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## Article

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# Ambidextrous leadership and individual ambidexterity: emerging challenges for medical representative performance

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## ABSTRACT

Medical Representatives (marketing employees) are spearheads of pharmaceutical company sales. Medical Representative performance directly influences the company's revenue and profitability. With strong sales, companies can grow, compete and generate profits. Understanding Medical Representative performance is the key to ensuring business success and continuity. Therefore, this study examines factors related to Medical Representative performance that can explain the sustainability of pharmaceutical companies in Indonesia. Then, investigate the mediation of work engagement both directly and indirectly. In this research, the elements applied include four aspects, namely ambidextrous leadership, talent management, and individual Ambidexterity. This study uses a quantitative approach. The unit of analysis was also a medical representative in Indonesia, which consisted of 370 subjects in five major cities. Furthermore, the impact analysis method was implemented Structural equation modelling part least square SEM-PLS). The research results show that Ambidextrous Leadership, talent management and individual Ambidexterity directly impact Medical Representative Performance ( $<0.05$ ); Ambidextrous Leadership, talent management and individual Ambidexterity now impact work engagement ( $< 0.05$ ). Work engagement influences the performance of Medical Representatives ( $0.000 < 0.05$ ). Indirectly through mediation, indicating that leadership is ambidextrous, talent management, Individual Ambidexterity influence the performance of Medical Representatives mediated by work engagement ( $<0.05$ ); Thus, work engagement in this study is a mediating variable with the part mediation category. The results provided new insights for companies to design leadership and medical representative development programs that suit different needs, skills, and expertise in distinct tasks. Work engagement was also promoted among employees to improve Medical Representative performance.

## IMPACT STATEMENT

Medical representative (Marketing employee) is known to have a central role in the peaceful success of the pharmaceutical company. This study explores the impact of three key e-mails, namely ambidextrous leadership, talent management, and individual ambidexterity, and highlights the role of work engagement mediators. Moreover, the patterns by which people can combine innovation with real action are explained, producing essential adaptations in the ever-changing business world. Medical representatives are also more engaged and enthusiastic about their work due to the exhibition of a strong connection, producing a superior performance. The experiment is subsequently presented in an easy-to-understand language and perspective that benefits anyone from various backgrounds. It also aims to determine the influence of ambidextrous leadership, talent management, individual ambidexterity, and work engagement mediation on medical representative performance.

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## 1. Introduction

The main goal of a pharmaceutical company is to provide cutting-edge, secure, and efficient health solutions to prevent, detect, and treat a wide range of illnesses and medical disorders. This concept emphasizes the pharmaceutical market in Indonesia, which is highly open to appropriate expansion.

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State-owned company agencies (SBI), domestic private businesses, and multinational companies (MNCs) also encompass the three categories comprising the overall company. However, with 270 million people, Indonesia has a sizable pharmaceutical market due to being the largest country in the ASEAN region with the most significant company share of \$5.93 billion, as observed in 2014 (Kemenperin, 2021).

In developing nations, experts have extensively examined the impact of prescription drug marketing since the 1960s (Lotfi et al., 2016). This contributes to one of the responsibilities of pharmaceutical companies, specifically the promotion of health products (Murshid & Mohaidin, 2017), encompassing medications, vaccines, dietary supplements, and medical equipment. By implementing marketing and promotion tasks, consumers, including doctors, are expected to obtain information about pharmaceutical company products from the sales force, often known as 'Medical Representatives' (Gul et al., 2021). This led to the definition of the 'Medical Representative' as a trusted marketing employee representing a company in promoting organizational products in a professional, credible, and ethical pattern (Mishra & Bhatnagar, 2006). Representatives are also known as retailers because they elucidate all aspects of the products to customers, contributing to enhanced business profitability. Moreover, medical representatives play a pivotal role in pharmaceutical companies by executing marketing, promotional, and customer relationship duties (Almomani, 2019; Azeem et al., 2022). Regarding the development of various academicians, medical personnel also significantly impacted the achievement of sales targets (Gul et al., 2021; Ilyas et al., 2023; Murshid & Mohaidin, 2018).

In fostering medical representative performance, the presence of a leader is essential in playing a pivotal role in guiding and motivating the workforce toward marketing goals and success. This is realized through leaders adept resource management and astute decision-making abilities ((Asrar-ul-haq & Kuchinke, 2016; Yuan & Lo, 2018). The conceptualization of leaders in marketing contexts is also considered through the paradigm of dreamy behaviour (Bachrach & Mullins, 2019; Peesker et al., 2019), such as autocratic (Arun & Krishnan, 2021), transformational (Gao et al., 2020), ethical (Adnan et al., 2020) servant leadership (L. Wang et al., 2017), and transactional leadership (Aliekperova, 2018), work engagement (F. A. Khan et al., 2022), talent management (Srivastava & Tang, 2022), and ambidexterity (Schnellbacher et al., 2020).

Based on Luo et al. (2018) and Gerlach et al. (2020), the concept of human resources management encompasses the ability of a leader to combine elements of different leadership and behaviour toward the development of a balanced approach between innovative exploration and exploitation of efficiency (Zacher et al., 2014). Zacher and Rosing (2015) and Alghamdi (2018) also expanded the concept of ambidextrous leadership, which became essential in improving individual performance, specifically in a medical representative context. Since ambidextrous leadership requires managers to strike a balance between maximizing efficiency in routine tasks (exploitation) as well as encouraging innovation and adaptation in changing situations (Kafetzopoulos, 2022; Luo et al., 2018), the job performance of employees in a diverse and complex pharmaceutical company were influenced (Ahmad et al., 2022). This indicated that ambidextrous leadership positively impacted marketing performance by driving innovation, facilitating market adaptation, boosting team creativity, developing human resources, and supporting long-term organizational performance (Ahmad et al., 2023). Therefore, more companies are efficiently and effectively prepared to encounter multiple challenges. Numerous studies were also conducted on the relationship between ambidextrous leadership, employee innovative performance (Alghamdi, 2018) and new work behaviour (Akıncı et al., 2022), with no direct effect on workforce efficiency. In this case, exploring individual performance and its influential factors is highly required.

From the descriptions above, the performance of medical representatives and talent management are two intriguing areas meriting more analysis. This indicates that human resource improvement is closely linked to talent management studies in identifying, recruiting, developing, and hiring talented individuals, as Hassanein and Özgüt (2022) and Mensah (2015) reported. The improvement can also significantly meet business needs and provide a competitive advantage (Al-Haraisa et al., 2021). According to Khan et al. (2015), talent management improved employee work styles, as well as increased organizational performance and employee retention (Dahshan et al., 2018; Nile, 2019; Olaka et al., 2018). Damanik et al. (2020) and Mutiara et al. (2019) also analyzed talent management by emphasizing development, idea, and construction. In Vaiman et al. (2015), the management process was considered a fresh approach to effective human resource administration, encompassing recruitment, retainment, leadership skills

development, career trajectories, planning, succession, etc. Moreover, Srivastava and Tang (2022) and Ahmad Arif and Uddin (2016) showed that robust talent management strategies enabled businesses to bolster their marketing teams to attain sales targets. This was accomplished by strategically recruiting and placing adept individuals according to specific organizational requirements. Based on Al-Qeed et al. (2018), pharmaceutical companies should always hunt for new talented hires and effectively develop and retain skilled employees. Talent management also influences individual employee performance, as well as favourably and significantly correlated with organizational performance (Aina & Tarik Atan, 2020; Hongal & Kinange, 2020; Luna-Arocas & Morley, 2015; Sopiah et al., 2020). In Mensah (2015), talent management and employee performance were considered one of the exciting future study objectives.

Individual Ambidexterity is also an essential factor that needs to be considered apart from other factors such as ambidextrous leadership and talent management. Thus, the research gap in this context is that although there is research that has been conducted regarding individual Ambidexterity in various industries, including research such as (Ahammad et al., 2015; Ijigu et al., 2022), it turns out that there is still a lack of concrete empirical evidence that measures explicitly and explains the relationship between individual Ambidexterity and Medical Representative performance in the context of the pharmaceutical industry. Since medical representatives with high levels of versatility are capable of contributing to the development of sustainable innovation (Caniëls & Veld, 2019), the possession of individual Ambidexterity then provides many organizational advantages, specifically in achieving competitive advantage and optimal employee performance (Mu et al., 2020). Medical representatives can also determine and develop fresh concepts and approaches for marketing tactics capable of aiding businesses to remain competitive and thrive in a constantly shifting market. According to Latukha et al. (2022), talent management highly emphasizing human Ambidexterity helped businesses achieve strategic objectives, obtain market share, improve medical representative performance (Elsotouhy et al., 2022), and preserve prolonged competitive advantage (Gasda & Fueglistaller, 2016). Using talent management credit, various businesses could provide preference to medical representatives with ambidextrous employees. According to Solís-Molina et al. (2018) and Baškarada et al. (2016), individual behaviour ambidexterity was capable of causing new inventions, enhancing performance, and facilitating environmental adaptation. Schnellbacher et al. (2020) and Caniëls and Veld (2019) also explained that individual Ambidexterity partially affected employee performance. This was because the employees often exhibited exploratory and exploitative behaviour, strived for innovative attempts, produced new ideas, dared risk implementation, and conducted constant work experiments and explorations.

From the descriptions above, medical representatives are expected to work toward strengthening their performance priority (Aggarwal et al., 2020; Meintjes & Hofmeyr, 2018). This is because active medical representation is capable of increasing innovation (Afsar et al., 2021), commitment (Teo et al., 2020), and customer interaction (Kumar & Pansari, 2015). A frequently observed connection is also found between employee performance and work engagement. This observation shows that motivated employees often experience positive motivational sentiments fostering effective performance (De Carlo et al., 2020; Helmy & Wiwoho, 2020). Furthermore, work attachment is positively associated with employee performance in several studies (De Carlo et al., 2020; Helmy & Wiwoho, 2020). This observation was not in line with the analyses developed by Mercy et al. (2020), Ariyani and Hidayati (2018), Pradana and Suhariadi (2020), Yeana et al. (2016). Kananu et al. (2020) also stated that work innovation was strengthened to enhance performance and job attachment.

### **Problem statement**

Medical representatives (marketing employees) play a crucial role in pharmaceutical companies. Hence, the research focuses on the problems faced by Medical Representatives in pharmaceutical companies related to improving individual performance, meeting the challenges of achieving sales targets and establishing changes in the preferences of medical professionals (Consumers of pharmaceutical companies). In the research context, the focus is more on the performance of Medical Representatives where they work. Includes evaluation of the performance of Medical Representative representatives and the factors that influence it, such as ambidextrous leadership, talent management, individual ambidexterity and work engagement. There is a conceptual gap in the literature which has not comprehensively shown

the integration of these four concepts in a research model such as (Ahammad et al., 2015; Aina & Tarik Atan, 2020; Ijigu et al., 2022); Medical Representatives must achieve performance, one of which is selling pharmaceutical products to medical professionals (consumers) to achieve sales targets. However, several problems can affect the performance of Medical Representatives, including difficulty in achieving sales targets, decreased access to medical professionals caused by policies and regulations and changes in medical professional preferences. Therefore, this research will explore and analyze the issues that influence the performance of Medical Representatives in the pharmaceutical industry to identify strategies and solutions to help them overcome these challenges. Thus, this research will provide valuable insight for pharmaceutical companies to increase the effectiveness of Medical Representatives and face changes in a dynamic industrial environment.

## 2. Literature review

### 2.1. Medical representative performance

A 'medical representative' is a pharmaceutical company's sales or marketing team. Although each company has its terms, similar work, obligation, and duty are still common characteristics. According to Yeo et al. (2019), a salesperson's performance was the output emphasising sales outcomes. It was also considered that organisational performance quantitatively prioritises the achievement of individual and team outputs. In Aqmal and Ardyan (2019), medical representative performance measured the contribution to achieving targeted corporate sales volumes. This was considered an approach to assessing contributions to accomplishing company goals, emphasising a seller's efficiency (Siagian et al., 2020). Based on the above definitions, the performance of a medical representative emphasises the achievement and estimation of sales targets, work planning, and the effectiveness of a person or team carrying out systematic processes in achieving specific objectives. This was considered the success level measurement of a person or an entity in completing the tasks or responsibilities encompassing achieving desired outcomes. Several vital elements influencing medical representative performance were also found, including ambidextrous leadership, personnel management, personal ambidexterity, and job engagement. This indicated that several companies could increase their sales targets in numerous patterns, including developing ambidextrous leadership, using management talent, establishing a creative and innovative environment, and improving employee engagement. Using a complete approach to measure medical representative performance, multiple businesses could also enhance relevant activities, acquire a competitive advantage, and succeed in meeting sales targets.

#### *Ambidextrous leadership*

According to Zacher and Rosing (2015), *ambidextrous leadership* is defined as an authoritative behaviour capable of combining exploratory (opening leader behaviour) and exploitation (closing leader behaviour) attitudes toward improving organizational performance. Alghamdi (2018) also defined leadership element as the behaviour of leaders to encourage subordinates to implement three activities, namely exploratory, exploitation, and flexibility, to switch between exploratory-exploitation attitudes as required periodically.

From the descriptions above, ambidextrous leadership was considered the style of management that promotes three employee behaviours, namely exploratory, exploitation, and flexibility, to switch between exploratory-exploitation attitudes as required periodically. This idea was adopted because no difference was observed between ambidextrous dimensions of leadership, indicating that all leadership theories equally emphasized two domains, namely opening and closing behaviour (Mascareño et al., 2021; Usman et al., 2020). Therefore, multiple companies significantly benefitted from ambidextrous leadership, including Sahyaja and Rao (2019), Selamet et al. (2020), Duc et al. (2020), Kung et al. (2020), and Peng (2020). These reports showed the patterns by which leadership behaviour fostered innovative behaviour, as observed by Kafetzopoulos (2020) and Selamet et al., (2020). Additional studies, such as (Guo et al., 2020) and Dwidienawati et al. (2020), also indicated that ambidextrous leadership enhanced individual and team performance. When businesses encountered unstable conditions and fierce competition, this

authoritative attitude was considered more important, increasing company competitiveness (Adiwijaya et al., 2020). In addition, the idea of ambidexterity had the power to affect the growth of sales (Freihata, 2020; Kafetzopoulos, 2020). Based on Ying Cai et al. (2021), a positive relationship was observed between ambidextrous leadership and work engagement. This was because the engagement of employees contributed more to the organization, with ambidexterity encouraging the marketing staff to strive for novel and daring patterns when building marketing campaigns. The employees perceiving that ambidextrous leadership could foster agile talent and enhance work engagement also recognized the significance of an appropriate organizational authoritative approach. This approach was vital for developing strategic decisions and nurturing employees' mindsets (Gouda & Tiwari, 2022). Based on the descriptions above, the following hypotheses are formulated.

H1: A positive influence is observed between ambidextrous leadership and medical representative performance.

H2: A positive effect is found between ambidextrous leadership and work engagement

### **Talent management**

In Gallardo-Gallardo et al. (2019), talent management included regulating organizational activities, such as identifying, selecting, and developing the best employees and their attributes. Bui and Chang (2018) and Narayanan et al. (2019) also showed that talent management was one of the strategic measures used to manage employees and boost their performance. This management process is essential for a business to foster individual creativity and innovation. To increase organizational effectiveness, the relationships between managers and employees developed due to innovative and creative activities (Khaki et al., 2017). This indicated that applying talent management could change the behaviour displayed in multiple companies. Furthermore, skill development is possible through talent management, which continuously inspires human resources to carry out appropriate activities (Chen et al., 2019). A significant relationship was also observed between talent management and employee marketing performance due to the influence of compensation, recruitment and selection criteria, training and support for the learning process and skill development, and relevant sustainability practices. According to Ngozi Nzewi (2016) and Kwame Mensah et al. (2016), the most crucial issue indicated that businesses should allow employees to retain the most incredible talent, as talented workers are often efficient and effective toward increased competitiveness. Piansoongnern et al. (2011), Sopiah et al. (2020), and (Yuniati et al., 2021) also showcased the beneficial and significant relationship between talent management and employee engagement in a business by fostering an atmosphere where staff members were valued, allowed to develop, and encouraged to contribute to the objectives and advancement of the organization. Since the employees felt physically fit and were more likely to become emotionally engaged and dedicated to their jobs, precise and targeted talent management during recruitment ensured that new hires aligned with the company's working environment principles (Abdorrezza & Wan Hooi, 2015). From the descriptions above, the following hypotheses are formulated.

H3: A positive influence between talent management and medical representative performance is observed.

H4: A positive effect is found between talent management and work engagement.

### **Individual ambidexterity**

Based on Rosing and Zacher (2016), individual ambidexterity was behaviour linked to experimentation, seeking solutions to problems, learning from failures (exploration), as well as, depending on previous experience and accomplishing gradual targets (exploitation). Schnellbacher et al. (2020) also defined *individual ambidexterity* as the personal ability to use the information obtained through exploration and exploitation processes to drive performance. These reports showed a positive correlation between organizational ambidexterity and sales growth (Adiwijaya et al., 2020; Ho et al., 2020). When individual employees fostered organizational growth and survival with the company striving to enhance sustainable potential, the ambidexterity of the staff members also consistently bolstered business performance and

long-term viability (Caniëls & Veld, 2019). Furthermore, Kobarg et al. (2015) and (Caniëls & Veld, 2019) stated that ambidexterity behaviour promoted employee performance, indirectly boosting job innovation (Rosing & Zacher, 2016), and affecting the enhanced efficiency of both people and businesses (Schnellbacher et al., 2020).

Medical representatives combining exploration and exploitation abilities in their profession were also more active, seeking chances for innovation and daily routines (Verma & Kumari, 2021). Since various people felt engaged in several problems, implementing these representatives could improve their work passion. In Abdorreza and Wan Hooi (2015) and Ajayi et al. (2017), individual ambidexterity positively influenced anticipated work engagement. This showed that ambidextrous employees were more positively engaged when their environment supported and encouraged the development of exploration and exploitation skills. Based on the above descriptions, the following hypotheses are formulated.

H5: A positive influence is observed between individual ambidexterity and medical representative performance.

H6: A positive effect is found between individual ambidexterity and work engagement.

### ***Mediating work engagement***

According to Afsar et al. (2021) and Hakanen et al. (2021), work engagement was an excellent mental state connected to the job defined by vigour, dedication, and absorption behaviour. Winarno et al. (2022) and (Karatepe et al., 2019) also highlighted individual involvement levels of work engagement, which motivated employees to work hard and enjoy their respective tasks. This indicated that multiple employees benefitted from work engagement through enhanced performance, reduced risk of burnout (Fragoso et al., 2016; Huber et al., 2020), decreased likelihood of turnover (Xiong & Wen, 2020), and improved memory memory (Memon et al., 2021). The involvement of workers was also more likely to be creative during the provision of constructive criticism, with work attachment aiding the development of an emotional bond between employees and an organization (Baran & Sypniewska, 2020). In addition, work attachment predicts a company's ability to handle challenging situations effectively. From these scenarios, an employee's work engagement was capable of increasing under the direction of the leaders, fostering an environment that encouraged innovation and creativity (Prayogi et al., 2023). This indicated that the workers emotionally invested in their jobs were more likely to produce extra effort and deliver better performance, emphasizing the potential role of work engagement as a mediator (Winarno et al., 2022; Jufrizen et al., 2022).

Based on the aforementioned descriptions, emotionally-ambitious medical representatives were more likely to produce extra effort and original ideas, as Darwish et al. (2020) exhibited. This indicated that businesses should comprehend the significance of employee engagement via skilled management, bridging the gap between conventional administrative research and precise media portrayals. The organization should also recognize the importance of job engagement as a conduit to enhance the positive impacts of individual ambidexterity on worker performance. In this case, improving job engagement through innovation, skill enhancement, and appropriate accountability yielded more dedicated and pragmatic employees with organizational goals. The ambidextrous employees were also likely to consider the significance of developing a work style capable of motivating job engagement toward improving the overall performance of medical representatives when developing ambidextrous leadership and talent management methods. From the above explanations, the following hypotheses are formulated.

H7: Work engagement influences medical representative performance.

H8: Work engagement mediates the relationship between ambidextrous leadership and medical representative performance.

H9: Work engagement arbitrates the association between talent management and medical representative performance.

H10: Work engagement mediates individual ambidexterity and medical representative performance.

Based on the descriptions above, a gap was observed in understanding the intricate interactions between the critical variables of ambidextrous leadership, talent management, employee ambidexterity, job engagement, and medical representative performance. Firstly, the holistic integration of the concepts of ambidextrous leadership (Alghamdi, 2018), talent management (Al-Qeed et al., 2018), individual ambidexterity (Ahmad et al., 2021), and employee engagement (Darwish et al., 2020) was essential for improving medical representative performance. This indicated that a thorough structure should be developed from the body of analysis explaining the clusters and interactions between the variables. Secondly, a causal mechanism permitting relevant influential occurrences was required for the more profound causal media, regardless of the beliefs that ambidextrous leadership, talent management, and individual ambidexterity potentially affected the performance of medical representatives. The requirement was also necessary to generalize the outcomes of the variables toward operating in different business environments. In this case, the comprehensive description emphasizing the interactive patterns of each idea with other initiatives was fundamental, accompanied by the analysis prioritizing the production of medical representative performance outcomes through the collective interaction of the analyzed variables.

Moreover, the availability of new study avenues was responsible for integrating and evaluating the intricate connections between ambidextrous leadership, talent management, ambidextrous workers, and the function of work engagement mediation in fostering superior medical representative performance. This model provided a more thorough conceptual framework for comprehending the relationship between all variables. It also emphasized the functions of work engagement in mediating various relationships with the performance of medical representatives (Figure 1).

### 3. Methodology

Based on the intricate nature of the inherent concepts, a requirement was used to devise and validate precise measurement methods for medical representative performance, ambidextrous leadership, talent management, individual ambidexterity, and work engagement. This led to acquiring more relevant and precise data, which yielded better outputs.

#### 3.1. The study area

Since Indonesia was one of the world's largest regions, a medical representative working for a pharmaceutical company was selected as the unit of analysis. Several pharmaceutical companies with both national and international operations were also identified in the country. In addition, the expansion of medical representation was another factor supporting the selection of Indonesia as a study topic.

#### 3.2. Study design

This study's cross-sectional method was the key instrument for uncovering and analyzing correlations between pertinent factors at a specific moment. Quantitative study approaches with a cross-sectional approach were also investigated and implemented to discover and analyze potential connections

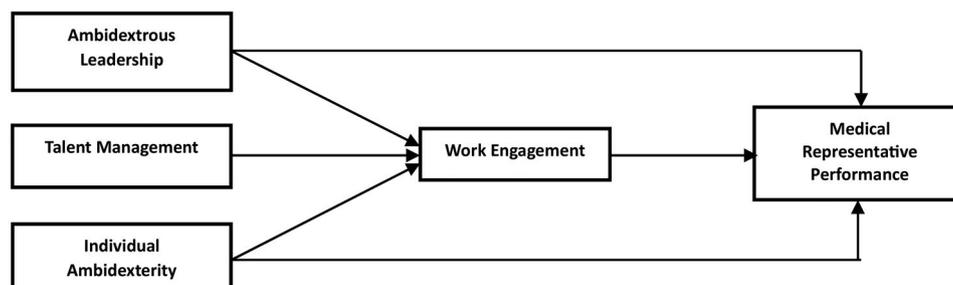


Figure 1. Conceptual framework.

between ambidextrous leadership, talent management, personal ambidexterity, employee engagement, and performance of medical representatives in Indonesia. However, understanding that the approach had limitations without an appropriate medium for a direct explanation of the causes was highly important. This approach remained helpful in exploring and comprehending intricate interactions between the analyzed variables, regardless of the limitations.

### 3.3. Population and sampling

A cross-sectional approach was used to understand better the elements influencing medical representatives' performance throughout Indonesia. This analysis encompassed several locales, namely Medan, Jakarta, Surabaya, Bandung, and Makassar, where 8,700 representatives were roughly observed. Since the analysis aimed to estimate the population proportion, Krejcie-Morgan's formula was implemented to measure the sample capable of providing a clear response. The Krejcie-Morgan formula was also used to assess the size of the specimen, as presented as follows,

$$\text{Formula of Krejcie and Morgan } n = \frac{X^2 \cdot N \cdot P(1-p)}{(N-1) \cdot d^2 + X^2 \cdot p(1-p)}$$

Where  $n$  = sample size,  $N$  = population quantity,  $X^2$  = Chi-square value assumption using  $\alpha=0.05$  at free degree 1, then Chi quarter value = 3,841,  $d$  = the percentage tolerance of non-examination because sample error remained tolerable at 5% ( $d=0.05$ ),  $P$  = population proportion, assuming population diversity entered in the calculation was  $P(1-P)$ , with  $P=0.5$ . Based on the calculation, the outputs of the debris were obtained from 370 participants. Proportional random sampling was also a method where all members had similar chances of being sampled according to their proportions. Using the sampling method, medical Representative Districts of Jakarta, Surabaya, Bandung, Medan, and Makassar were 195, 69, 37, 47, and 22, respectively. These five major cities were selected due to being the most prominent places for medical representatives in Indonesia.

### 3.4. Data and collection

Based on the ongoing COVID-19 epidemic during data collection, two methods were used to acquire the required information, namely online and offline, which used Google Forms and enticed accessible participants, respectively. On a scale of 1–5, the participants were also instructed to rate statements on performance criteria for medical representatives in Indonesia. In addition, the data were obtained between August to December 2022.

### 3.5. Variable measurement design

The questionnaire was an effective instrument for obtaining the information required to examine the patterns by which ambitious leadership, talent management, and personal ambidexterity affected medical representatives' performance, with work engagement mediating the interaction. The instrument was also used to measure the patterns through which the participants perceived and evaluated the variables affecting the performance of the medical representatives. Furthermore, several survey statements were meticulously designed to maintain impartiality and eliminate bias. Confounding effects were also mitigated by identifying the variables influencing the correlation between the elements of medical representative performance. These variables were subsequently employed as controls in the analysis.

From the descriptions above, the ability of leaders to supervise creative exploration and the exploitation of efficiency was measured through the several statements presented to the participants. In this case, the conceptual model used in formulating the Ambidextrous Leadership questionnaire was adapted from Rosing et al. (2011) and Alghamdi (2018). The two fundamental components of the ambidextrous leadership concept were the opening and closing behaviour, consisting of 7 utterances and seven declarations, respectively.

### **3.5.1. Talent management measurement**

This variable was used to measure the participants' perspectives on the management and growth of employees' skills by businesses. The implemented talent management questionnaire also aligned with the theories and frameworks developed by Miiro et al. (2016) and Aina and Atan (2020). Furthermore, the management concept included the talent identification, development, culture, and retention dimensions containing 7, 6, 3, and 5 statements, respectively.

### **3.5.1. Individual ambidexterity measurement**

A person's capacity for in-company exploration and exploitation activities into regular employment was evaluated by measuring individual ambidexterity. In this section, the implemented concepts and design questions emphasized the models and principles developed by Selamet et al. (2020) and (Schnellbacher et al., 2020). The participants were also instructed to produce the ratings for explorative and exploitative innovations, which contained five statements each.

### **3.5.1. Work engagement measurement**

The measurement of work engagement was one of the most commonly used instruments to gauge employee job involvement in the workplace, using the UWES scale (Utrecht Work Engagement Scale). This scale was developed by Bakker et al. (2008) and Shimazu et al. (2008), with participants instructed to evaluate the dimensions of vigour, dedication, and absorption, which contained 7, 6, and 6 statements, respectively.

### **3.5.1. Medical representative performance**

In measuring the medical performance of the representative from the perspective of the participants, the questionnaire was designed based on the approach adopted and developed by by Inyang and Jaramillo (2020), Ohiomah et al. (2019), and Charoensukmongkol and Suthatorn (2020). This instrument was adopted to understand participants' perspectives on the various influential aspects of medical representative performance. The informants were also instructed to evaluate the dimensions of explorative and exploitative innovations containing five and eight statements, respectively.

## **3.6. Data analysis**

The analysis of structural equation modelling-partial least squares (SEM-PLS) was used to understand better the variables influencing the performance of medical representatives in Indonesia:

1. The SEM-PLS approach was selected due to its supremacy in handling the intricate interactions between variables.
2. The approach emphasized a more advanced study to assess the relationship between variables. It also understood the patterns by which medical representative performance components impacted one another and contributed to the outcomes.
3. SEM-PLS commonly involved several interrelated factors during the acquisition and analysis of relevant data.
4. The approach provided more flexibility during analytical processes when the data obtained did not always fit into a normal distribution.
5. SEM-PLS could obtain and predict various influential outputs when a nonlinear relationship was observed between variables, compared to the products of other methods, such as linear regression analysis.
6. The approach, encompassing a Likert scale, was used to test the validity and reliability of the questionnaire design.

Based on these reasons, a deeper and more thorough understanding of medical representative performance variables in Indonesia was provided through SEM-PLS in data analysis, which had

significant implications for comprehending the factors of wellness efficiency. The likelihood that the sample size and model specifications influenced the outcomes should also be highly considered. In addition, PLS-SEM remained the finest option for understanding the intricacy of the Indonesian medical representative performance component, with future studies expected to improve the approach's limitations.

## 4. Results and discussion

### 4.1. Reliability and validity

The questionnaire responses were examined for validity and reliability using Alpha-Cronbach's formula before being provided to 30 medical representatives. In this case, all instruments on the variable were considered accurately valid when the validity test yielded  $r_{\text{count}} > r_{\text{Table}}$  (0.3610) using the Pearson correlation product moment. The Alpha Cronbach reliability test also yielded a value greater than 0.7, with ideal reliance enormously when the coefficient exceeded 0.90. Moreover, the alpha values ranging from 0.70–0.90, 0.50–0.70, and  $< 0.5$  suggested strong, moderate, and low reliabilities, respectively. From the results, the entire reliability of the instrument was declared high when the alpha, measuring the probability of item unreliability, was low.

### 4.2. Socio-demographic characteristics

Based on the results, the appropriate participant criteria were expected to reflect the target population and its objectives precisely. This guaranteed an unbiased sample and ensured the credibility and relevance of study outcomes. Demographic factors also encompassed age, gender, education, marital status, employment history ( $>0$  years), and place of residence. In addition, the criterion of available and accessible participants encompassed those with the availability or time to engage in the survey. Table 1 illustrates the socio-demographic profiles of the participants.

**Table 1.** Demographic profile of the respondents.

Category	Total	Percentage
<b>Gender/Sex</b>		
Man	202	54,59
Woman	168	45,41
<b>Total</b>	<b>370</b>	<b>100,00</b>
<b>Age</b>	<b>Total</b>	<b>Percentage</b>
19–23	30	8,11
24–28	88	23,78
29–33	90	24,32
33–37	67	18,11
38–42	55	14,86
$>42$	40	10,81
<b>Total</b>	<b>370</b>	<b>100,00</b>
<b>Status</b>	<b>Total</b>	<b>Percentage</b>
Marriage	206	55,68
Single	164	44,32
<b>Total</b>	<b>370</b>	<b>100,00</b>
<b>Education</b>	<b>Total</b>	<b>Percentage</b>
SMA-Equal	49	13,24
Diploma 3	83	22,43
Bachelor (S1)	215	58,11
Master (S2)	23	6,22
Doctor (S3)	0	0,00
<b>Total</b>	<b>370</b>	<b>100,00</b>
<b>Work Period</b>	<b>Total</b>	<b>Percentage</b>
Under 1 year	23	6,22
1–2 Years	55	14,86
3–5 Years	103	27,84
5–7 Years	77	20,81
8–10 Years	59	15,95
Up to 10 Years	53	14,32
<b>Total</b>	<b>370</b>	<b>100,00</b>

According to Table 1, the participants comprised 54.59% of men, with the majority between the ages of 24 and 33 (48.1%). Most of the participants also had work experience between 3 and 7 years (41.65%), with a bachelor's degree highly exhibited for the level of education (58.11%). Since the observed age was continuously associated with high production levels, the males aged 24–33 were more inclined to secure positions as medical representative. Based on completing undergraduate education, most pharmaceutical employees aspire to be hired with a bachelor's degree.

### **4.3. Measurement model**

The final stage of the analysis was analyzed using the SEM-PLS approach, which commenced by examining the measurement framework known as the outer model. This model assessed the validity and reliability of indicators for each structure. It also outlined the interactions between each indicator and its corresponding latent variable. Furthermore, the convergent validity was examined through DV (Discrimination Validity) and Average Variance Extracted (AVE), where the projected AVE value exceeding 0 signified strong reliability. Concealed high dependability was also indicated by Composite Reliability > 0.7 and Cronbach Alpha data. In this case, the Cronbach Alpha test reinforced the reliability assessment, with an expected value greater than 0.7 for all constructs (Table 2).

### **4.4. Structural model and hypotheses testing**

Using the bootstrapping facility, the following model was analyzed with the SmartPLS 4.0 program. This facility acquired test values for the internal model or method connected between the generated structures (latent variables). Figure 2 displays the bootstrapping processes emphasizing the structural model (inner model).

Based on the results, the  $T$ -statistics and the  $p$ -value coefficients were used to test the experimental hypotheses. In this case, a hypothesis was declared valid when the  $p$ -value was less than 0.05. Regarding the direct, indirect, and total effects on the computation, Table 3 illustrates the path coefficients and hypotheses analysis using the inner model:

According to Table 3, individual ambidexterity was the most significant contributor, emphasizing the improvement of medical representative performance ( $H_6$ ) due to having an original sample value of 0.384. This was accompanied by talent management and ambidextrous leadership, with the outcomes indicating that medical representative should possess individual ambidexterity to improve performance. Furthermore, talent management was the most significant contributor to prioritising improving work engagement due to having an original value of 0.359. Since the independent variables (ambidextrous leadership, talent management, and individual ambidexterity) directly affected the dependent determinant (medical representative performance) without mediation, the arbitration of work engagement regarding the criteria of the analysis was declared partial).

## **5. Discussion**

### **5.1. The influence of ambidextrous leadership on medical representative performance**

The open dimension of conduct significantly influenced the effectiveness of medical representative performance. This was in line with a parameter coefficient generally implying that ambidextrous behaviour was significantly effective. In this scenario, candidates should provide incentives to grant medical representatives the flexibility to think and function independently, fostering space for personal ideation. Furthermore, the candidates need to permit varied study to task execution. Excessive micro-management increased the concerns about its impact on the performance of medical representatives. From this context, the employment of an ambidextrous leadership style was subsequently conducted with the motivation of medical salespeople to achieve sales goals. These results were supported by Alghamdi (2018) and Guo et al. (2020), where ambidextrous leadership boosted worker productivity and creativity. Employees should also increase their work performance and forge relationships with leadership to obtain more possibilities and resources for boosting company earnings.

**Table 2.** Measurement model evaluation.

Construct	Indicator	Outer loading	CA	CR	(AVE)	Information
Ambidextrous Leadership	Opening Leader Behaviour		0.924	0.928	0.596	Fit
	OLB1	0.857				
	OLB5	0.823				
	OLB6	0.732				
	OLB7	0.860				
	Closing Leader Behavior					
	CLB1	0.819				
	CLB2	0.802				
	CLB3	0.866				
	CLB5	0.839				
	CLB6	0.849				
	Talent Management	Talent Identification				
IT3		0.818				
IT4		0.885				
IT5		0.764				
IT6		0.730				
Talent Development						
TD1		0.739				
TD3		0.777				
TD4		0.868				
TD5		0.873				
TD6		0.856				
Talent Culture						
TC1		0.942				
TC3		0.954				
Talent Retention						
TR1		0.859				
TR3		0.843				
TR4	0.843					
TR5	0.917					
Individual Ambidexterity	Exploration Behavior		0.936	0.940	0.639	Fit
	EB1	0.865				
	EB2	0.902				
	EB3	0.892				
	EB4	0.815				
	EB5	0.725				
	Exploitation Behavior					
	ExB1	0.865				
	ExB1	0.825				
	ExB2	0.865				
	ExB3	0.889				
	ExB4	0.779				
	ExB5	0.787				
Work Engagement	Vigour		0.930	0.941	0.591	Fit
	VG4	0.871				
	VG6	0.888				
	VG7	0.945				
	Dedication					
	Ded1	0.793				
	Ded2	0.837				
	Ded4	0.863				
	Ded5	0.853				
	Ded6	0.823				
	Absorption					
	Abs3	0.912				
Abs6	0.915					
Medical Representative Performance	MRP1	0.790	0.892	0.896	0.607	Fit
	MRP2	0.763				
	MRP3	0.776				
	MRP5	0.863				
	MRP6	0.745				
	MRP7	0.779				
	MRP8	0.732				

Note: CA: Cronbach's alpha; CR: Composite reliability; AVE: Average Structural Analysis Model (Outer Model).

## 5.2. The influence of talent management on medical representative performance

Compared to other companies (competitors), talent management initiatives were beneficial for individual medical representatives based on the difficulty in assessing and replicating the skills of health delegates. The effectiveness of representation was also influenced by talent management due to the provision of

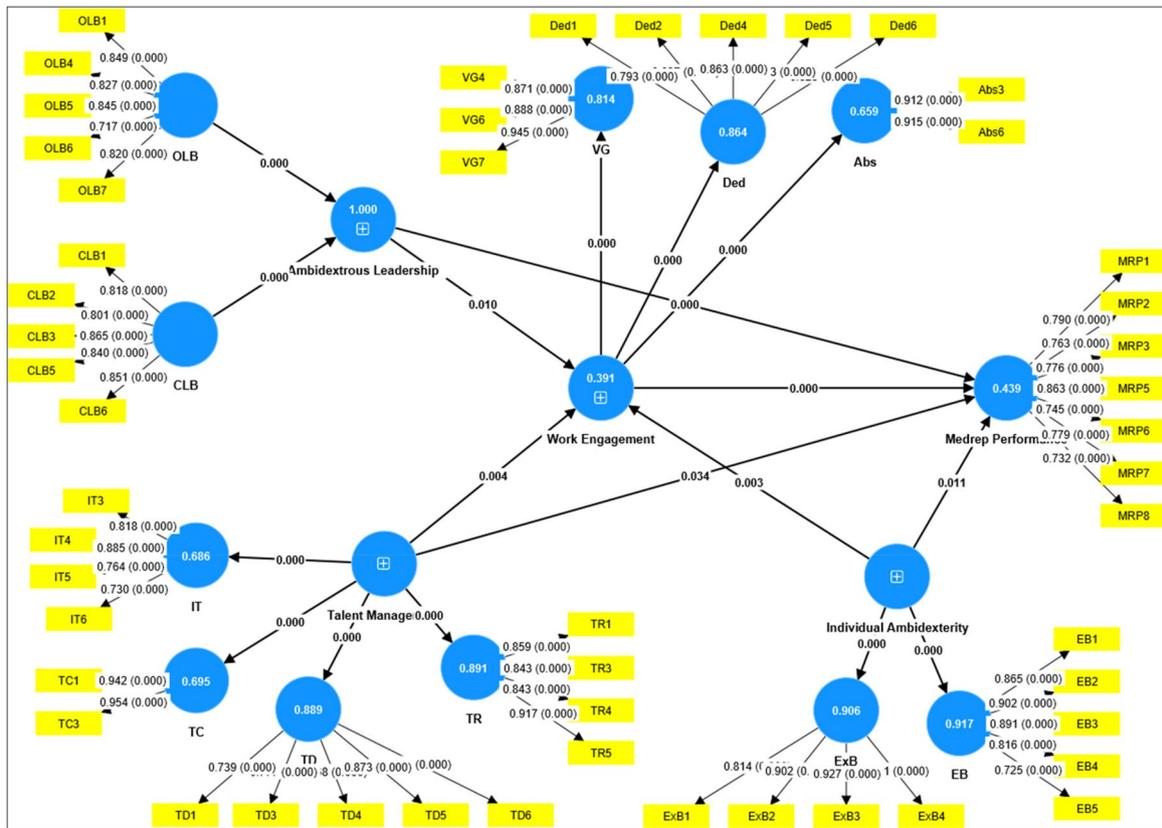


Figure 2. Model Study results direct-effect and indirect relationship coefficients.

Table 3. Path coefficients and hypothesis testing.

Hypotheses	Construct	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV)	p Values	Conclusion
<b>Direct effect</b>							
H1	Ambidextrous Leadership → Work Engagement	-0.162	-0.162	0.058	2.779	0.005	Supported
H2	Ambidextrous Leadership → Medical Rep Performance	0.138	0.142	0.033	4.130	0.000	Supported
H3	Talent Management → Work engagement	0.359	0.355	0.128	2.805	0.005	Supported
H4	Talent → Medical Rep Performance	0.334	-0.334	0.156	2.140	0.032	Supported
H5	Individual ambidexterity → Work engagement	0.358	0.364	0.114	3.141	0.002	Supported
H6	Individual ambidexterity → Medical Rep Performance	0.384	0.391	0.149	2.583	0.010	Supported
H7	Work engagement → Medical Rep Performance	0.566	0.559	0.062	9.082	0.000	Supported
<b>Indirect Effect</b>							
H8	Ambidextrous leadership → work engagement → Medical Rep Performance	-0.092	-0.092	0.038	2.384	0.017	Part Mediation
H9	Talent management → work engagement → Medical Rep Performance	0.203	0.199	0.077	2.637	0.008	Part Mediation
H10	Individual ambidexterity → work engagement → Medical Rep Performance	0.203	0.203	0.067	3.011	0.003	Part Mediation

enduring advantages to the business. Furthermore, four key factors significantly affecting the performance of medical representatives were identified: talent identification, development, culture, and retention. These results were supported by Bibi (2018), where talent management approaches impacted employee performance in the health sector, specifically the hiring and selection processes. The processes were also crucial in luring talented workers capable of ultimately improving the performance of

employees. Other numerous studies, such as (Abdullahi et al., 2022; Al-Hussaini et al., 2019; Hakro et al., 2022), subsequently supported the results, showing the beneficial effects of comprehensive talent management on worker performance. This proved that talent management was a successful strategy for enhancing employee performance and maintaining talented workers within the organization. Therefore, talent identification, development, preservation and culture promotion are critical aspects of talent management for modern businesses. This highlighted that the company should efficiently and swiftly implement talent management in a dynamic company environment to boost employee performance and guarantee the business benefits obtained from the skills of medical representatives.

### ***5.3. The influence of individual ambidexterity on medical representative performance***

The medical representative was expected to regularly determine synergistic solutions and exploit opportunities by carefully reconfiguring relevant resources. In this case, a desired position could be maintained in an ever-changing environment by regularly rearranging resources. Therefore, medical representatives achieved ambidexterity of instant service sales through pure luck (Shiue et al., 2021). By implementing individual ambidexterity, this representative emphasized achieving sales goals by applying their knowledge, skills, and expertise. To support improved medical representative performance, the stability of exploration and exploitation behaviour was crucial as a challenge in the pharmaceutical market. This condition necessitated the consideration of individual ambidexterity to adapt to technological and environmental changes (Schnellbacher et al., 2019). These results, which impacted employee performance at the personal level, were generally accepted by the general public (Ijigu et al., 2022; Peng et al., 2019). However, the link between exploration, exploitation, and performance at the individual level has not been extensively studied. Based on ambidexterity, the medical representative should be able to investigate and capitalize on their surroundings for better performance. The result was consistent with Ijigu et al. (2022), who found a connection between individual ambidexterity and worker performance. From this context, the ambidexterity of medical representative enhanced high performance, as ambidextrous behaviour needs to be considered a competence for higher work efficiency while increasing organizational profit execution.

### ***5.4. The influence of work engagement on medical representative performance***

In addressing job challenges, a strong desire was responsible for the substantial influence of work engagement, including vigour, dedication, and absorption, on the adeptness of medical representatives. This indicated that an engaged worker proactively embraced challenges, swiftly developing a perception of time. Heightened commitment also prompted individuals to approach their responsibilities with increased seriousness. These results were supported by Tisu et al. (2020) and Borst et al. (2020), where individuals striving to enhance the work environment showed heightened productivity and enthusiasm in their tasks while fostering job engagement. Al-Dmour et al. (2019), C.-H. Wang and Chen (2020), Wijayati et al. (2022) also provided similar responses, where work involvement favourably affected enhanced employee performance in numerous elements of employment.

### ***5.5. The influence of ambidextrous leadership on work engagement***

Based on the results, work engagement was positively impacted by ambidextrous leadership processes and behaviour. This indicated that the company leaders in pharmaceutical should simultaneously possess specialist knowledge in two areas, namely opening and closing behaviour. The relationship between open and closing behaviour from the leader to the medical representative was also one of the elements affecting work engagement. Other influential elements, such as work spirit, dedication, and absorption, accompanied this. Furthermore, possessing an ambidextrous personality was considered a gift, as several experts ultimately determined its connection to work engagement (work attachment) as a source of employment. The dedication was also an expectation influencing the job attachment dimension, closely impacting vigour and absorption. This indicated that the leadership of the pharmaceutical companies should be cautious when implementing termination practices for medical representatives, as excessive

strictness could undermine their business commitment. Therefore, an additional variable was required to mitigate ambidextrous leadership behaviour and to enhance all dimensions of work engagement among medical representatives. In this case, leadership behaviour was not only entirely accountable for constructing the entire dimension. From the results, a fresh perspective on leadership strategy was required, with ambidextrous authority considered a new plan for boosting employee job engagement, according to Cai et al. (2021). These results were in line with (Gouda & Tiwari, 2022) where the medical representative was expected to understand the patterns by which ambidextrous leadership increased workplace engagement. Regarding the descriptions mentioned above, the information obtained became one of the new avenues for evaluating ambidextrous leadership.

### **5.6. The influence of talent management on work engagement**

Since talent management was a task that medical representatives should perform, its idea of using skill identification, development, culture, and retention significantly impacted job engagement. This management process was one of the most crucial initiatives several businesses should frequently implement due to theoretically involving the determination, cultivation, and deployment of appropriate people in adequate positions. Talent management also influences employee engagement at work and enhances output (Sopiah et al., 2020). Moreover, knowledge of employees' skills and information was crucial, as talent management and worker engagement had a positive and significant association (Yuniati et al., 2021; Zaib Ayub, 2017). This indicated that various businesses should find, develop, and maintain talented personnel. Great employee potential was also needed, accompanied by a thorough plan to handle relevant skills. To effectively manage and involve the talented individual in the management process, a company should subsequently visualize the future and anticipate their skills, attitudes, and behaviour. In addition, management needs to retain workers by developing specific talents to maintain a positive workplace culture (Mahfoozi et al., 2018).

### **5.7. The influence of individual ambidexterity on work engagement**

From the results, individual ambidexterity of work involvement was assessed through two aspects. In this case, exploration and exploitation activities were grouped under the first category and allowed to combine to generate labour engagement (vigor, dedication, and absorption). The strength and determination obtained from the inventive exploration behaviour were also transformed, with absorption unaffected. This exploitative behaviour was capable of boosting commitment and engrossment without affecting vigour. Behaviour also included the following: Intense work, Compliance with company policies, Serving present customers using the company's existing programs, Focusing on monthly sales targets, Using expertise, skills, and knowledge to reach targets, Exploration activities. According to Katou et al. (2021) and Gibson and Birkinshaw (2004), people should adopt the initiative and opportunity to manage their jobs while being cooperative and seeking possibilities to integrate work with others. The employees should also be able to multitask, enjoy working multiple jobs, function as brokers, and constantly develop connections within the company. Therefore, employment attachment was significantly influenced by medical representative's exploration and exposure behaviour (Ajayi et al., 2017; Katou et al., 2021).

### **5.7. Mediating work engagement**

The impact of mediating work engagement between ambidextrous leadership, talent management, and individual ambidexterity on medical representative performance. From the results, talent management, through work engagement between ambidextrous leadership characteristics and individual ambidexterity, was the most indirect contributor to the performance of medical representative. Since all independent variables (ambidextrous leadership, talent management, and individual ambidexterity) directly affected the dependent determinant, the mediation of work engagement mediation was also partially considered (performance by medical representative).

From the descriptions above, the obtained novelty of this study was categorized into several parts: 1). the selection of medical representative as the unit for analysis in Indonesia, with the approach

presently examining medical representative performance exemplified by Ligade and Bhegade (2020), 2). the data analysis methods (Li et al., 2018), 3). the variable composition (Yuan & Lo, 2018); the emphasis on a previous report, namely Alkunsol et al. (2019), and The development of a model used in administrating human resources within pharmaceutical companies, specifically the management of medical representative. Using the results as a foundation, a model of representative medical performance was also designed and eventually attained. Moreover, the model's originality was not previously studied, with the present idea providing a medical representative performance system as a response. Improved performance was also the main objective of managing human resources in pharmaceutical companies and was assessed using four variables: ambitious leadership, talent management, individual ambition, and work engagement.

## 6. Conclusion

In conclusion, several significant literary contributions were observed in the analysis due to the high dependence of pharmaceutical company sustainability on understanding the elements affecting the performance of medical representatives. This indicated that the influence of ambidextrous leadership, talent management, individual ambidexterity, and work engagement on medical representative performance was analysed through the construction and testing of models, as well as the investigation of complex relationships between the three main structures (H1, H2, H3, H4, H5, H6, H7). The total performance of a team was also improved by leaders capable of performing their duties toward inventive exploration. Compared to close leadership, open authority was subsequently more effective at enhancing the performance of medical representatives. Moreover, proficient employees with a deep understanding of talent management could effectively maximise performance. Individual ambidexterity also significantly impacted the originality, adaptability, and task execution flexibility of medical representative. This indicated that a harmonious interplay between exploration and exploitation behaviour was essential to bolster the effectiveness of representative. Work engagement also served as a mediator between individual ambidexterity, talent management, and ambidextrous leadership in influencing the performance of medical representatives (H8, H9, H10). In addition, enhanced emotional, cognitive, and behavioural engagement correlated with heightened performance through intrinsic motivation and unwavering work dedication.

From the descriptions above, several practitioners, managers, and leaders in the pharmaceutical sector and allied fields should exploit the practical contributions of this analysis, where the need for ambidextrous leadership was shown in addressing efficiency and innovation concerns. Based on investigation and exploitation, practitioners and managers should determine the patterns of developing leaders capable of maximising the performance of medical representatives. Leadership development programs must also help businesses determine/support efficiency and innovation by providing a better competitive advantage. According to the results, the company were motivated to establish individual ambidexterity for their medical representative. This was achieved by developing several programs, such as training, workshops, and self-development platforms, to inspire employees to combine innovation with efficiency in their daily tasks seamlessly. The company should also adopt practical steps to improve employee engagement, such as fostering a positive work atmosphere, praising achievement, and encouraging greater participation and responsibility. In addition, multiple businesses were likely to develop more devoted and effective teams by raising work engagement levels.

## 7. Study limitations

According to the study limitations, the sample size of 370 participants could have helped generalize the analytical outputs to the medically representative Indonesian population. This emphasised the difficulty of establishing the cause-and-effect link due to various correlations. Although variables were related, the direct effects among variables remained impossible. The absence of some factors, such as organisational ambidexterity, coworker support, quality of work life, job embeddedness, and HPWS, also limited the ability to comprehensively understand the components of medical representative performance.

## 8. Future study

Based on the results, the sample for future studies is expected to increase, emphasising more Indonesian districts' involvement. This can provide a more comprehensive understanding of performance factors in many contexts. Several variables, such as company culture, job embeddedness, innovative behaviour, or external factors emphasising employee success, should also be modified to understand better the elements influencing medical representative performance. In addition, future studies are expected to examine changes in performance and other factors over time using a longitudinal study approach, enabling the easier spotting of long-term trends and patterns in typical medical execution.

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## Disclosure statement

No potential conflict of interest was reported by the author(s).

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