Emotional Intelligence and Leadership Emergence in Agile Team Meetings

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ABSTRACT,
This research aims to further explore the applications of the rising concept of Emotional Intelligence(EI). EI has become more and more popular, both in recruitment practices and in the scientific literature. However, in the context of leadership emergence, this topic still lacks coverage. To explore the concept of EI in relation to leadership emergence, research was performed in an Agile Scrum work environment. In this environment, there is no leader appointed and the tradional leadership role is distributed over the team members. To measure the level of EI, the Wong and Law EI scale was used. Next to this, the impact of the product owner role on leadership is also further investigated. No significant relation was found between EI and leadership emergence. However, for the impact of the product owner role on leadership emergence significant results were found.

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Emotional Intelligence, Agile, Scrum, Leadership behavior, Leadership Emergence

1. INTRODUCTION

Emotional Intelligence(EI) has become a more and more important topic within hiring and training practices of companies over the years (Fineman, 2004). The concept of EI first emerged in a study in 1990, where the following definition was given: *"Emotional intelligence involves the accurate appraisal and expression of emotions in oneself and others and the regulation of emotion in a way that enhances living."* (J.D. Mayer, Dipaolo, & Salovey, 1990, p. 772). A lot of studies have been performed regarding EI and the influence of EI in the context of performance, ranging from studies seeking to make the concept measurable to studies seeking practical implications for the concept EI. (Luong, 2019; Slaski, 2003; Wong & Law, 2002). Even though a lot of studies have been performed on this topic, most of these studies have been in a traditional work environment with a hierarchical reporting and leadership structure. In his study from 2000, Goleman suggests that EI is closely related to successful leadership in a traditional system(Goleman, 2000). Besides, Pescosolido(2002) and Côte et al(2010) found results that also suggests a positive relationship between EI and leadership emergence(Côté, Lopes, Salovey, & Miners, 2010; Pescosolido, 2002). Based on the findings of Goleman(2000), Pescosolido(2002) and Côte et al.(2010), this study aims to further explore the effects of EI on leadership in environments where leadership is not appointed, on teams working with an Agile-scrum methodology. This will specifically be done in these Agile-scrum environments, since according to the Agile manifesto by Beedle et al(2001), leadership in these environments is diffused over team members. Since leadership is not appointed, it will emerge naturally and by investigating how it emerges, the role of EI can also be further examined.

Another reason why the focus for this study will be on Agile Scrum teams is that there are only a few studies on EI which have been performed within work environments that adapted to the principles of the Agile manifesto(Beedle, 2001). These studies do not elaborate on the effects of EI on leadership directly, but they do suggest that a higher EI helps moderate the negative impact of human related challenges in an agile setting in the dimensions of anxiety, mutual trust, motivation and communication competence.(Luong, 2019)

This study was performed at a large financial organization from the Netherlands, that pioneered in adopting the Agile methodology in the financial world. In 2015 they made the transition from a traditional, hierarchical way of working towards the an Agile-Scrum methodology based on the methodology of Spotify.(Birkinshaw, 2018) The Spotify-model is an Agile-scrum based method, adapted to larger organizations. In the Scrum-model, the main functions are Product Owner(PO), Scrum Master and Development team member, where the PO represents the stakeholders interests and manages the product backlog and the scrum master facilitates the Scrum process of a team. (AgileScrumGroup, 2020). These teams work in sprints, demarcated periods of time varying between 2 to 4 weeks.

As stated above there has also been research on the impact of EI on Agile team performance, but that research mainly focuses on team performance and individual performance, but does not look into correlations between EI and leadership emergence in these teams.(Luong, 2019).

Even though it is suggested that in the Agile way of working, there are no leaders, one study suggests that Agile teams are still in need of the functions normally performed by traditional leaders and they propose that shared leadership will emerge in Agile teams. However, this study also hypothesizes that this emergent leadership is influenced by the function of the team members. (Przybilla, Wiesche, & Krcmar, 2019)

1.1 Research Question

This study aims to fill the gap in the scientific literature considering the leadership emergence in Agile teams. Even though some explorative studies have been performed regarding this subject, the impact of EI and the role of PO on leadership emergence currently lacks in coverage. To further explore the impact of these two variables the following research question is formulated:

RQ: What is the effect of emotional intelligence and the role of an employee on their tendency to show leadership?

1.2 Academic and Practical relevance

1.2.1 Academic Relevance

This paper aims to further explore the relation between EI and leadership behaviors. Previous studies already have established positive correlations between leader performance and Goleman even called EI a primer for successful leadership. This paper aims to investigate whether the concept of EI is not only involved in performance, but whether it is also involved in the emergence of leadership where there is no appointed leader. This is also the reason for the second research question, where the impact of role on leadership emergence is tested, so further hypotheses can be generated about the predictivity of EI for leadership emergence and how the role of a team member might play a role in this. Finally, this paper will further investigate the relationship between EI and leadership emergence by looking for correlations between EI and specific types of leadership behavior. This will not only fill a gap in the literature on the relationship between EI and leadership emergence, but will also provide new insights on the impact of EI in the team dynamics of an Agile team, a subject which has been studied, but still lacks in coverage in the current literature.

1.2.2 Practical relevance

On a more practical note, this study will provide Human Resources specialists with more information on how to interpret EI scores when forming an agile or other form of self-organized team, or when hiring someone for such a team. By better understanding how EI relates to leadership emergence this study can also enhance their ability to form well-performing agile teams or adjust teams where lack of leadership or clashing emergent leaders hinders performance.

1.3 Thesis outline

To answer the research question, first a literature study is performed for the concepts that are relevant for this research. In the methodology chapter, the sample, data collection method and data analysis method will be described. Finally, in the discussion part, conclusions are formed about the data and, since this is an exploratory research, potential hypotheses for future research are formulated. Finally, the limitations of this study and their implications are also discussed.

2. LITERATURE STUDY

2.1 Emotional Intelligence

2.1.1 Conceptualization of Emotional Intelligence

Firstly, EI will be further defined. The first mention of EI is in 1966, in a German psychodynamic study on women, where the relation between EI and emancipation is studied. The next mention after that is a study by Mayer, DiPaolo and Salovey(1990), in which they explore the perception of affective content in ambiguous visual-stimuli, which they recognized as a component of EI. This is one of the first major studies on EI, which is also the reason this definition of EI is chosen in the introduction.

After this study, a lot of other studies have been performed regarding EI and because of this a lot of definitions and measures of EI have emerged. To get an overview of all these definitions, measures and their relevance, a meta-analysis was done by Joseph and Newman. (Joseph & Newman, 2010) In their meta-analysis Joseph and Newman recognize two viewpoints on the conceptualization of EI. The first viewpoint is called the ability based model and is defined as *"…a set of specific competencies for recognizing and controlling individual emotions(Joseph & Newman, 2010, p. 72)"* The second viewpoint is called the mixed model and is defined as *"…a grab bag of constructs that contribute to job performance but are not redundant with cognitive ability.(Joseph & Newman, 2010, p. 72)"*

In their analysis they concluded that the ability based model is built on stronger theory, but only shows criterion validity in localized settings and the mixed model one was stronger to give a general prediction of job performance, but has a lack of underlying theory to strongly substantiate these predictions. In the ability-based model(a scale in this category will be used for the research) Mayer et al. recognize 4 subdimensions: "*…perception and appraisal of emotion…*, *…assimilating basic emotional experiences into mental life…*, *…understanding and reasoning about emotions* and *… management and regulation of emotion in oneself and others*" (John D. Mayer, Salovey, & Caruso, 2000, p. 400)

Here, perception and appraisal of emotion means recognizing and putting value on emotions of self and others. Assimilating basic emotional experiences into mental life means being able to compare emotions against each other and to other thoughts and sensations, understanding. Reasoning about emotions means being able to govern your emotions according to rules(i.e. being sad in a sad experience). Finally, recognizing and knowing how emotions unfold and management and regulation of emotion means that you know how to change your emotion when necessary(i.e. calming down when you are angry). (John D. Mayer et al., 2000)

In the meta-analysis of Joseph and Newman the WLEIS (Wong & Law, 2002) was classified as an ability-based self-report measure for EI(Joseph & Newman, 2010). This means that the criticism of only being valid in a localized setting does apply here(in the case of WLEIS, emotional labor is an important moderator). They also address this criticism in their own paper by stating: "*The results of this study suggests that although it may be nice to have leaders and employees with a high level of EI because these employees tend to have higher job satisfaction, it is still important to ensure the match employee levels of EI to job requirements(Wong & Law, 2002, p. 269)".* In their paper, Wong and Law recognize 4 main dimensions of EI, self-emotion appraisal, others' emotion appraisal, use of emotion and regulation of emotion, with 4 questions to test for each of those dimensions. Furthermore they found that for their scale for followers, there is a positive relationship between EI and job performance, which is however moderated by emotional labor, which is defined as: "*…the extent to which an employee is required to present an appropriate emotion in order to perform the job in an efficient and effective manner.(Wong & Law, 2002, p. 249)"* They also found a positive relationship between EI and job satisfaction , regardless of emotional labor and the relationships EI-commitment and EI-turnover intention are insignificant for this scale, unless moderated with emotional labor. In summary, the scale suggested by Wong and Law can show correlations for all job outcome dimensions, if performed in an environment with high required emotional labor. Considering the high level of communication the NWW of the financial organization requires between and within squads, a high required emotional labor and thus validity of the scale for this research is assumed.

The WLEIS is also criticized by Joseph and Newman, because besides ability, it also includes motivational questions, which means it is not a pure ability-based EI model, and that it does require more research to know what kind of construct is measured with this test(Joseph & Newman, 2010). Even though Joseph and Newman argue that more research is needed on this scale, WLEIS is widely used and validated in several countries(Iliceto & Fino, 2017; Kong, 2017; Libbrecht, Lievens, & Schollaert, 2010). And despite all its criticisms this scale is consistent with the definition of Mayer, DiPaolo and Saloveys(1990) definition of EI.

2.1.2 Effects of Emotional Intelligence

In a traditional environment, the effects of EI on job and leadership and job performance have been broadly investigated. For this study, the focus will be on the effects of EI on leadership performance. In his literature review, McCleskey(2014) found that leadership is an emotion-laden process, and from this he concludes that EI should have an impact on effective leadership(McCleskey, 2014). In another literature study, Walter, Cole & Humphrey(2011) found there is a division in the academic world considering EI. Even though some scholars claim EI has no impact on leadership effectiveness, other studies have published evidence that contradicts these claims and the majority of research is in support of the positive role in leadership effectiveness. In their study, they also address the studies that did not find significant results for the relationship between EI and leadership effectiveness. Based on the non-significant findings and the evidence for moderating and mediating factors on the relationship between EI and leader performance, they suggest that EI is not equally relevant for all types of leaders.(Walter, Cole, & Humphrey, 2011).

EI has already been studied in work environments that adopted the Agile way of working. Luong found that EI plays an important role in agile teams, because it reduces perceived human challenges within agile teams. In their research they found team members with a high EI act as a protective factor against anxiety. Team members with a high EI can help create a safe environment, where other team members can expose their weaknesses. Secondly, they also concluded that EI acts as a predictor for motivation, based on the statement by Law et al.(2008), that individuals with high EI can regulate their emotions to improve performance and through that can keep high motivation levels. Thirdly, they found that all four dimensions of EI were significantly negatively related to the occurrence of communication problems in Agile teams. (Luong, 2019)

On top of these positive outcomes of a high EI in Agile environments, Soltani, Matook and Maruping(2018) found that EI is important in daily standups and retrospectives, because a higher EI stimulates involvement and ownership of responsibilities. They further found that improvements in software outcomes and information system design processes where a result of emotion management.(Soltani, Matook, & Maruping, 2018)

2.2 Leadership

2.2.1 Conceptualization of Leadership

The concept of leadership has been studied for a long period of time. During this time countless different definitions of leadership have been formulated and Stogdill already suggested in 1974: "*There are almost as many definitions of leadership as there are persons who have attempted to define the concept"(Stogdill, 1974, p. 259)*. So there is not one correct definition of leadership, however in 2002, Yukl et al. made a

taxonomy of leadership behaviors that have been found to be effective in the last 50 years before his research. In this study, the authors define effective leadership as: *"…types of behaviors that enhance individual and collective performance"*. In this study they summarizes leadership as a collection of three metacategories of behavior: Task, Relations and Change behavior. Task behavior is about planning short-term activities, making roles clear and keeping track of operations and performance. Relations-oriented behavior is about supporting the inter-team relations, for example by helping members develop skills and confidence and by recognizing achievements and contributions of team members. Finally the change behavior is about monitoring the external environment and by encouraging innovation both through participation and by stimulating innovative thinking. One important thing to note about these behaviors is that the relevancy and effectiveness of each of these behaviors also depends on the situation in which it is shown. (Yukl, Gordon, & Taber, 2002)

Hoogeboom(2020) used this taxonomy, combined with other models of leadership to construct a model that includes a fuller range of leadership behaviors. This model was used to also analyze the interaction patterns of effective and less effective teams. In this analysis it was found that effective teams have less recurring leadership behavior patterns than less effective teams. They conclude this is because recurring interaction patterns will restrict the information sharing.(Hoogeboom & Wilderom, 2020) In an earlier study by Hooijberg et al.(1997), the importance of a broad leadership repertoire was already found. They state: *"A broad portfolio of leadership roles makes it more likely that a managerial leader can perform the appropriate leadership role for a given situation…(Hooijberg, Hunt, & Dodge, 1997, p. 387)"* Both these findings indicate that in order for a leader to be an effective leader, it is important to not only show one type of leadership behavior, but to be able to show a broad amount of leadership behaviors.

Both Hoogeboom(2020) and Yukl et al.(2002) identified effective leadership behaviors. Yammarino(2012) goes further in depth about the desirable outcomes of effective leadership behaviors, which were identified by analyzing past models of leadership. At the individual level, he mentions that *"High degrees of satisfaction, commitment, and loyalty…as well as effective and higher individual performance(Yammarino, 2012, p. 518)"* are important leadership outcomes and on the group level he mentions *"High degrees of cohesion, high morale and positive climate, as well as objective, effective and higher group/team performance and lower group absenteeism(Yammarino, 2012, p. 518)"* as important outcomes.

2.2.2 Shared leadership

Throughout the years, a new way of leadership has emerged, in which there is no single appointed leader anymore. However, the outcomes of effective traditional leadership can still be considered desirable outcomes for these teams. So instead, the responsibilities of a traditional leader are dispersed over the team, Shared Leadership. Carson, Tesluk and Marrone(2007) define shared leadership as "*an emergent team property that results from the distribution of leadership influence across multiple team members.(Carson, Tesluk, & Marrone, 2007, p. 4)"*

Shared Leadership does not always emerge in teams without a leader, there are some antecedents that need to be fulfilled before shared leadership will emerge. The mentioned study by Carson, Tesluk and Marrone(2007) found that important antecedents for shared leadership are "*An internal team environment consisting of shared purpose, social support, and voice…(Carson et al., 2007, p. 15)"*. Besides these antecedents, they found an additional antecedent: external team coaching(Carson et al., 2007). Firstly, shared purpose is defined as a situation where team members *"have a similar understanding of the team's primary objective and take steps to ensure a focus on collective goals.(Carson et al., 2007, p. 13)* They found that teams with agreed upon goals and a common sense of purpose are more likely to have motivated, empowered and committed team members. In turn, team members with higher motivation, empowerment and commitment are more willing to share the leadership responsibilities. The second antecedent, Social support is defined as "*team members' efforts to provide emotional and psychological strengths to one another(Carson et al., 2007, p. 13)"* They found that when individual and team contributions of team members are encouraged or recognized, this will help to create an environment where cooperation between team members is valued. The cooperation between the team members makes it more likely for shared responsibility to emerge. Thirdly, Carson et al.(2007) define the voice component as "*The degree to which team members have participation and input into how the team carries out its purpose(Carson et al., 2007, p. 14)*". They defined this as an antecedent for shared leadership, based on the fact that it is associated with participative behaviors in teams. In turn, these behaviors can lead to higher levels of social influence within teams. They also mention that this antecedent helps have constructive discussions and debates in teams, and through this enhance the abilities to share responsibilities within a team. Finally, external team coaching is about the involvement of external team leaders of coaches in the development of the motivation and capabilities of teams to be able to lead themselves. Through recognition and encouragement of leadership shown by team members, external coaches create a sense of team independence for self-leading teams.(Carson et al., 2007)

2.2.3 Emotional Intelligence and Leadership Emergence

One of the antecedents of shared leadership, the social support antecedent, states that efforts to provide emotional strength to team members helps create an environment of cooperation, which in turns leads to an increased likelihood of shared responsibility in a team. This antecedent suggests that EI plays a role in the emergence of shared leadership as well. Some scholars investigated the relationship between EI and leadership emergence.

Wolff et al(2002) found that their results supported their hypothesis that EI plays a role in leadership emergence. However, this study only focused on the empathy dimension of EI and did not investigate EI as a whole. This study also used a sample consisting only of students participating all in the same Business Administration master's program(Wolff, Pescosolido, & Druskat, 2002). In 2010, Côte et al. further investigated this association by not only investigating the association between leadership emergence and empathy, but by expanding the research to other abilities included in models of EI. Again, their proposition that EI is positively related with leadership emergence was supported(Côté et al., 2010). However, the sample only consisted of students for this study as well, which makes the generalizability of these studies limited. Nonetheless these findings indicate that a positive relationship between EI and leadership emergence exists.

Pescosolido(2002) suggests in his research that one way Emergent leaders influence group performance is through managing the groups emotional state.(Pescosolido, 2002) Even though he does not make the direct link to EI, he suggests that "*Emergent leaders who exhibit both charisma and empathy will be more likely to engage in the management of group*

emotion(Pescosolido, 2002, p. 593)". Considering that Salovey and Mayer(2000) found that empathy is incorporated in many models of EI, it can be argued that EI could have a significant correlation with emotion-oriented leadership behavior.

2.2.4 Leadership in Agile teams

In this study, the relationship between EI and leadership is further investigated, specifically in an Agile Scrum environment. This methodology promotes a distribution of leadership and fulfills all antecedents of shared leadership found by Carson et al.(2007) The level to which the antecedents of shared leadership are fulfilled may vary per specific Agile methodology. In the studied organization, shared purpose can be seen in the fact that the company reorganized their teams so that instead of grouping employees by their respective specialties, multidisciplinary teams were formed that work together on the same product. The social support antecedent is not really dependent on the methodology of working, but more on the members of the team. The voice antecedent can be traced back to the planning and refinement meetings within agile, where objectives are set/refined, based on the input of the whole team. Finally, the external team coaching antecedent can be found back in the employment of Agile coaches. In the early stages of teams, these coaches guide the teams in the Agile-scrum methodology and in later stages the help of Agile coaches can be requested to identify obstacles and improve the way of working in teams.

Based on the findings about the relationship between EI and leadership emergence, as well as the fulfillment of all antecedents for leadership emergence in the agile scrum methodology, it is expected that EI will also play a role in the leadership emergence in Agile teams. However, most literature that describes leadership in agile environments is about being a project leader above the agile teams but one study found in an initial exploration about emergent leadership within agile teams, that leadership in Agile teams is shared.(Przybilla et al., 2019). One thing to note about the study by Przybilla et al(2019) is the hypothesis that states: "*Leadership attributions within agile teams differ based on functions.(Przybilla et al., 2019, p. 178)"* Even though this hypothesis is not tested in the study, the literature this hypothesis was built on strongly suggests that the function of a team member might impact the way in which they emerge as a leader. Moe et al.(2009) supports this finding, since he states in his study "*…the Product-owner is an important role regarding team leadership. The Product-owner is the official responsible for the project, managing, controlling and making visible the product backlog list.(Moe, Dingsøyr, & Øyvind, 2009, p. 2)"* Considering these hypotheses, the research will also have to take into account the role of PO within agile teams. So if we look at the NWW, and want to find the impact of EI on tendency to show leadership behavior, the POs of the teams have to be taken into account.

3. RESEARCH METHODOLOGY

3.1 Sample

The sample for this research consists of the team members of 9 Agile squads with 71 participants. Their age ranges from 22 to 65. The sample includes both male(76.1%) and female(23.9%) team members. Each observed squad has a life span of over 3 months. To observe the leadership behavior, each of these squads will also have their meetings filmed. To minimize the impact of digital communication becoming an additional factor, 50% of the members should be present at the filmed meetings. To improve the amount of data points to answer the research question, three meetings of each squad are videotaped:(1) a sprint planning meeting, where the activities for the sprint are planned, (2) sprint refinement meeting, where the team reviews the goals set in the sprint planning and (3) sprint retrospective meeting where the squad reflects on the sprint.

3.2 Measures

3.2.1 Emotional Intelligence

The EI of each of the participants was measured using the questions of the Wong & Law intelligence scale which can be found in appendix 1. These questions were mixed in with questions about job demands and squad interdependence to prevent the participants from recognizing the measured concepts, which could lead to bias when answering the survey. These items measure the 4 facets of EI as defined by Wong & Law of each respondent: self-emotion appraisal, other's emotion appraisal, the use of emotion and the regulation of emotion. Each facet consists of 4 questions which can be answered on a 7 point Likert scale, ranging from strongly disagree to strongly agree.

3.2.2 Tendency to show leadership behavior

In this research, the tendency to show emergent leadership is measured. Firstly, to know what has to be observed, the tendency has to be defined. This tendency will be measured in two ways: (1) the total frequency of leadership behaviors shown and (2) The leadership behavioral repertoire.

To identify leadership behavior, a codebook designed by Hoogeboom(2020) was used. Hoogeboom(2020) combined Yukl's model of leadership with several other leadership models to create a broad codebook to observe leadership behavior. The codebook can be categorized in multiple ways, however a categorization was chosen that consists of 4 categories of leadership behavior: transformational, transactional and counterproductive leadership behavior and behavior oriented on initiating structure in a meeting(Hoogeboom & Wilderom, 2020). Firstly, transformational behavior is behavior through which a leader aims to stimulate and inspire followers to achieve better outcomes and is characterized by charismatic leaders and consideration for each individual on the team. Secondly, transactional behavior is behavior that indicates some kind of social exchange.(Bass & Riggio, 2005) Thirdly, counterproductive behavior is behavior that goes against the legitimate interests of the organization or the team(Einarsen, Aasland, & Skogstad, 2007). Finally, the initiating structure behavior is behavior that is oriented around tasks by structuring, directing and informing during meetings.(Rothman, 1975)

The codebook can be categorized in multiple ways, however this categorization was chosen because it splits up the data in four distinctive types of leadership behavior, without focusing on the micro-behaviors displayed during meetings. This is more relevant for this study, since the focus of this study is not on the specific micro-behaviors, but on leadership styles that might be correlated with EI. This categorization also is a broader categorization than the categorization by Yukl(2002) and accounts for a fuller diversity of workplace behaviors(Hoogeboom & Wilderom, 2020). An overview of the behaviors and the way in which the codebook is categorized can be found in appendix 2. The codebook is constructed using several models of leadership theory, so all behaviors in this codebook should be leadership behaviors. At the same time, all behaviors are mutually exclusive, so only one leadership behavior from the codebook can be shown at a time.

The tendency to show leadership emergence is firstly measured as the total frequency of leadership behaviors shown. This measures was used because a higher total frequency of leadership behaviors indicates more leadership emergence of an individual.

The leadership behavioral repertoire will be measured by scoring all leader behaviors 1 if it was shown by the participant, or 0 if it was not shown, and taking the total sum of different behaviors

shown. A higher score on this variable, means that an individual shows a broader range of leadership behaviors during meetings. This variable was constructed to incorporate leadership effectiveness as well, because according to the findings by Hooijberg et al.(1997) an individual able to show a broader range of leadership behaviors is more likely to perform an appropriate leadership role for a given situation.

To test whether the findings by Hooijberg et al.(1997) apply to this codebook and to test whether the codebook behaviors where really shown more by leaders compared to followers, for each of the behaviors, a t-test was performed between leaders and followers for the frequency of each of the behaviors. This t-test was performed in the dataset of a previous study in a Dutch financial institution, with n=1616. The results of the t-test showed that all behaviors in the codebook, except for showing disinterest where shown significantly more by leaders compared to followers. Based on this result and the fact that the study where the codebook was designed and this study both take place in a financial organization, all the behaviors of the codebook, except for showing disinterest are measured as leadership behavior and included in the leader behavioral repertoire. One additional code that has also been left out is the code "Null behavior". This code was added to code behavior that did not fall within the other codes and is not a leadership definition based on literature.

Finally, the variable PO will be used to analyze the impact of the function PO on leadership emergence. This is a dichotomous variable, where 1 indicates a participant performs the function of PO and 0 indicates a regular team member.

3.3 Data Collection

3.3.1 Emotional Intelligence

Data for the Emotional Intelligence scale was collected through letting the participating employees fill in the Wong & Law Emotional Intelligence survey. After collecting the data, it was found that the EI data was missing for 6 participants, these participants have been left out of the analyses.

3.3.2 Tendency to show leadership

As described in section 3.2.2, before analysis the video of each meeting will be coded using the Observer software. This coding process was done by Business Administration undergraduate students. The students first coded the videos individually. After that, they discussed the discrepancies between the observations with their partner to create a final file which was used for analysis.

3.4 Data Analysis

All data analysis procedures will be performed using SPSS Statistics 26.0(IBM Corp. 2019). For all analyses an α of 0.05 is used as the cutoff point for what is statistically significant.

3.4.1 Initial Analysis

After both the EI and the frequency of leadership behaviors of each team member is obtained, first the frequency of leadership behaviors is recoded into several new categories. Firstly the variable Leadership_Total will be constructed by taking the sum of the standardized frequencies of all leadership behaviors. Secondly 5 variables will be constructed for the leadership categories by taking the sum of the standardized frequencies of leadership behaviors within each category of leadership behavior. This will result in 5 new variables: *Leadership_TA, Leadership_TF, Leadership_CP, Leadership_IS* and *Leadership_O.*

After collection of the data, the frequencies where standardized for meeting time, because the sample of this study consists of several different teams, which all had different meeting durations.

For the variable leader behavioral repertoire, a new variable was constructed(LeaderRepertoire) This variable included all behaviors shown significantly more by leaders compared to followers. A total of 18 behaviors were included, so this variable ranges from 1 to 18, where 1 represents a narrow behavior repertoire and 18 represents a broad repertoire. This variable was measured as a total throughout the three recorded meetings. Even though each of the 3 meetings recorded per team is different in nature, the same meetings were recorded for all teams.

After all the variables have been constructed, they will first be tested for normality, using a Shapiro-Wilk test. After checking for normality, a scatterplot is made for the relations between EI and Leadership_Total and EI and LeaderRepertoire to check for linearity. If linearity is detected, Pearson's R is determined for both relationships, in case of no linearity spearman's rho will be tested to check if there is at least a monotonic relationship between the variables. Additionally, the same correlational analyses will be performed between the variable PO and Leadership_Total and between PO and LeaderRepertoire.

After this initial analysis, the variable EI is recoded into 3 new categorical variables, EI_Split, EI_category and EI_extreme. These categorizations are made to compare the means between participants with high and participants with low EI.

The EI variable will first be recoded into a categorical variable with the categories High and Low EI(EI_Split). Where high EI is above the mean and low EI is below the mean. For this categorization, the mean was used to split the sample, because the distribution of EI does not depart significantly from a normal distribution($W(65)=.984$, $p=.579$).

Secondly, the variable EI is recoded again, this time into 3 groups, High, Low, and Medium EI(EI_category). The Low EI group consists of all participants with an EI lower than 5,03(lower quartile) and the High EI group consists of all participants with an EI of over 5,81(higher quartile). This variable is constructed, because in the analysis with the mean split, the participants scoring slightly below the mean and participants scoring slightly above the mean are compared to each other, even though their EI scores are similar.

Finally, the variable EI is recoded again, this time to compare the 5 highest scoring participants to the 5 lowest scoring participants, to see whether extreme scores on EI have a significant impact on Leadership emergence(EI_Extreme). Additionally, a statistical test will be performed to check for the impact of the PO role on leadership emergence. This will be done by checking whether a significant difference exists between the mean Leadership behavior frequency between POs and other team members.

3.4.2 EI and leadership frequency

After constructing the new variables, the dependent variable leadership frequency is analyzed first. First all categorizations are tested for normality. For EI_split, the distribution of leadership frequency departed significantly from normality, both for the group with low EI and the group with high EI($W_{low}(31)=.902$, $p=.008$ an $W_{high}(34)=.930$, $p=.031$). For EI_category, the distribution of leadership frequency only departed significantly from normality for the group with low EI($W_{low}(16)=.816$, $p=.004$ and $W_{high}(16)=.939$, $p=.343$). Finally, for EI_Extreme, again only the distribution of leadership frequency for the group with low EI significantly departed from normality. Since the independent t-test is normally considered relatively robust to non-normal distributions, this test was still used to compare the mean leadership frequency between the groups with high EI and the groups with low EI. However, to further explore the data a Mann-Whitney U test is performed as

well to compare the mean rank of leadership frequency between the groups with high EI and low EI.

3.4.3 EI and leadership repertoire

After analyzing whether significant differences exist for the frequency of leadership behaviors, the dependent variable leadership repertoire is analyzed. The distribution of LeadershipRepertoire for each categorization of EI will be checked again. For the categorization EI_split the distribution of leadership repertoire did not depart significantly from normality.($W_{low}(31)=.960$, $p=.288$ and $W_{high}(34)=.971$, $p=.497$) For EI_category the distributions did also not depart from normality($W_{low}(16)=.925$, $p=.206$ and $W_{high}(16)=.939$, $p=.342$). Finally, for EI_Extreme none of the distributions of leadership repertoire departed significantly from normality($W_{low}(5)=.927$, $p=.579$ and $W_{high}(5)=.981$, $p=.940$) Because this dependent variable is an ordinal variable, the Mann-Whitney U test is appropriate to compare the mean rank of leadership repertoire between high and low EI. However, since none of the distributions significantly departs from normality, an independent t-test is performed here as well to compare the mean leadership repertoire between high and low EI.

3.4.4 PO and leadership frequency

After analyzing the impact of EI on leadership emergence, the impact of the function PO is analyzed. Firstly, the impact of the function of PO on leadership frequency is analyzed. Again the distribution of leadership frequency is investigated for the POs and for the other team members. For the POs, the distribution of leadership frequency did not depart significantly from normality, however for the other team members the distribution did depart from normality.($W_{PO}(7)=.887$, $p=.257$ and $W_{other}(58)=.893$, $p<0.01$) Again, because the independent t-test is considered robust to non-normality, this test is performed. A Mann-Whitney U test is also included again to check for differences in mean rank of leadership frequency.

3.4.5 PO and leadership repertoire

Secondly, the impact of the function PO on the leadership repertoire is analyzed. The distribution of leadership repertoire did not depart significantly from normality, both for POs and for the other team members($W_{PO}(7)=.922$, $p=.484$ and $W_{other}(62)=.972$, $p=.484$). So even though leadership repertoire is an ordinal variable, not only the Mann-Whitney U test is performed, but an independent samples t-test as well, since again the distributions did not depart significantly from normality.

3.4.6 Leadership categories analysis

Additionally, the subcategories of leadership will be analyzed. First, the categories are analyzed for EI_split, EI_category and EI_extreme. For EI_split and EI_category, the distribution of each leadership category departs significantly from normality, both for the groups with low and for the groups with high EI. For EI_extreme some distributions do not depart from normality. For transactional, transformational and counterproductive leadership behavior, both the distributions for low and high EI are normally distributed. For Initiating structure behavior, only the distribution of the group with high EI is normally distributed. Finally for the other leadership category, neither the group with high nor the group with low EI had a normal distribution. Because some of the distributions depart significantly from normality, not only an independent t-test is used her to compare the means, but again a Mann-Whitney U test is used as well to compare the mean ranks between the groups.

Additionally, this analysis is also performed for the difference between POs and the other team members. For each leadership behavior the POs have a normal distribution, while the distribution for the other team members is not normally distributed. So for this analysis, both an independent t-test and a Mann-Whitney U test is used as well.

3.4.7 Robustness analysis

Finally, a robustness analysis is performed by identifying outliers for leadership frequency as well as for leadership repertoire. These outliers are then further inspected to identify why these cases are outliers and how it can further explain the outcomes of the tests.

4. RESULTS

For the initial exploration of the data, a correlational analysis is performed between EI and Leadership_Total, and between EI and LeaderRepertoire. This correlational analysis is performed to check whether a linear or a monotonic association can already be found between these variables. The results for these analyses can be found in table 1 and 2 respectively.

Table 1

Correlational analysis

Variable	n	1	2	3	4
Pearson's R					
1. EI score	65	-			
2. Total leadership frequency	70	-.056	-		
3. Leadership repertoire	70	-.076	.665**	-	
4. Function of PO	70	.063	.528**	.229	-
Spearman's rho					
1. EI score	65	-			
2. Total leadership frequency	70	-.043	-		
3. Leadership repertoire	70	-.131	.735**	-	
4. Function of PO	70	.060	.472**	.231	-

**p<.01

This analysis did not show any statistically significant associations between EI and Leadership_Total or between EI and LeaderRepertoire, neither linear(Pearson's R) nor monotonic(Spearman's ρ). After this statistical test, the scatterplots of both associations were checked as well. In the visual representation of both relationships, no associations were found. However, this correlational analysis did show a statistically significant association between the variable for the function of PO and leadership frequency. From this it can be concluded that team members having the function of PO does impact the total frequency of leadership behaviors shown.

4.1 EI and leadership behavior frequency

A summary of al statistical test results for the dependent variable Leadership_Total can be found in table 2.

Since the initial exploration of the data did not provide significant results about a potential relationship between EI and Leadership emergence, the data is further explored. To further explore the data, the recoded EI variables are used.

For EI_Split, no statistical significant difference in mean frequency of leadership behaviors shown was found between

high and low EI(t(63)=.687, p=.495). The results of a Mann-Whitney U test did also not provide evidence for a statistical significant difference in mean rank for the total frequency of leadership behaviors shown.(U=495, p=.694)

The same procedure was performed for EI_Category. Again, no statistically significant difference in means was found between high and low EI(t(30)=.618, p=.541). Again, the Mann-Whitney U test did not provide statistically significant evidence for a difference between the low EI group and the high EI group.(U=118, p=.724)

For the variable EI_Extreme, this procedure was repeated again. Firstly, the independent samples t-test was performed. Again, this test did not provide statistical significant evidence for a difference in means between low EI and high EI.(t(8)=-1.005, p=.344) The Mann-Whitney U test did also provide no evidence for a statistical significant difference.(U=6.00, p=.175) However, the U-value of 6.00 does indicate that the majority of participants in the high EI group had a higher leadership behavior frequency than the participants of the low EI group.

From these analyses it can be concluded that there is no significant difference in means, nor in mean rank. However, if the extreme values for EI are compared, the majority of the participants in the high EI group ranked higher than the participants in the low EI group.

The final test for this dependent variable is performed to test whether a statistically significant difference exists between POs and other team members. This test did show a statistically significant difference in means between POs and other team members(t(67)=-5.088, p<.01). The distribution for the team members that did not have the role of PO departed significantly from normality, so to decrease the probability of a Type 1 error occurring, a Mann-Whitney U test was also performed again. This test reinforced the finding and showed that the mean rank of the POs for Leadership_ Total was also significantly higher than the mean rank of the other team members(U=21, p<0.01). These findings reinforce the findings of the correlational analyses for the PO, the frequency of leadership behaviors is significantly higher for POs than for other team members.

Table 2

Statistical tests for comparison of means and ranks of Leadership.Total

	Low EI		High EI		t(df)	p(t)
	M	SD	M	SD		
EI_split	.067	.051	.060	.040	.687(63)	.50
EI_category	.064	.052	.054	.034	.618(30)	.54
EI_extreme	.033	.027	.054	.038	-1.005(8)	.34
	Other		PO			
Function of PO	.054	.040	.133	.032	-5.088(67)	<.01

(continued)	U	P(U)
EI_split	495	.694
EI_category	118	.724
EI_extreme	6.00	.175
Function of PO	21	<.01

4.2 EI and leadership repertoire

A summary of al statistical test results for the dependent variable LeaderRepertoire can be found in table 3.

After the dependent variable leadership_Total has been examined, the same procedure is repeated for the range of leadership behaviors shown, the dependent variable LeaderRepertoire.

First the difference between high and low EI for EI_Split is tested. The independent samples t-test did not provide evidence for a significant difference in mean range of leadership behaviors shown between low and high EI.(t(63)=.977, p=.332) The Mann-Whitney U test did not provide evidence for a significant difference between the two groups(U=445.5, p=.288)

The next categorization that is tested is EI_Category. There was also no statistical significant difference found in mean range of leadership behaviors shown between high and low EI for this categorization.(t(30)=.752, p=.458) Again the Mann-Whitney U test was performed to check for a significant difference in mean ranks for range of leadership behaviors shown. This test did not provide evidence for a statistical significant difference in mean rank for the range of leadership behaviors as well.(U=104.5, p=.373)

Thirdly, the 5 participants scoring highest on EI are compared to the 5 participants scoring lowest on EI again. First the independent t-test is performed. No evidence was found for a significant difference in mean range of behaviors shown between high and low EI.(t(8)=-.839, p=.426) The non-parametric Mann-Whitney U test did not provide evidence for statistically significant difference in the mean rank of range of leadership behaviors shown either.(U=10.000, p=.690)

From these results, it can be concluded that there is no statistical significant difference in mean range of behavior between participants with low EI and participants with high EI. However, the same phenomenon appeared as with the frequency analysis. When the extreme values of EI are compared, no statistical significant difference is detected, however the mean range of behaviors is higher for the participants in the high EI group compared to the participant in the low EI group.

The difference in range of leadership behaviors was also tested between POs and the other team members. First an independent t-test is performed. On first glance, his test does not provide evidence that there is a statistical significant difference in means between the POs and the other team members(t(67)=-1.927, p=.058). Finally, the Mann-Whitney U test is performed to test whether a difference in mean rank exists between POs and other team members. This test did not provide evidence for a statistical significant difference for range of leadership behaviors between POs and other team members.(U=121.5, p=.057)

Even though these results did not show a significant difference at α=.05, the mean range of behaviors showed is higher for POs than for other team members. These findings combined with the frequency analysis of the POs, do show that POs show a significantly higher frequency of leadership behaviors and in this sample they show a higher range of behaviors as well.

Table 3

Statistical tests for comparison of means and ranks of LeadershipRepertoire

	Low EI		High EI		t(df)	p(t)
	M	SD	M	SD		
EI_split	12.42	3.54	11.58	3.31	.977(63)	.332
EI_category	11.81	3.45	11.00	2.61	.752(30)	.458
EI_extreme	9.80	3.70	11.60	3.05	.839(8)	.426
	Other		PO			
Function of PO	11.7	3.41	14.3	2.43	-1.927	.057

(continued)	U	P(U)
EI_split	445.5	.288
EI_category	104.5	.373
EI_extreme	10.00	.690
Function of PO	121.5	.057

4.3 Types of leadership behavior

Finally, the t-test and the Mann-Whitney U test for each variable are repeated for the 5 subcategories of leadership. The results of these tests can be found in table 4. From this table, it can be concluded, that regardless of the categorization of participants by EI, no evidence was found for statistically significant differences between high and low scores for EI, neither in mean rank nor in actual mean frequency. From this it can be concluded that the level of EI does not impact the emergence of a specific type of leadership behavior. However, the tests for differences between the POs and the other team members did provide statistically significant results. These tests showed that the mean frequency of each behavior, except the counterproductive behavior, is significantly higher for the POs than for the other team members($t_{ta}(67)$=-4.572, p<.01 and $t_{tf}(67)$=-2.283, p=.026 and $t_{cp}(6.37)$=-1.937, p=.098 and $t_{is}(67)$=-2.385, p=021 and $t_{o}(67)$=-4.781, p<.01). The mean rank of frequency for each of these behaviors is also significantly higher for POs than for other team members. Based on these results, a conclusion can be drawn that the function of PO does impact the emergence of each of the leadership categories, except for the counterproductive behaviors. Considering that the function of PO impacts the total frequency of each leadership category, combined with the finding that in this sample the POs had a higher mean behavioral repertoire, it can also be concluded that the function of PO impacts the broadness of the behavioral repertoire as well.

Table 4

Statistical tests for comparison of means and ranks of the categories of leadership behavior

	Low EI		High EI		t(df)	p(t)
	M	SD	M	SD		
Transactional						
EI_split	.027	.020	.023	.019	.836(63)	.406
EI_category	.024	.018	.021	.015	1.491(30)	.672
EI_extreme	.015	.013	.013	.006	.211(8)	.838
Function of PO[a]	.021	.016	.053	.024	-4.572 (67)	**<0.01**
Transformational						
EI_split	.003	.004	.002	.003	1.304(63)	.197
EI_category	.003	.005	.001	.001	1.491(30)	.146
EI_extreme	.002	.002	.002	.002	.056(8)	.957
Function of PO[a]	.002	.003	.005	.003	- 2.283(67)	**.026**
Counterproductive						
EI_split	.007	.007	.006	.005	.456 (53.2)	.650
EI_category	.007	.008	.005	.005	.670(30)	.508
EI_extreme	.003	.002	.005	.002	-1.601(8)	.148
Function of PO[a]	.005	.005	.013	.010	-1.937 (6.37)	0.098
Initiating structure						
EI_split	.003	.005	.003	.005	.322 (53.2)	.749
EI_category	.004	.007	.002	.003	1.163 (19.7)	.259
EI_extreme	.002	.004	.001	.0004	.939(8)	.375
Function of PO[a]	.003	.005	.007	.004	-2.385 (67)	**.021**
Other						
EI_split	.027	.021	.026	.018	.295(63)	.769
EI_category	.026	.023	.025	.021	.223(30)	.825
EI_extreme	.012	.011	.034	.031	-1.470(8)	.180
Function of PO[a]	.023	.017	.055	.020	-4.781 (67)	**<0.01**

[a] For the dichotomous variable: function of PO: Low EI=other, High EI=PO

(continued)	U	P(U)
Transactional		
EI_split	461	.386
EI_category	120	.763
EI_extreme	11	.841
Function of PO	53	**<0.01**
Transformational		
EI_split	428.5	.195
EI_category	90.5	.160
EI_extreme	11	.841
Function of PO	59	**<0.01**
Counterproductive		
EI_split	511	.834

EI_category	127	.985
EI_extreme	5	.117
Function of PO[a]	118	**0.049**
Initiating structure		
EI_split	495.5	.678
EI_category	120	.780
EI_extreme	10.5	.675
Function of PO	69	**<0.01**
Other		
EI_split	515	.875
EI_category	120	.763
EI_extreme	3	.056
Function of PO	36	**<0.01**

4.4 Robustness analysis

After the previous analysis, notable data points were identified and analyzed. One outlier was found for Leadership_Total. This participant had a leadership behavior frequency of about 3.5 standard deviations above the mean frequency of leadership behaviors shown. Upon further investigation of the video, it was found that this participant was taking notes during the meetings as well as managing the agenda of the meetings.

An examination of the categories of leadership behavior also showed an outlier case. One of the participants had a frequency of 3.8 standard deviations above the mean Transactional behavior frequency, 5.5 standard deviations above the mean Transformational behavior frequency and 4.5 standard deviations above the mean initiating structure frequency.

5. DISCUSSION

In this section, the results are discussed further in depth. Firstly the results regarding the relation EI and leadership emergence are discussed. Secondly the results for the relationship between the function of PO and leadership emergence are discussed.

5.1 EI and leadership emergence

From this study, it can not be concluded that there is a significant relationship between EI and leadership behavior frequency. The same goes for the relationship between EI and leadership behavioral repertoire. These findings contradict the findings by Wolff et al.(2002) and Côte et al.(2010). One reason that the findings of this study differ from the findings by Wolff et al.(2002) and Côte et al.(2010) could be the difference in measure for leadership emergence. In both studies mentioned, the level of leadership emergence was measured by using peer-ratings. These peer-ratings demonstrated perceived leadership emergence by peers. In contrary to observed leadership emergence, perceived leadership emergence may include several other factors of leadership emergence that are overlooked during an observational analysis of leadership emergence, such as interactions between team members and non-verbal behaviors. This study did also not take into account that leadership is dependent on situation. There was an attempt to capture this by incorporating behavioral repertoire as a dependent variable, this still does not account for when behavior is shown. Another potential explanation for the difference between the findings of the present study and the studies by Wolff et al.(2002) and Côte et al.(2010) could be the difference in sample. Both of the mentioned studies were performed in a student sample, where no roles were assigned. However, the present study was performed in a large financial organization, where the agile methodology was employed and some roles were already assigned. The statement "*…the Product-owner is an important role regarding team leadership. The Product-owner is the official responsible for the project, managing, controlling and making visible the product backlog list.(Moe et al., 2009, p. 2)"* does imply that Agile teams are less organized than the Agile methodology normally promotes. One explanation of this might be that the PO is acting as a leader.

5.2 PO and leadership emergence

From the findings of this study, it can be concluded that the POs show significantly more leadership behavior than other team members. These findings partially support the hypothesis in the initial exploration of leadership emergence in Agile teams by Przybilla et al.(2019):"*Leadership attributions within agile teams differ based on functions.(Przybilla et al., 2019, p. 178)"* When the statement by Moe et al.(2009) is taken into account, about the importance of the PO for team leadership, we see that POs indeed do act as leaders in Agile teams. Even though a PO is not explicitly a leader, POs do represent the stakeholders interest in Agile teams and in turn fulfilling and managing these interests is their responsibility(Kristinsdottir, Larusdottir, & Cajander, 2016).

This could also explain the lack of impact of EI on leadership emergence. One of the antecedents of leadership emergence is the voice antecedent and is define as "*The degree to which team members have participation and input into how the team carries out its purpose(Carson et al., 2007, p. 14)*". If a PO is really acting as a leader of an agile team, this reduces the input of other team members in how the team carries out its purpose. Because of this, it will become less likely that leaders will emerge.

5.3 Theoretical implications

Because it is expected that the observed leadership emergence in this study does not take into account all factors of leadership emergence, future research can develop a completer model to observe leadership emergence, for example by using behavioral differentiation as a measure instead of leadership repertoire, since this concept also incorporates the ability of a leader to adjust their approach to different situations(Hooijberg et al., 1997). Furthermore, this study can be repeated in a bigger sample. When the participants with extreme scores on EI were compared, almost all participants in the high EI group had a higher leader behavior frequency as well as a broader behavior repertoire than the participants in the low EI group. No statistical significant results were found in this study, but a bigger sample, including more participants with extreme EI scores could further investigate whether extreme scores on EI make a difference for leadership emergence.

5.4 Practical implications

In this study no significant relation between EI and Leadership Emergence found, even though other studies suggest this relationship should be there in self-managing teams. Possible explanations for these differences were analyzed, but at the same time, the POs show significantly more leadership emergence than the other team members. One possible explanation could be that the Agile-Scrum method employed at the financial institution is less self-organized than the Agile manifesto promotes. On the vacancies-page of the institution some job offers could be found for PO, meaning that POs do not emerge from or are chosen by a team, but they are appointed by management. Even though this is not necessarily a bad thing Fowler(2019) does mention POs that act like managers a pitfall for successful implementation of scrum methodology(Fowler, 2018). For the financial institution, this means that in case lack of performance is detected, they might want to take a look of their implementation of the Agile Scrum methodology.

5.5 Limitations

As with the majority of research, this study is also subject to some limitations.

One limitation of this study is that it has a limited sample size of only 71 participants. The Covid-19 outbreak constricted further videotaping of the meetings, because they were canceled. In the future this study may be repeated in a larger sample size to generate more insights both on the relationship between EI and leadership emergence and on the relationship between the role of the PO and leadership emergence.

A second potential limitation of this study was that only the WLEIS-scale was used to assess the level of EI of the participants. Even though this scale has been validated, there are a lot of other methodologies to measure EI. For example, the relationship between leadership emergence and observed EI might give different results and might serve as a predictor for leadership emergence. Since the WLEIS is also a self-report scale, it is possible that bias can arise from for example social desirability bias.

Finally, a potential limitation of this study is that only the frequency and the range of leadership behaviors are recorded as leadership emergence. The duration of behaviors shown might also play a big role in leadership emergence as well as the level of leadership as perceived by peers.

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7. APPENDIX

7.1 Wong & Law Intelligence scale survey

(Wong & Law, 2002, pp. 270-271)

Self-emotion appraisal (SEA)

1. I have a good sense of why I have certain feelings most of the time.
2. I have good understanding of my own emotions.
3. I really understand what I feel.
4. I always know whether or not I am happy.

Others' emotion appraisal (OEA)

5. I always know my friends' emotions from their behavior.
6. I am a good observer of others' emotions.
7. I am sensitive to the feelings and emotions of others.
8. I have good understanding of the emotions of people around me.

Use of emotion (UOE)

9. I always set goals for myself and then try my best to achieve them.
10. I always tell myself I am a competent person.
11. I am a self-motivated person.
12. I would always encourage myself to try my best.

Regulation of emotion (ROE)

13. I am able to control my temper and handle difficulties rationally.
14. I am quite capable of controlling my own emotions.
15. I can always calm down quickly when I am very angry.
16. I have good control of my own emotions.

7.2 Behavior codes and categories

Table 5: Behavior codes and their corresponding category(TA=Transactual, TF=Transformational, IS=Initiating structure, CP=Counterproductive, O=Other) (Hoogeboom & Wilderom, 2020, pp. 16-17)

Coded behavior	Category	Example
Providing negative feedback	(TA)	" I am not satisfied with the result"
Task Monitoring	(TA)	" How far are you on the project?"
Correcting	(TA)	" You are doing it wrong"
Individualized consideration	(TF)	"How is your family?"
Intellectual stimulation	(TF)	"How could handle this problem differently?"
Idealized influence behavior/Inspirational motivation	(TF)	"Let's solve this like we always do!"
Showing disinterest	(CP)	Not paying attention to the discussion
Defending one's own position	(CP)	"Let's do it this way, I know what I'm doing"
Interrupting	(CP)	Talking over a team mate who was talking
Directing	(IS)	"Can you do this, Jan? then the rest of the team can finish the other assignment."
Informing	(IS)	"I talked to management about the complaints"
Structuring	(IS)	"Lets start this meeting at the first point of the agenda"
Providing positive feedback	(O)	"Great job on finishing that!"
Giving own opinion	(O)	"Maybe we should do it like this"
Agreeing	(O)	"Yes, that is right"
Disagreeing	(O)	"We should do it differently"
Humor	(O)	Making a joke
Giving personal information	(O)	"My trip in the US was great!"