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Development of a Self-Transformational Leadership Scale for Medical Representatives in Thailand

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Abstract

Medical representatives play a critical role in the pharmaceutical companies. However, there is a lack of studies in skills improvement for medical representatives in Thailand. Considering the work context, medical representatives have to demonstrate the self- leadership behaviors and transformational leadership behaviors. Therefore, the aims of this study were to develop a self-transformational leadership scale for medical representatives in Thailand and test the psychometric properties. A sequential exploratory mixed method design was implemented to explore the definition of self-transformational leadership of medical representatives in Thailand. Firstly, each in-depth interviews with eleven key informants were conducted. The interview was tape-recorded and transcribed verbatim. A 34-items scale was generated and distributed. The participants were 347 medical representatives in Thailand. The qualitative results showed the definition and four components of self-transformational leadership specific to work context of medical representatives in Thailand that are self-idealized influence, self-inspirational motivation, self-intellectual stimulation, and individualized consideration. The quantitative results showed that the scale developed from the previous phase was statistically appropriate. The goodness-of-fit indices demonstrated that the self-transformational leadership model was consistent with the empirical data (Chi-square = 1465.57, df = 523, p-value = .00, RMSEA = .07, SRMR = .07, NFI = .90) with a Cronbach's alpha score of .92. This study contributes to behavioral science research by providing a scale of self-transformational leadership that measures both the internal and external factors that affect self-transformational leadership behaviors.

COVID-19 affected the global economy by slowing down economic growth and decreasing global trade (Khan et al., 2021). However, the pharmaceutical market in Thailand is growing continuously. It is expected to be worth $6.52 – 6.65 billion and expand by 3.0 – 5.0 % in 2022 (Kasikorn Research Center, 2022). Medical representatives (MRs) play the crucial role to gain sales and market share for the pharmaceutical company because the medical advertisement was limited by the legal issue. Nevertheless, they are facing the big challenges in working daily, especially in contacting with health care providers due to COVID-19 (Darwish et al., 2020). For example, Thai MRs have to adapt their work into the digital business engagement (Chompooborisuth, 2021). Therefore, MRs require communication skills, creativity, problem solving skills, and seeking opportunities for customer engagement. The MRs also have to collaborate with both within the team and outside the organization, as well as have to cope with pressure (Soontornnon & Chaichalermpong, 2013). This allows MRs to influence themselves and their peers. Sometimes MRs have to work alone so they must stimulate their own thinking and motivate themselves to

perform well. Meanwhile, it can also provide both work and psychological support to colleagues and influence the work behavior of other MRs in the team. The working context of MRs as a whole is consistent with the concept of transformational leadership, which is about driving the work forward where leaders support their followers through intellectual stimulation, inspiration, acting as a role model, and taking into account the individuality (Bass, 1999).

Accordingly, transformational leadership behaviors are suitable for MRs to improve job performance during COVID-19 pandemic. Although MRs have no subordinate or not be a team leader, it does not mean that MRs do not need leadership. They can demonstrate self-leadership behaviors to control and influence themselves. Halvadia and Singh (2018) suggested that leadership competencies, which include ambitious, self-management, positive attitude, and ability to influence others, are essential for MRs. However, there is a gap of knowledge and practice of leadership behaviors, which involve the influencing of both individuals and others, because MRs can influence both themselves and others at work. In addition, specific self-leadership behaviors should be applied for MRs, especially in the critical time like COVID-19 pandemic. Thus, the objectives of this study were to explore the meaning of self-transformational leadership for MRs in Thailand and develop a scale of self-transformational leadership for MRs in Thailand. This scale will be helpful for the organization to measure the outcome of factors and environment that affect the self-transformational leadership behaviors of MRs. The pharmaceutical companies will be able to develop those behaviors specifically as well. The MRs who demonstrate self-transformational leadership behaviors will perform a good job performance. This leads to the financial profit of the pharmaceutical companies.

Literature Review

In this section, the relevant literature and previous studies of transformational leadership and self-leadership were discussed.

Transformational Leadership

Transformative leadership was mentioned by Burns (1978) in his book "Leadership". Burns (1978) recommended that leader effectiveness should be evaluated by his ability to change society. The roles of the leader and the follower must be unified, with "leadership" as the liaison between conflict and power. Burns (1978) proposed two leadership concepts, transactional leadership and transformative leadership. Leaders with transactional leadership are always willing to reward for the performance of their followers. Nevertheless, leaders with transformative leadership focus on the potential of their followers to encourage them to reach their full potential and meet their needs at a higher level. This is in accordance with the meaning of transformational leadership defined by Avolio and Bass (1991) in the full range of leadership model which is the process that the leader influences the followers to change and develop the ability of the followers and raise their potential to a higher level. The leader will increase awareness of the mission and vision of the group and organization as well as motivate followers to think and act beyond their own interests or abilities for the benefit of others.

Transformational leadership consists of four behavioral components. First, idealized influence (II) refers to leaders acting as role models for followers. Leaders will be respected and trusted. Leaders must have vision and be able to pass it on to their followers. Second, inspiration motivation (IM) refers to the leader behaves in a way that motivates the followers by creating intrinsic motivation, giving meaning and challenging in their jobs. Third, intellectual stimulation (IS) refers to the leader stimulate the followers to be aware of the problems that arise and seek for new approaches to solve the problem as well as create something new and creative for their work. Last, individualized consideration (IC) refers to the care of the leader towards the individual followers. This makes followers feel valued and important.

Numerous studies have suggested the correlation, influence, or predictor that show that transformational leadership is related to or be a predictive factor of job performance or operational efficiency. For example, Dvir et al. (2002) conducted a long-term, experimental study to determine the

impact of transformational leadership. They compared the trained transformational leadership group with the untrained group in 54 military leaders. The results showed that direct subordinates had a better level of development and indirect subordinates had a better job performance in the trained group compared to the control group. Unhalekka and Boonyarit (2020) reported the relationship between intrapreneurship and job performance of MRs in Thailand. This relationship is mediated by work engagement of MRs and moderated by transformational leadership of their first line manager.

On the other hand, there are many antecedents of transformational leadership. Sun et al. (2017) reviewed the studies of last two decades and find that there are three set of antecedents. The first set is leaders' qualities, e.g., self-efficacy, values, traits, emotional intelligence. The second set is organizational features, e.g., organization fairness. The last set is the leader's colleagues' characteristics, e.g., follower's initial developmental level. In addition, Bommer et al. (2004) founded that peer leadership behavior can positively predict transformational leadership behavior, but cynicism about organizational change predict transformational leadership behavior negatively. Moreover, Trépanier et al. (2012) founded that autonomous motivation and self-efficacy positively related to self-reported transformational leadership behavior.

Furthermore, the impact of transformational leadership during COVID-19 situation is important. Yücel (2021) found that transformational leaders support employee performance, which in turn decreases their turnover intentions. This in in accordance with Charoensukmongkol and Puyod (2021) who revealed the effect of transformational leadership on decreasing role ambiguity and enhancing the work–life balance. Therefore, transformational leadership will probably support MRs in both job performance and job satisfaction during the COVID-19 pandemic.

Self-Leadership

Everyone can create their own leadership to guide their own working and help motivate themselves to take action. As Manz (1986) proposed self-leadership theory which attract the attention of many researchers to study the effect of self-leadership in various contexts (Neck & Houghton, 2006). He developed this theory by integrated the social learning theory (Bandura, 1977) with the concept of self-control (Bandura, 1969) and the concept of self-influence as well as adding elements of personal standards which is setting own clear goals. Moreover, he added an element of self-rewarding. The meaning of self-leadership is the behavior control process of individuals that influence one's self through the applying of specific thought and behavioral strategies.

Neck and Houghton (2006) reviewed the past, present, and future possibilities of self-leadership, included strategies for self-leadership development and summarized into three aspects of self-leadership strategy. Behavior-focused strategies focus on increasing the self-awareness of individuals affecting their behavior. In particular, managing behaviors related to tasks that are unwanted but need to be performed. Natural rewards strategies focus on creating happiness and fun in the work process. The purpose of this strategy is to enhance behaviors that promote job performance by focusing on the nature of the job or the routine work process that employees have to perform. For example, an employee has the opportunity to help society together with performing good job performance. Last, constructive thought pattern strategies focus on the ways of thinking that will positively affect job performance. This form of thinking encompasses both identifying and substituting beliefs and assumptions that are not relevant to performance.

Stewart et al. (2011) compiled the studies that examined the factors influenced by employees' self-leadership. They found that self-leadership positively influences individual-level factors, including quality of result, self-efficacy, job satisfaction, and career success. In addition, self-leadership has a negative influence on some personal factors such as absenteeism, stress or anxiety. Singh et al. (2017) studied in MRs from large multinational pharmaceutical companies with gross annual sales of more than $1 billion in India, Singapore, Malaysia, Philippines, Nepal and Thailand by collecting data on the patterns of thought

self-leadership, perception of self-efficacy, selling skills, sales adjustment skills, and job performance by using an online questionnaire which is a self-report. The analysis of the structural equation model revealed that the patterns of thought self-leadership, which is a strategy of self-leadership consists of self-talk, imagery, and assessment of beliefs and assumptions affect the perception of individuals' self-efficacy and job performance directly. It also indirectly affects selling skills and sales adjustment skills. This study is the very first study that applies the concept self-leadership to salesperson, especially MRs.

However, the studies on MRs in Thailand are limited. Most of the studies focused on the factors affecting the behavior of MRs, such as factors affecting the job burnout (Vichanjalearnsuk & Supapong, 2015), organizational commitment (Pu et al., 2009; Srikamol, 2014), turnover intention (Tangvenitcharoensuk, 2017), career advancement (Wichiensarn & Rattanapongpinyo, 2020), efficiency at work (Sathapornwachana & Archarungroj, 2019), and job performance (Unhalekka & Boonyarit, 2020; Wanichapun & Anuntaakarakul, 2019). Nevertheless, there has not been a study in Thailand focusing on self-leadership or transformational leadership in the context of MRs. This issue, therefore, is a gap of knowledge, which has never integrated the concept of the two theories together. There is also no specific scale for self-transformational leadership. According to the literature review, there are many antecedents of transformational leadership behavior, both personal factors and situational factors. The pharmaceutical companies must consider the contextual influences on transformational leadership behavior development (Pawar & Eastman, 1997).

Because most pharmaceutical companies have been shifting the promotional and marketing strategies, MRs must explore a novel customer interaction (Sawad & Turkistani, 2021). Transformational leadership and self-leadership ought to be the important internal factors to support MRs during COVID-19 pandemic. However, there is a knowledge gap of leadership behavior, which MRs can implement for both individuals and others. This gap of knowledge can be closed by the integration of transformational leadership and self-leadership. Therefore, the objectives of this study were, (1) to explore self-transformational leadership meaning and components in MRs in Thailand; and (2) to develop a self-transformational leadership scale for MRs in Thailand. The developed scale from this study could be used to measure and enhance the self-transformational leadership behaviors of MRs to maximize their job performance. The organization can also adjust the external factor, e.g., organization fairness, and enhance internal factor, e.g., self-efficacy, which affect the self-transformational leadership behaviors of MRs.

Method

This study was a two-phase, sequential exploratory mixed method design (Creswell & Plano Clark, 2011). The qualitative phase aimed to explore the experiences of seven MRs and four experts in pharmaceutical industry about self-transformational leadership. The qualitative data was collected to draft an initial self-transformational leadership scale for MRs in Thailand, which was then used in the second phase, quantitative phase, to test the psychometric properties.

Qualitative Phase
This phase is aimed to explore the meaning and components of self-transformational leadership in MRs in Thailand. The draft of questionnaire will be developed based on the finding in this phase as well.

Participants
The first group of participants were selected based on the following four criteria: (1) was former MRs; (2) presently working in the pharmaceutical company in managerial level or higher and involved in the performance evaluation process of MRs; (3) had the experiences of MRs recruitment or promotion; and (4) demonstrated transformational leadership behavior and be accepted by their team member. The participants

were four pharmaceutical industrial experts who were recommended by The Marketing Pharmacy Association of Thailand (MPAT). Then, the same process was run with selected MRs based on the following four criteria: (1) presently work as MRs; (2) had at least five years experiences in MRs position; (3) used to be rewarded about job performance or outstanding work behavior; and (4) demonstrated self-leadership behavior, measured by Thai version of *revised self-leadership questionnaire*, translated and developed by Boonyarit (2021). Seven MRs who had high score of self-leadership were interviewed.

Procedures

The data was collected from August 2021 to September 2021 by semi-structural in-depth interview. The in-depth interview started with rapport talk to engage the interviewee and let them relax before asking questions to explore the behavior and thought process of self-transformational leadership of MRs by probing. The initial interview questions were: (1) What are the key success factors of MRs?; (2) What are the essential skills of MRs in the future?; (3) What are the mindsets of MRs for coping the competitive situation?; (4) What do you think about self-transformational leadership?; and (5) How MRs demonstrated the self-transformational leadership behaviors? In-depth interview was conducted until data saturation. The interview was tape-recorded and transcribed verbatim. Investigators integrated the transcripts and related researches for data analysis process with deductive strategies. Then the operational definition of self-transformational leadership was generated. The researcher used the operational definitions to draft a self-transformational leadership scale for MRs in Thailand and invited experts in behavioral sciences and industrial and organizational psychology to prove the content validity by indexing the item objective consistency.

Quantitative Phase

This phase is aimed to test the psychometric properties of the self-transformational leadership scale.

Population and Sample

The population of this study was 2,499 certified medical representatives (MR) in Thailand. This data was provided by Pharmaceutical Research and Manufacturers Association (PReMA) on January 25, 2021. Thus, the sample size is 345 (Yamane, 1973). The questionnaires were distributed to sample via Facebook closed group of MRs in Thailand during January to February 2022.

Data Analysis

Descriptive statistical analysis was employed to describe general characteristic of participants. The psychometric properties of the scale were analyzed by item discrimination, construct validity, and reliability. Item-total correlation was performed to estimate the item discriminations. All items must perform more than 0.2 item-total correlation. Data was tested reliability by Cronbach's alpha coefficient to perform the internal consistency of the scale. Last, the researcher run a second-order confirmation factor analysis (second-order CFA) to measure construct validity with LISREL version 8.72.

Ethical Considerations

This study was approved by the ethics committee of Srinakharinwirot University before gathering the research data. The approval number is SWUEC-G-284/2021.

Results

The results were reported in two separate phases, qualitative and quantitative. The aim of the qualitative phase was to define the definition of self-transformational leadership of MRs in Thailand and develop a self-transformational leadership scale for MRs in Thailand. The quantitative phase was conducted to test the psychometric properties of a self-transformational leadership scale for MRs in Thailand.

Qualitative Phase

The results from the semi-structure in-depth interview with eleven key informants, four high managerial level in pharmaceutical companies and seven medical representatives, can be summarized the definition of self-transformational leadership of MRs in Thailand which is "thought or behaviors of individuals that influence themselves to focus on self-transformation and work-related skills development. They have awareness in their work mission and vision, self-motivation to achieve goals, and are able to collaborate with others". There are four components of self-transformational leadership (sTFL) of MRs in Thailand, which are self-idealized influence (II), self-inspirational motivation (IM), self-intellectual stimulation (IS), and individualized consideration (IC). The meaning of each component and some quotation to support the definition are explained in detail.

Self-Idealized Influence

Self-idealized influence refers to thought, skills, or behaviors of individuals that demonstrate the process of self-acceptance and self-confidence. They created their work goals for both short and long term. Be confident to overcome the obstructer and able to achieve the goals. They put effort into their work with self-management and self-control. They keep their performance meet the expectation of organization or beyond with the accountability.

> "I do everything that I can. When I received the target from the organization, I start with 'how to' plan for success. Where can I get sales order? How can I close the gap of target? Furthermore, I share my thought and my plan with colleagues. They always follow my plan and become me now."

> "Moreover, we must have accountability and know our responsible territory. We also have to know the customers and their prescribed behaviors. There are a lot of things that we must know."

> "I have to think that I must succeed. That is 'can do' attitude. Even though the target was very high, but I have to think that I can do."

Self-Inspirational Motivation

Self-inspirational motivation refers to thought, skills, or behaviors of individuals that demonstrate the process of knowing their own values. They encourage, motivate, and stimulate themselves to work with thinking of the meaning of works. They have a positive attitude of work, self-respect, and resilience. They are proud of themselves to work as medical representatives.

> "It is about the intention to succeed and encourage yourself, I always say this is self-motivation and goal setting. The concrete key performance indicator is sales result."

> "The important key is mastering your motivation. It like we can build our own motivation. Because it is very challenge in this industry, the one who can overcome problems is the one who can master his motivation."

> "I think that we have to be confident and believe in ourselves. It means that you are proud and believe in what you are doing is good for others and contribute values to others. Then we will be happy and energized to do."

Self-Intellectual Stimulation

Self-intellectual stimulation refers to thought, skills, or behaviors of individuals that demonstrate the process of self-stimulation to seek a new way of work process, consider the current practice, criticize their own performance, and always improve overall work process. They are able to analyze the problem with

every affected factor and think systematically. They can apply 'growth mindset' and 'emotional intelligence' concept into their work.

> "I think MRs must consider all factor that affect the problem and find the root-cause. First, don't believe in whatever until you can proof, so you have to explore more data and analyze it."

> "Everything has always changed. If you complain on it, you cannot move on and survive. MRs who accept the change and adapt quickly, they will seek a new opportunity. So, MRs' thought is very critical."

> "We work in a cycle, when we achieve target in this month, next month is the same. But we can advance the previous results or our performance to the better one in the next month. If you see it as a routine job, it's a routine job. But if you see it a new thing, it's a new thing."

Individualized Consideration

Individualized consideration refers to thought, skills, or behaviors of individuals that demonstrate the process of empathic working with others. They understand the difference of people and perform the two-way communication. They know their own need of improvement and self-efficacy. They are a good player in the team, support team, and able to request support from team member or supervisor properly.

> "I'm getting older, and we have young newcomers joined our team. I have to adapt myself, I think that young generation's thought is different to mine. Don't strict to your thought, we must listen to others as well."

> "The most important person is my supervisor who can guide us. He has to support team. When MRs achieve target or succeed in their job, he should recognize and encourage team to learn from each other."

> "We are working with people. If we know how to approach customers who have different style and personality, we will feel confident to understand and deal with them. We will know their need-behind-need and what customers want."

Items Generation

Seventy-two items of the self-transformational leadership scale were generated from the meaning of each component. The researcher conducted check for content validity by using the index of item objective congruence (IOC) (Kamket, 2006). Any items met under 0.6 level rating by three experts were removed from the scale. The researcher invited three experts in behavioral sciences and industrial and organizational psychology to prove the content validity by indexing the item objective consistency of 72 items developed from the interview results. The operational definition was provided to compare with the item. Thirty-eight items were removed because the IOC score was lower than 0.6. The scale was also revised some wordings aligned with the comments of experts. Therefore, the final self-transformational leadership scale is a 34-item questionnaire. The scale is a 5-point Likert scale. The examples of items are "I can explain my strength of medical representatives", "I am proud to tell others that I am a medical representative". This scale will be analyzed psychometric properties in the next phase.

Quantitative Phase

The quantitative phase was conducted to complete the result from the qualitative phase by testing the psychometric properties of the scale. The researcher posted the final scale on the Facebook closed group of MRs in Thailand to invite them to participate the study by completing the questionnaire between January

27 to February 7, 2022. A majority of the participants were between 30 and 39 years old, have bachelor's degree, and work in Bangkok. The average MRs tenure of participants is 8.59 years. The results of item discrimination were tested by item-total correlation and all items had coefficient correlation more than 0.2, no item was deleted. For reliability test of 34 items, Cronbach's alpha was 0.92, so the scale had reliability. Finally, the second-order CFA (see Figure 1) demonstrated that the self-transformational leadership of MRs in Thailand model was consistent with the empirical data indicated by the goodness-of-fit indices (Chi-square = 1465.57, df = 523, p-value = .00, RMSEA = .07, SRMR = .07, NFI = .90) (Schumacker & Lomax, 2010).

Figure 1

The Second-Order CFA of Self-Transformational Leadership Scale for MRs in Thailand
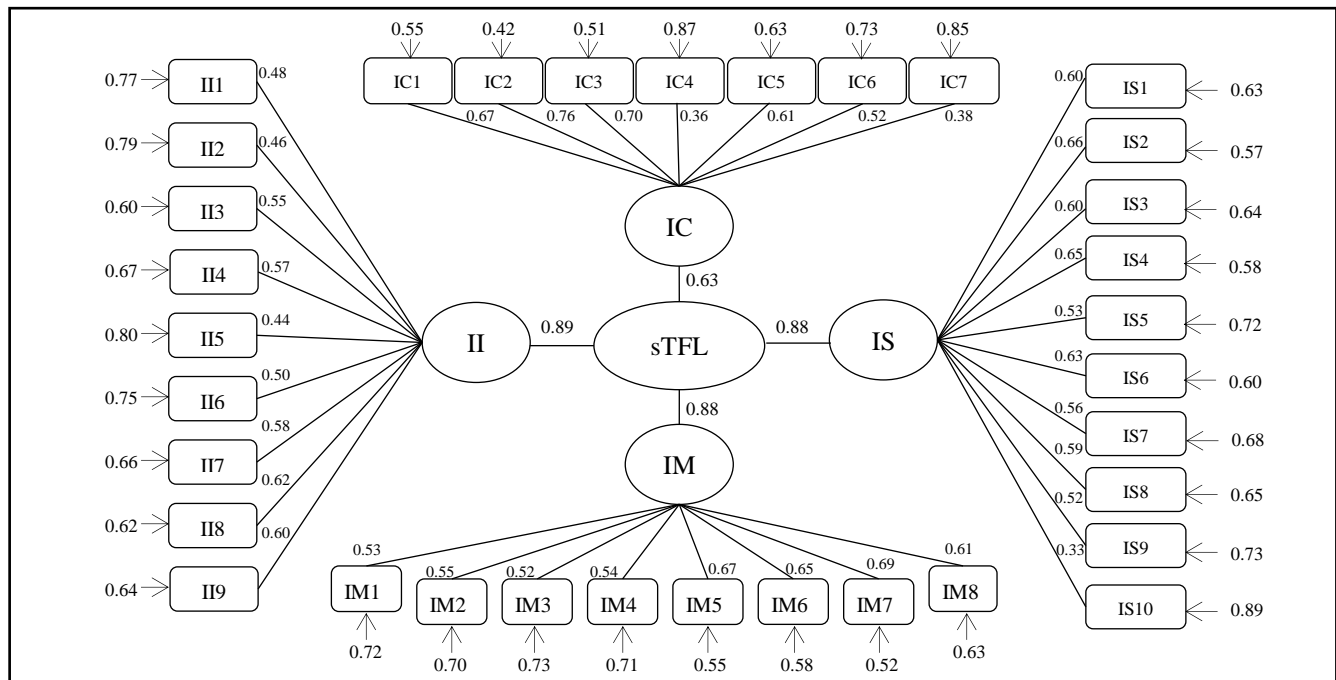
Note. sTFL = Self-Transformational Leadership, II = Self-Idealized Influence, IC = Individualized Consideration, IS = Self-Intellectual Stimulation, IM = Self-Inspirational Motivation.

Discussion and Conclusion

Main Result

The results from this research illustrated that self-transformational leadership of MRs in Thailand consist of four components which are self-idealized influence, self-inspirational motivation, self-intellectual stimulation, and individualized consideration. The psychometric properties of the self-transformational leadership scale for MRs in Thailand developed in this study were accepted of content validity, item discrimination, reliability, and construct validity. This result relates to the previous study of Avolio and Bass (1991) who demonstrated four components of transformational leadership. The factor loading from a second-order CFA demonstrated that II, IM, and IS equally describe the variance of self-transformational leadership of MRs in Thailand but higher than IC. These results were confirmed with the related literature by Mason et al. (2014) who studied transformational leadership development and found that self-efficacy, perspective taking, and positive affect were positive related to transformational leadership improvement. This is also consistent with the interview in this study, MRs who perceived self-efficacy demonstrated more self-transformational leadership behaviors than MRs who have low self-efficacy.

The self-transformational leadership behavior can be explained in two angles, personal factors and situational factors. Refer to the job description of MRs for explanation the self-idealized influence behavior,

they must set the clear personal goal to achieve sales and non-sales target. They have to define their own way of working in order to be successful with self-assessment, self-confidence and dedication. These are related to Vroom's Expectancy Theory (1964), when a person accepts the value of expected outcome and perceived that their performance will lead to that outcome, he will put effort to work and be motivated to work towards the goal. Thus, organization should set the challenge but achievable sales target for MRs to motivate and enhance self-transformational leadership behavior.

The self-inspirational motivation behavior can be described with job characteristic theory (Hackman & Oldham, 1976) focus on task significance. Because the core job of MRs is providing academic information to healthcare professionals for making decision to prescribe proper medicine to patient. When MRs know how important the work they are doing and how it will affect patients' quality of life, they will have the intrinsic motivation. This work-related intrinsic motivation will lead to the increasing of self-transformational leadership behavior.

For the self-intellectual stimulation behavior, MRs must stimulate themselves to think of new ways of working or solutions that will lead to better performance. It also includes being prepared for changes that may occur at any time. They may require strategic planning with marketing information and company support. These are consistent with Job Demand-Resource Theory (Bakker & Demerouti, 2014). When MRs perceive motivational process, both job resource, for example, marketing information support, and personal resource, for example, self-efficacy, they will have work engagement that lead to higher job performance.

The last behavior is individualized consideration behavior that is demonstrated by collaboration with an understanding of individual differences and empathy. MRs can request support from others, especially from the line manager who plays the critical role in their team. Supervisors play a decision-making role with MRs on all matters and contribute to the development and evaluation of their performance. This situational factor can be explained by Leader-Member Exchange Theory (Graen & Uhl-Bien, 1995). When supervisors provide support and trust in MRs, they will also perform well to reward good relations between supervisors. Therefore, social support from supervisors is one of the critical situational factors that affect the self-transformational leadership behavior of MRs.

This study focused on the measurement and development of the work behavior of MRs. The scale developed in this study can be used to guide organization to develop training plan for MRs because the specific behaviors of transformational leadership were integrated with self-leadership concept. This is supported by Andressen et al. (2012) who found the relationship between transformational leadership and self-leadership. Self-leadership plays a mediator role on the relationship between transformational leadership and employee motivation and has a higher influence on motivation in virtual work structures. However, when the organization implement this scale to measure the outcome of factors that affect self-transformational leadership behavior of MRs, social cognitive framework (Bandura, 1997) should be considered to evaluate the learning outcome because the learning outcome is a result of the interaction between the learner's cognitive, behaviors and the environment.

Limitations

This study was mainly designed for MRs in Thailand. This limitation should be considered before applying with other population or MRs who are outside of Thailand. Future studies may adapt the scale developed in this study to validate and implement with other population. Moreover, the self-transformational leadership scale for MRs in Thailand is a self-report instrument. This may cause the bias of respondents. Because the result may reflex the work behavior of respondents.

Implications for Behavioral Science

A number of pharmaceutical companies are now transforming into the digital era. They integrate digital tools with current work behaviors of MRs, for example, to engage customers by virtual academic

symposium and webinar. The implication of this study will support MRs to transform their work behavior for coping not only the COVID-19 pandemic, but also the upcoming change in the organizations. MRs who demonstrate self-leadership behavior can support colleague during critical time. They may perform the innovative work behavior, which can enhance work engagement (Darwish et al., 2020). The scale developed in this study can be used in the training need analysis process for enhancing self-transformational leadership behaviors of MRs in the organization.

This study contributes to behavioral science knowledge and practice by providing the self-transformational leadership scale. Researchers can apply this scale to study the personal and situational factors that affect self-transformational leadership behaviors. For example, growth mindset, a personal factor, has the positive relationship with leadership development (Han & Stieha, 2020). Situational factors, for example, job satisfaction, pleasantness at work, or organizational commitment affect the transformational leadership (Jin et al., 2016).

Future studies can apply the qualitative results to design a training program for enhancing self-transformational leadership behaviors of MRs in Thailand. Researchers should consider the antecedents of self-transformational leadership behaviors for the creating process of activities in the training program. Moreover, researchers can also explore the consequences of self-transformational leadership, and then create the conceptual framework to explain the relationship of antecedents and consequences of self-transformational leadership.

Theoretical Implication
This research integrated two leadership theories, transformational leadership and self-leadership. The results showed the expansion and coverage of leadership theory in the perspective of self-leading and influencing others. Based on empirical evidence, researchers can apply the concept and scale of self-transformational leadership to integrate with further study or other field of practice.

Conclusion
The self-transformational leadership scale for MRs in Thailand was created to expand the behavioral science research of MRs performance in Thailand. This scale is a reliable and valid tool, which support further study in the area of pharmaceutical company. It also helps the organization to evaluate the behaviors of MRs for development, design training program, or recruitment process. Future behavioral science studies can apply the developed scale to find the antecedents of self-transformational leadership behaviors.

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