. A five-point Likert scale running from 1 ("strongly disagree") to 5 ("strongly agree") operationalized each research construct. Emotional intelligence ability (EI-Ability) was the "Wong and Law Emotional Intelligence Scale (WLEIS)" originally developed by Wong and Law (2002). It has 16 items that represent four distinct dimensions of emotional intelligence: "self-emotion appraisal (SEA), others' emotion appraisal (OEA), use of emotion (UOE), and regulation of emotion (ROE)". For this study, these dimensions represented first-order constructs. Representative items are the following: "I always know whether or not I am happy", "I am a good observer of others' emotions", "I would always push myself to try my best", and "I am quite capable of controlling my own emotions". Salespersons' work engagement (SWE) was the "Utrecht Work Engagement Scale (UWES)" developed by Schaufeli et al. (2002). The UWES measures that the second-order construct of work engagement comprises the dimensions "vigor, dedication, and absorption". Representative items are the following: "I am bursting with energy at work", "I am enthusiastically involved in my work", and "I am fully absorbed in my work". Reliability and validity levels for all the constructs have been found to be satisfactory by the measures of Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE) that are higher than the thresholds that are proposed by Hair et al. (2021).

3.3 Procedure

Due to the research interest in the predictive aspect, the measurement and structural models were evaluated using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method using SmartPLS version 3.3.3. PLS-SEM has been widely accepted as a strong analytical tool suitable for predictive studies and for investigating highly intricate theoretical constructs (Alshammakh & Azmin, 2021; Hair et al., 2021). Based on the covariance-based SEM, PLS-SEM provides higher statistical efficiency for studies that are focused on prediction and allows for greater flexibility when confronted with highly complex models that contain many latent variables (Henseler & Schuberth, 2023). Accordingly, it appeared the most suitable analytical tool for testing the predictive impact of emotional intelligence (EI) abilities on salespersons' work engagement (SWE). The measurement took place in two phases. The measurement model's reliability and validity were assessed in the first stage. Internal consistency was established when Composite Reliability (CR) values were higher than 0.70 (Hair et al., 2021), and convergent validity was established by Average Variance Extracted (AVE) values higher than or equal to 0.50 (Hair et al., 2021). Item loadings were estimated using the PLS algorithm such that loadings higher than 0.60 showed appropriate convergent validity at the construct level (Alhindaassi et al., 2025; Hair et al., 2021). Discriminant validity was assessed by the "Heterotrait–Monotrait (HTMT)" criterion, such that the inter-construct correlation was "lower than 0.90", confirming appropriate discriminant validity (Al Azzani et al., 2024; Henseler et al., 2015).

In the subsequent third stage, the structural model was evaluated for its explanatory and predictive capabilities. The coefficient of determination (R^2) was employed in a measurement of the variance explained in the endogenous constructs, such that values

higher than 0.26 denoted a considerable explanatory power (Cohen, 1988). Additionally, a measurement of the effect size (f^2) showed relative effects for single exogenous constructs on the dependent variable while adhering to the standards for small (0.02–0.15), medium (0.16–0.35), and large effects (>.35) proposed by Cohen (2013). Moreover, predictive relevance (Q^2) measures higher than zero were employed for the purpose of validating predictive accuracy by the model (Hair et al., 2021). Finally, the proposed path importance was evaluated using a procedure of 5,000 resamples by bootstrapping such that the one-tailed tests were significant for $t \geq 1.645$ ($p < 0.05$) and $t \geq 2.33$ ($p < 0.01$) (Hair et al., 2021).

4 Results

4.1 Measurement Model Results

In alignment with the analytical methods provided by Hair et al. (2021) and Meeker et al. (2022), the proposed study carried out a detailed test of the measurement model that included tests of "construct validity, convergent validity, and discriminant validity." As presented in Table 2, the Cronbach's alpha levels ranged between 0.767 and 0.879 and thus exceeded the given minimum acceptability level of 0.70 and hence supported the internal reliability. Likewise, the levels of the Composite Reliability (CR) ranged between 0.843 and 0.909 and thus exceeded the proposed threshold level of 0.70 and hence further supported the internal consistency and stability of the constructs. To achieve convergent validity, a single particular indicator (SWE-A1) was removed because the factor loading for it fell below the allowable level of 0.60. The rest of the items showed standardized loadings above 0.60 and hence reflected the required criterion for convergent validity at the construct level. Further, the values of the AVE for all the latent constructs were above the conventional limit of 0.50 and indicated that all constructs indeed captured a considerable portion of variance from their associated indicators. Overall, the empirical results confirm the reliability of the measurement model and show that all the constructs have significant convergent validity. As a result, the finished model that comprises five latent constructs and a total of 32 items provides a sound empirical foundation for subsequent structural examinations.

Table 2. Construct Reliability and Convergent Validity (Loading and AVE) (after deleting some items)

Constructs	Dimension	Item	Loading (≥0.60)	Cronbach's Alpha (≥0.70)	CR (≥0.70)	AVE (>0.50)
"Self-Emotion Appraisal (EI-SEA)"		SEA1	0.83	0.837	0.891	0.673
		SEA2	0.87			
		SEA3	0.88			
		SEA4	0.69			
"Others' Emotion Appraisal (EI-OEA)"		OEA1	0.84	0.827	0.885	0.659
		OEA2	0.84			
		OEA3	0.79			
		OEA4	0.78			
"Use of Emotion (EI-UOE)"		UOE1	0.70	0.825	0.885	0.661
		UOE2	0.74			
		UOE3	0.89			
		UOE4	0.90			
"Regulation of Emotion (EI-ROE)"		ROE1	0.74	0.833	0.889	0.668
		ROE2	0.82			
		ROE3	0.85			
		ROE4	0.86			
Salespersons' Work Engagement (SWE)	*Vigour (SWE-V)*	SWE_V1	0.70	0.879	0.909	0.627
		SWE_V2	0.74			
		SWE_V3	0.86			
		SWE_V4	0.85			
		SWE_V5	0.82			
		SWE_V6	0.77			
	Dedication (SWE-D)	SWE_D1	0.76	0.871	0.907	0.661
		SWE_D2	0.80			
		SWE_D3	0.84			
		SWE_D4	0.87			
		SWE_D5	0.79			
	Absorption (SWE-A)	SWE_A2	0.66	0.767	0.843	0.520
		SWE_A3	0.63			

SWE_A4	0.79
SWE_A5	0.72
SWE_A6	0.80

* *"The SWE-A1was deleted from the list due to the testing of Loading <60."*

An additional test of discriminant validity employed the HTMT, such that all the values are represented in Table 3 and are all lower than the suggested level of 0.90 (Al Azzani et al., 2024; Henseler et al., 2015). Recent methodological writings recommend the advantages of the HTMT criterion over more traditional measures such as the Fornell–Larcker criterion and cross-loadings, where traditional measures are often inaccurate in the effective detection of concerns related to construct differentiation (Hair et al., 2021; Henseler et al., 2015). For this reason, the adoption of the HTMT technique guarantees a stricter and less fallible test of discriminant validity, such that it sustains the assertion that all the constructs in the model are empirically and conceptually distinct from one another.

Table 3. Discriminant Validity Results by HTMT

Constructs	EI-OEA	EI-ROE	EI-SEA	EI-UOE	SWE-A	SWE-D	SWE-V
EI-OEA							
EI-ROE	0.72						
EI-SEA	0.87	0.69					
EI-UOE	0.76	0.75	0.73				
SWE-A	0.71	0.68	0.65	0.71			
SWE-D	0.45	0.54	0.39	0.48	0.35		
SWE-V	0.82	0.77	0.76	0.85	0.83	0.48	

Key: "EI= Emotional Intelligence, EI-SEA= Self-Emotion Appraisal, EI-OEA= Others' Emotion Appraisal, EI-UOE= Use of Emotion, EI-ROE= Regulation of Emotion, SWE= Salespersons' Work Engagement, SWE-V= Vigour, SWE_D= Dedication, and SWE_A= Absorption."

Overall, the outcomes present significant empirical support for the adequacy of the measurement model that describes excellent construct reliability, followed by clear convergent and discriminant validity. The final model consists of five latent constructs that are operationalized by a total of 32 measurement items that show significant stability throughout the psychometric tests. Figure 2 shows a graphical interpretation of the overall measurement model that has been extracted using the PLS algorithm, where the indicator loadings, path coefficients, and R² values have been represented. Individually, these factors indicate important measures towards the evaluation of the model's explanatory power and overall research methodology validity.
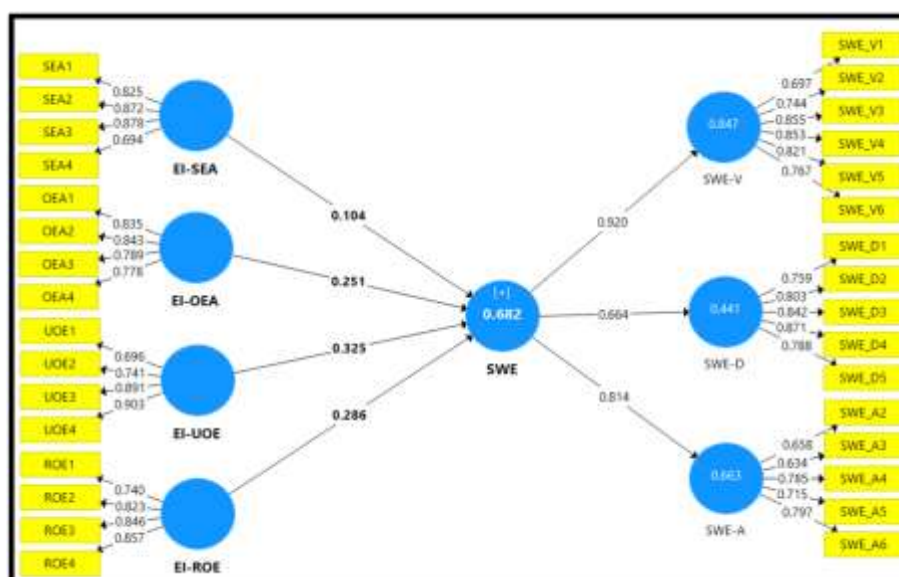

Figure 2. The Comprehensive Measurement Model Results

4.2 Structural Model Assessment Results

To test the statistical significance of the hypothesized relationships, a bootstrapping procedure using 5,000 resamples was followed. One-tailed tests were employed where hypotheses were significant at $t \geq 1.645$ ($p < 0.05$) and $t \geq 2.33$ ($p < 0.01$) according to accepted criteria (Hair et al., 2021). The analysis examined the effects of four different aspects of emotional intelligence: self-emotion appraisal (EI-SEA), others' emotion appraisal (EI-OEA), utilization of emotion (EI-UOE), and regulation of emotion (EI-ROE) on work engagement of salespersons (SWE) in the German pharmaceutical industry's B2B business. The path coefficients (β) estimates of the post-estimations for the direct hypotheses are reported in Table 4, and the path model for the hypotheses is associated with the path model in Figure 3. The results provide strong evidence supporting all hypothesized direct connections. Specifically, self-emotion appraisal, others' emotion appraisal, utilization of emotion, and regulation of emotion have significant positive impacts for work engagement for B2B pharmaceutical industry salespersons (β = 0.104, t = 1.871, p < 0.05; β = 0.251, t = 4.34, p < 0.001; β = 0.325, t = 5.065, p < 0.001; β = 0.286, t = 5.417, p < 0.001, respectively) and therefore authenticate hypotheses H1 through H4.

Table 4. The Direct Hypotheses Results

Hypo-NO.	Hypothesis	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Decision
H1	EI-SEA -> SWE	0.104	0.055	1.871	0.031	Supported
H2	EI-OEA -> SWE	0.251	0.058	4.340	0.000	Supported
H3	EI-UOE -> SWE	0.325	0.064	5.065	0.000	Supported
H4	EI-ROE -> SWE	0.286	0.053	5.417	0.000	Supported
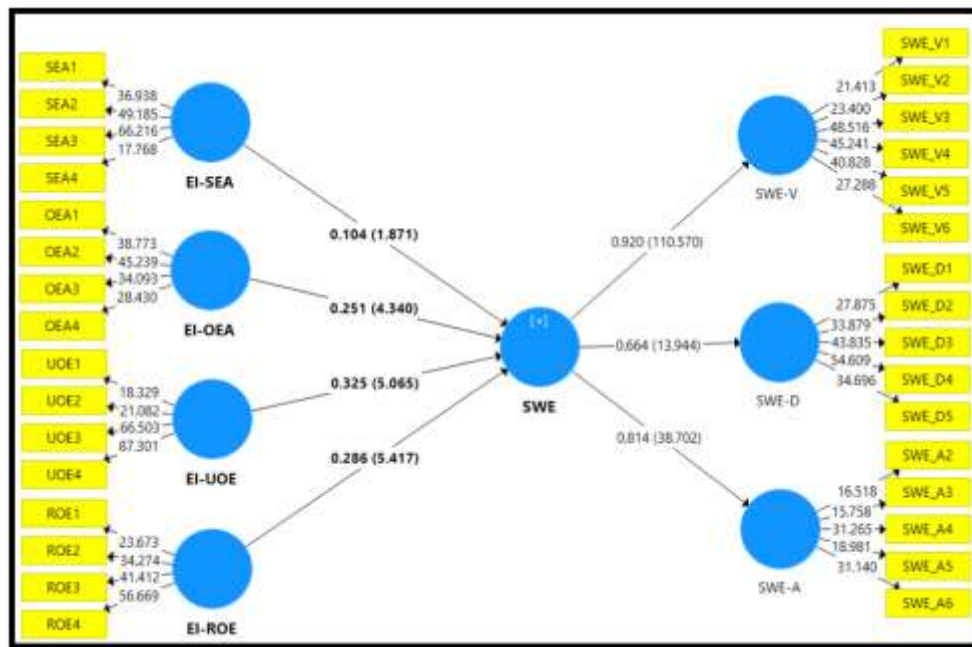
Figure 3. PLS Bootstrapping Outputs

In addition, the coefficient of determination (R^2) served to evaluate the proportion of the dependent variable's variance that was accounted for by its related predictors. As Figure 2 and Table 5 indicate, it was found that the four emotional intelligence capabilities of self-emotion appraisal (EI-SEA), others' emotion appraisal (EI-OEA), use of emotion (EI-UOE), and regulation of emotion (EI-ROE) together explained 68% of work engagement (SWE) by the salespersons. Such a strong explanatory power indicates the model's great predictive power in the German B2B pharmaceutical market context (Cohen, 1988). To complement the R^2 results, the research also explored the individual contribution of each predictor through the effect size measure (f^2) for a further understanding of their practical impact (Hair et al., 2012). As Cohen (2013) warrants, p-values simply represent statistical significance while values of f^2 represent the size of the effect, with measurement classifications for small (0.02–0.15), medium (0.16–0.35), and large effects (>0.35). Based on Table 5, the impact values for EI-SEA, EI-OEA, EI-UOE, and EI-ROE on SWE were

0.02 (small), 0.08 (small), 0.16 (medium), and 0.13 (small), respectively. These results underscore that while all emotional intelligence abilities contribute meaningfully to enhancing salespersons' work engagement, the use of emotion demonstrates a particularly notable influence within the predictive model.

Table 5. R^2 Values and Impact Size f2

Construct	R^2	Effect Size (f^2)	Result
Salespersons' Work Engagement (SWE)			
EI-SEA	0.682	0.02	Small
EI-OEA	0.682	0.08	Small
EI-UOE	0.682	0.16	Medium
EI-ROE	0.682	0.13	Small

Lastly, the study evaluated the predictive relevance of the model using the Q^2 statistic derived through the blindfolding procedure. Whereas the R^2 coefficient reflects the model's explanatory capability, Q^2 serves as an indicator of predictive accuracy, measuring the extent to which the model's parameter estimates can reproduce the observed data. As shown in Table 6, the Q^2 value was substantially greater than zero, confirming that the model possesses moderate to high predictive validity in line with the guidelines of Hair et al. (2021). According to these benchmarks, values of 0.35, 0.15, and 0.02 correspond to large, medium, and small predictive effects, respectively. Thus, the results demonstrate that the structural model not only explains a considerable proportion of variance in the salespersons' work engagement but also achieves strong predictive precision, underscoring its robustness within the context of Germany's B2B pharmaceutical sector.

Table 6. Predictive Relevance (Blindfolding) Q^2

Endogenous Construct	SSO	SSE	Q^2 (=1-SSE/SSO)	Predictive Relevance
Salespersons' Work Engagement (SWE)	5440	3990.61	0.266	Moderate

5 Discussion

5.1 Interpretation of the Findings

This research's results strongly confirm the Conservation of Resources (COR) theory, which argues that people pursue obtaining, conserving, and utilizing valuable psychological resources in order to manage demands and sustain work engagement (Hobfoll et al., 2018). The findings report that the four dimensions of emotional intelligence—self-emotion appraisal (SEA), others' emotion appraisal (OEA), use of emotion (UOE), and regulation of emotion (ROE)—contribute positively to salesperson work engagement in the B2B pharmaceutical market in Germany, pointing to the role of emotional resources in demanding work environments. Acceptance of all the hypotheses indicates that emotionally intelligent salespeople are skilled at perceiving affective cues, facilitating feelings, and translating affective insights into persistent engagement. The findings confirm the COR structure in demonstrating how an individual's stock of emotional intelligence functions as a storehouse of personal resources that controls the onset of emotional exhaustion and boosts adaptive energy and therefore sustains effort in difficult work conditions (Dåderman et al., 2023; Khoddami et al., 2023).

Furthermore, the results show that the four emotional intelligence abilities collectively explain a substantial proportion of the variance in work engagement, confirming the integrative role of emotional intelligence as a multidimensional construct rather than a singular talent. This lends support to evidence that unique abilities differentially influence motivation (Barreiro & Treglown, 2020; Chen & Fellenz, 2020). UOE and ROE are stronger, suggesting that the effective regulation of emotions is paramount for vigor, dedication, and absorption in B2B sales. This ties in with research associating emotional regulation with proactive engagement and resilience (George et al., 2022; Selvi & Aiswarya, 2023). By parceling emotional intelligence down into core abilities, the current study demonstrates that each dimension uniquely maintains engagement, deepening its understanding in organizational behavior.

The predictive relevance coefficient (Q^2) of the model indicates a close fit between theory and empirical findings, supporting its strength. The result supports recent findings that emotionally intelligent staff are more engaged in complex and challenging professions such as pharmaceutical sales (Mallin et al., 2025; Selvi & Aiswarya, 2023; Senćanski et al., 2024b). In building on previous studies, this research verifies emotional intelligence as a constellation of related but discrete abilities enhancing engagement. In contrast to one-dimensional views of emotional intelligence held in some studies, these results underscore the value of each dimension, enhancing the theoretical accuracy and practicality of COR theory in sales. Broadly speaking, emotional

intelligence functions as more than an adaptive resource but also a key psychological asset in sustaining engagement in an intensely competitive, relationship-driven, and regulated market like the industry in this study.

5.2 Practical Implications

The strong empirical support confirming that the four aspects of emotional intelligence—self-emotion appraisal, appraisal of others' emotions, use of emotion, and regulation of emotion—act as key facilitators of work engagement among sales staff in Germany's B2B pharmaceutical market has several practical applications in terms of organizational practice and human capital practice. The findings reinforce the argument that emotional intelligence should no longer be perceived as an accessory competence, but instead as a key competence that plays an essential role in sustaining motivation, adaptability, and interpersonal competence in challenging sales roles (Khoddami et al., 2023; Sudiro et al., 2023). Through the systematic cultivation of such emotional competencies with specially designed developmental programs and evidence-informed human resources interventions, organizations can strengthen workforce vitality and dedication (Selvi & Aiswarya, 2023).

Corporate training programs must be effective in enhancing specific emotional intelligence skills directly applicable to work engagement. Programmed courses in self-awareness, empathy, the use of emotions, and regulation can assist sales professionals in deciphering the clients' emotional signals, coping with stress at the workplace, and utilizing emotions positively while keeping up the enthusiasm and performance in difficult negotiations (Barreiro & Treglown, 2020). For example, workshops in emotional regulation and simulation training can reinforce resilience and motivation and create sales staff with the potential to perform while living and working in high-pressure conditions (Devi et al., 2023). Beyond training, emotional intelligence should also become a part of broader-based human resource management (HRM) systems. Hiring and selection processes can be fine-tuned so that candidates with strong emotional competencies—empathy, adaptability, and persuasion—indicative of long-term stay and client confidence (Sudiro et al., 2023), are identified. Furthermore, performance appraisal mechanisms should also include measures based on emotional intelligence so that the leaders take notice and reward behavior with high emotional intelligence. Inclusion of emotional intelligence in the programs of developing leadership can inculcate the culture focusing on empathy, open communication, and emotional balance, and thus create the working environment conducive to sustainable stay and organizational performance.

6 Limitations

Despite the substantial theoretical and empirical contribution of this research, its limitations should also be recognized and provide the basis for future research. First, the findings are only applicable to sales representatives in the B2B drug industry in North Rhine-Westphalia, Germany, thus limiting the external generalizability of the findings. Therefore, future work should extend the empirical scope to encompass a range of occupational types, industries, and geographic sites so as to enhance the generalizability and contextual strength of the inferences. In addition, the cross-sectional research design prohibits the identification of causal links and the detection of temporal changes. To correct this limitation, the use of longitudinal or time-lagged research designs is recommended in order to examine the persistent and directional nature of the links between the capabilities of emotional intelligence (EI) and the work engagement in sales personnel (SWE). Moreover, future studies could also test the proposed model in the different socio-economic and cultural settings—comparing developed and developing nations—to identify cross-cultural variations and setting-specific dynamics. Lastly, this work only studied the direct effects of EI capabilities on SWE. Hence, future work could also incorporate mediators like well-being, resilience, or job satisfaction in order to identify the complex psychological mechanisms through which EI enhances engagement and sustained performance.

7 Conclusion

Rooted in the COR theory, this research advances empirical understanding regarding the influence of four specific abilities of EI on the work engagement of sales personnel within the pharmaceutical B2B sector. This contribution is especially relevant in light of the growing global issue of salesperson turnover and the resulting shortage of highly competent sales professionals—a situation that is particularly pronounced in the German market. The results indicate that all four aspects of emotional intelligence—self-emotion appraisal, others' emotion appraisal, emotion utilization, and emotion regulation—positively affect the work engagement of salespersons, highlighting the crucial importance of emotional resources in managing challenging work environments. Importantly, the skills related to the utilization and regulation of emotions surfaced as the most significant predictors of sustained engagement, implying that emotionally intelligent sales personnel are more adept at leveraging emotional states as motivational tools and maintaining calm under stress. Taken together, these results underscore the strategic necessity for organizations to cultivate the emotional intelligence of their sales staff, especially in enhancing their ability to effectively employ and regulate emotions. Such a commitment not only enhances individual engagement but also bolsters organizational resilience and performance in the emotionally demanding and relationally intricate context of the pharmaceutical B2B sector.

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