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Influence of leader's non-verbal and verbal behavior on meeting effectiveness

Master Thesis

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„The most important thing in
communication is hearing what is not said”

Peter F. Drucker

Abstract

Meetings are prevalent in organizations; they take up to about six hours per week of employees' time on average. Previous studies have shown that specific non-verbal and verbal behaviors of leaders can help to make meetings more effective. However, there is a lack in the literature that examines effective leaders' non-verbal and verbal micro behaviors integratively in relation to meeting effectiveness.

This field study examines which specific non-verbal behaviors enhance meeting effectiveness; both in isolation and during task-oriented and relation-oriented behavior. A quantitative cross-sectional, multi-method study was set up. Forty-four videos from regular staff meetings, which were recorded in a Dutch public organization, were systematically coded: The non-verbal behavior, the non-verbal behavior during task-oriented behavior and the non-verbal behavior during relation-oriented behaviors of 44 leaders were analyzed by using a specific pre-set coding scheme. A questionnaire filled in by the followers of the recorded meetings gave more insight into the perceived meeting effectiveness. Non-verbal behavior was not found to influence meeting effectiveness significantly in a regression analysis. However, correlation testing showed a positive, non-hypothesized trend. Implications for theory and practice and directions for future research are discussed.

Key words: non-verbal behavior, task-and relation-oriented behavior, leadership, meeting effectiveness

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1 Introduction

Nowadays meetings are essential for organizations to achieve their goals and various scholars underline the importance of leadership behavior during those regular staff meetings, as leaders are able to increase meeting effectiveness by their behavior (Lehmann-Willenbrock, Allen, & Kauffeld, 2013; Poel, Poppe, & Nijholt, 2008). Even though it is such a relevant topic for organizations there is a significant gap in the literature. Bonaccio, O'Reilly, O'Sullivan, and Chiochio (2016) determined that "it is surprising to notice that management scholars have lagged behind in understanding this seemingly important form of communication" Leaders and employees spend a lot of time in meetings, but they see them often as annoying or as interruption of their work (Rogelberg, Leach, Warr, & Burnfield, 2006). Unsuccessful meetings can be wasteful: time, effort and money can be lost. However, leaders and managers agree that meetings are necessary in organizations because they are helping individuals to reach their tasks (Rogelberg et al., 2006). Previous studies found that especially leaders and how they behave are able to increase the perceived value of meetings. They can do so by using effective non-verbal behavior and verbal behavior, especially task-oriented and relation-oriented behavior (Darioly & Mast, 2013; Nixon & Littlepage, 1992). Therefore, it is important for organizations to spend time on increasing meeting effectiveness (Nixon & Littlepage, 1992). Previous research mainly focused on the design characteristics, such as starting and ending on time or using an agenda (Cohen, Rogelberg, Allen, & Luong, 2011; Rogelberg, Shanock, & Scott, 2012). But there is not much known about how leaders and their behavior could enhance the effectiveness of meetings as earlier studies mainly focused on leadership effectiveness and not on meeting effectiveness (Darioly & Mast, 2013). In addition, there is a gap in the literature that connects verbal and non-verbal behavior (i.e., scholars either focus on verbal or non-verbal behavior in isolation); hence, it might be especially interesting to examine which combinations of verbal and nonverbal leader behavior could enhance meeting effectiveness as this could help organizations to reach their goals. Poel et al. (2008) indicate that the behavior of a leader plays a significant role during meetings and influences meeting effectiveness. They found out that for instance, gaze, body posture or laughs are important cues for communication during such meetings. But their study focused on smart meeting environment, where the participants were physically on separate locations. So, it was impossible, for example to analyze the eye contact. But eye contact could help a leader to gain more trust and to be efficient, which might have an influence on how employees perceive the effectiveness of the meeting (Miller, 1988). Also, the study of Darioly and Mast (2013)

demonstrated that non-verbal communication leads to higher leadership effectiveness and further to more effective meetings (Nixon & Littlepage, 1992). But not only leaders' non-verbal behavior may have an impact on meeting effectiveness, also leaders' verbal behavior could improve meetings. The research of Nixon and Littlepage (1992) stated that meeting effectiveness is related to task- and relation-oriented behavior. They found that especially a task-oriented focus is positively related to meeting effectiveness. Therefore, it is important for organizations to train leaders in the specific non-verbal and verbal behavior that they display during meetings and gain more understanding in the interplay between effective verbal and non-verbal behaviors. Interpersonal skill training creates awareness for leaders of their own verbal and non-verbal behavior, which is recommended because it has a positive effect on leadership and meeting effectiveness (Darioly & Mast, 2013, p. 92; Nixon & Littlepage, 1992)

This research focuses on gaining in-depth knowledge about leaders' non-verbal behavior during task-oriented and relation-oriented behavior and how these aspects might improve meeting effectiveness. Therefore, the current research is focusing on the following research question: *How can a leader use his or her non-verbal behaviors during task- and relation- oriented behavior to enhance meeting effectiveness?*

This thesis is structured as follows: First, there will be given a scientific insight on non-verbal behavior, task-oriented behavior and relation-oriented behavior and how those aspects are important for meeting effectiveness. After that the hypothesis of this research will be presented. Next, the results of the present study will be presented and discussed. At the end there will be a conclusion and implications for theory and practice will be drawn.

2 Theoretical framework

2.1 Meeting effectiveness

Meetings are prevalent in the daily work routine of both leaders and employees. Rogelberg et al. (2006) state that managers spend more than 30% of their working time in meetings. Lehmann-Willenbrock et al. (2013) claim in their article that employees have at least three meetings per week. Hence, meetings are an important organizational event in which leaders can motivate followers towards higher performance (Lehmann-Willenbrock et al., 2013). Meetings are helpful to share information, to discuss important things, and to coordinate the work activities of employees. Leach, Rogelberg, Warr, and Burnfield (2009, p. 2) state that meetings are used “to accomplish goals such as information sharing, decision making, and problem solving “. Schwartzman (1986, p. 234) defined meetings as “pre-arranged gatherings of two or more individuals for the purpose of work-related interaction”.

However, a lot of experiences from employees point out that some meetings are effective, and some are not. According to the research from Schell (2010) 41,9 % of the meetings he evaluated were graded as poor. Lehmann-Willenbrock et al. (2013) found reasons for ineffective meetings: “Unmanaged (or free) social interaction often leads to poor decision-making, unnecessary conformity, social loafing, and ineffective communication processes, practices, and products” (p.366). Using an agenda makes meetings more efficient and could therefore be helpful to achieve team and organizational goals (Leach et al., 2009; Nixon & Littlepage, 1992). Nixon and Littlepage (1992) demonstrated that leaders’ good meeting procedures, for instance open communication, task-oriented focus and relation-oriented focus, are positively related to meeting effectiveness, which means that leaders could enhance the effectiveness of meetings by behaving in a certain way.

2.2 Leader non-verbal behavior

Non-verbal behavior (NVB) and non-verbal communication are important aspects for general communication and social interaction (Darioly & Mast, 2013). Darioly and Mast (2013, p. 74) state that “Non-verbal behavior refers to any behavior other than speech content” which means that people are acting for instance with body, hand and eye-gaze movements without any words or language. Bonaccio et al. (2016, p. 2) wrote that “non-verbal behavior has the potential to communicate meaning.” NVB is about using the entire body for communication while verbal behavior is more about using vocal chords to communicate. There are several categories that can be distinguished in NVB expression. Phutela

(2015), for example, categorizes non-verbal communication into 4 subranges. (1) aesthetic (i.e., art forms, like music, theater, dancing, painting and so on), (2) physical (i.e., wink, touch, smell, gesture or body movements), (3) signs, and (4) symbols. Another categorization, which is used for this study comes from Knapp, Hall, and Horgan (2013) who divided NVB into: eye gaze or behavior (i.e., looking towards group, looking away from group and functional looking behavior), facial expressions (i.e., open smile, closed smile or lip corners down), touching behavior (i.e., self-touch or object touch) and (hand) gestures (i.e., open palms, upward palms, downward palms). Previous studies have shown that NVB of leaders can influence the perception that followers have of them. It can be observed that leaders display different NVB during a meeting. The study of Remland, Jacobson, and Jones (1983) pointed out that if leaders for example are touching their followers, are oriented to them and are smiling, gazing and nodding, they are perceived as more supportive. Furthermore, Darioly and Mast (2013, p. 83) are writing that research on charismatic leadership shows that more expressive (i.e., touching behavior, looking towards, smiling, gazing etc.) NVB is also linked to more leader success. Yukl (2012) stated in his article that leaders use their NVB to build mutual trust and cohesion. This means that NVB also has an impact on leader effectiveness and could make leaders more successful, which is highly important for efficient meetings (Nixon & Littlepage, 1992; Yukl, 2012). But leader NVB does not only impact leader success, it also influences important work outcomes of the followers. In the laboratory study of Tjosvold (1984) leader and employees were working together to complete a specific task. The leader behaved in both ways, warm and cold. Which means he/she was using cold NVB, for instance tough voice, avoid smiling, avoid eye contact was distant. But he/she also used warm NVB like soft voice, a lot of smiling, direct eye contact and not distant. Results showed that a warm NVB was a more satisfying experience for the employees as the cold NVB. They perceived the "warm" leader as more helpful and wanted to work again with him/her. This means that a warm NVB can affect followers' satisfaction, motivation and performance (Darioly & Mast, 2013, p. 84)

Darioly and Mast (2013, p. 74) suggested that in the leadership context NVB is even more important than verbal behavior. If the verbal and NVB of a leader do not match, most of the followers are less likely to trust the leader's non-verbal cues. Hence, NVB is needed to make leaders more effective and to gain trust, which is highly important while having a meeting and which has the potential to make meetings more efficient (Miller, 1988).

2.3 Leader behavior and meeting effectiveness

Leadership behavior can influence employees' perceptions about meetings, for example if a leader is facilitating the meeting and guides followers through it (Myrsiades, 2000). Effective leadership behavior might have a positive influence on perceived meeting effectiveness by the followers. According to Yukl (2012) the task of leaders in organizations is for example to influence and facilitate efforts to reach organizational goals. This means that the performance of a team or organization can be improved by the leaders and their behavior (Yukl, 2012). Rogelberg et al. (2012) stated in their article that it is very important to study therefore effective leadership, as the role of the leader is important for effective meetings (Nixon & Littlepage, 1992). There is a lot known about leadership effectiveness but there is still a gap in the literature which connects leadership behavior with meeting effectiveness and how leaders can increase meeting effectiveness by using effective behavior. The following section starts with describing the three chosen NV cues and how they can help to make meetings more effective and then continues with verbal leader behavior.

2.4 Non-verbal cues

This study focuses on three NV cues, namely looking towards to group (Figure 1), open smile (Figure 3) and upward palms (Figure 2), as they can be found in and. Previously, most of the researchers were focusing on just one NVB category (i.e., gaze, facial expressions or gestures), but not on different cues and how they could interact with each other. Darioly and Mast (2013, p. 92) stated that it is important to take different NVB cues into account to get a better understanding about their interactions and combinations. Therefore, it was decided to include looking towards the group, open smile and upward palms and clustering them as it give results if they interact with each other and if a combination of different categories and cues is useful. These cues were selected as previous studies found out that, among others these three behaviors have a positive impact on meeting effectiveness in several ways.

Remland et al. (1983) and a more recent research from Kaiser, Hogan, and Craig (2008) found that for instance nodding or gazing towards their followers have a positive impact on leadership effectiveness and this leads to higher meeting effectiveness (Nixon & Littlepage, 1992). Humor and smiling is positive related to meeting effectiveness as the leaders and further the meetings are reported as more satisfying (Priest & Swain, 2002). Also, hand gestures, and more specifically open hand gestures were rated as more effective and help leaders to be successful and to make meetings more effective (Darioly & Mast, 2013; L. L. Talley, 2012). Also, the study of Tjosvold (1984) found out that

leaders who are smiling, have direct eye contact and are not distant, are perceived as more successful. These are the main reasons why these three cues were selected for this study. In the next paragraph all three behaviors will be described more detailed and how they might relate to meeting effectiveness.

2.4.1 Eye Gaze

The study of Miller (1988, p. 12) showed that facial expressions, eye contact and gaze can provide information, regulate interaction, express intimacy, exercise social control and facilitate goals. Previous studies have shown that looking in each other's eyes while having a social conversation has a positive impact on gaining more trust (Miller, 1988). Furthermore, Miller stated in his article that "eyes can be used as a good indicator of interest, or lack thereof, in a conversational topic. Speakers usually maintain eye contact and flash visual signals when they want to emphasize a particular point" (p. 14). Darioly and Mast (2013) also stated in their article that leaders who are gazing towards their followers are perceived as emergent leaders and Nixon and Littlepage (1992) stated in their study that effective leadership is positively related to higher meeting effectiveness. Furthermore, Darioly and Mast (2013, p. 77) were writing that emergent leaders are using gazing especially at the end of a statement, to invite others to speak up and to make an open climate in which followers feel confident. Also, the study of Remland et al. (1983) showed positive aspects on leader NVB. They were asking students to read a scenario beforehand, in which several aspects of leader NVB were described and afterwards to evaluate the leaders' effectiveness (p. 83). They found out that the students perceived the leaders as more effective if they were using eye gaze, more precisely when they were looking towards their followers. Moreover, the study of DePaulo and Friedman (1998) showed positive effects on professional success if a leader displays eye contact with the followers. So, eye contact between leaders and followers is extremely important while having a meeting because it could help leaders to gain more trust from their followers and show that they have an interest in what they are saying. This might lead to higher meeting effectiveness.

2.4.2 Facial Expressions

Facial expressions like for example an open smile is able to reveal various emotions. There are a lot of studies about facial expressions; most researches focused on muscles of mouth, cheeks, eyebrows and eyelids.

In addition, many studies examined the effect of humor and smiling. It appears that when people are smiling they are rated higher in kindness and lower in dominance (Edinger & Patterson, 1983; Keating et al., 1981). They are perceived as happier, more successful and more attractive (Edinger & Patterson, 1983; Keating et al., 1981). For instance, a waitress or waiter would earn more tips if she or he is smiling (Forbes & Jackson, 1980; Guéguen & Fischer-Lokou, 2004). Otta, Lira, Delevati, Cesar, and Pires (1994) studied the relationship between leadership effectiveness and smiling. They found out that broad smiling has a positive impact on the perception of leadership effectiveness, which is highly important for meeting effectiveness (Nixon & Littlepage, 1992). Also, the study of Priest and Swain (2002) found out that leaders who were using humor during meetings were reported as more effective. Robert and Yan (2005) suggested in their article that humor is helpful to build interpersonal work relationship and can influence organizational outcomes Darioly and Mast (2013) pointed out that smiling has a positive impact on leadership effectiveness and supportiveness and as further consequence makes meetings more effective.

2.4.3 Hand Gestures and touching behavior

Previous studies have shown that hand gestures are extremely important in the way individuals communicate and are helpful for leaders to communicate the message clearly (Kraus, 1995). Speakers who are not allowed to gesture, have more difficulties in producing speech: so, gestures play a unique part in communication and are important for providing and strengthening the information that is provided to the listeners (Jackob, Roessing, & Petersen, 2011). Also touching behavior is important for communication. For example, a handshake will tell a lot about someone's personality (McGough, 1974). But the meaning of touch sometimes also depends on the context or the way a touch is perceived, which means touch is culture-dependent (Knapp et al., 2013). Previous research found out that especially upward palm hand gestures have a positive influence on the information being received by group members. L. Talley and Temple (2015) studied the influence of leaders' hand gestures and defined "community hands as showing the palm up" like upward palms in this study. They found out that community hands are perceived as positive gesture. Also, the research of Kendon (2004) has shown that leaders, who are using upward palms are able to influence their listeners positively because they are gaining trust and are perceived as more effective leaders. Effective leadership is important to increase meeting effectiveness (Nixon & Littlepage, 1992).

These findings lead to the following hypothesis:

H1a: If a leader shows more looking towards to group during a meeting, this meeting is perceived as more effective.

H1b: If a leader shows more open smile during a meeting, this meeting is perceived as more effective.

H1c: If a leader shows more upward palms during a meeting, this meeting is perceived as more effective.

2.5 Verbal behavior

Verbal behavior is about sharing information between people by using words and speech. According to Skinner (1957, p. 226), verbal behavior is “shaped and sustained by a verbal environment, by people who respond to behavior in certain ways because of the practices of the group of which they are members”. The main function of verbal behavior is to express something to one or more recipients in a linguistic form. With help of verbal communication people are able to discuss, inquire, inform, and argue all kind of topics. Also, verbal communication plays an important part when it comes to leadership effectiveness and further to make meetings more efficient. One of the most important distinctions that has been made by researching the behavior of leaders is between task-oriented behavior and relation-oriented behavior (Behrendt, Matz, & Göritz, 2017).

In the following sub-sections both behaviors will be described and how they could independently increase meeting effectiveness. Further it will be investigated how NVB could strengthen those effects. The elaboration if NVB during task- and relation-oriented behavior does increase meeting effectiveness can be found in section 3.2

2.5.1 Task oriented behavior

Leaders’ task-oriented behaviors are helpful to improve the performance of individuals or smaller groups and to reach certain goals. Yukl (2008, pp. 711,712) wrote in his research that task-oriented behaviors “include short-term planning and scheduling of work activities, determining resource and staffing requirements, assigning tasks, clarifying objectives and priorities, emphasizing the importance of efficiency and reliability, directing and coordinating activities, monitoring operations and dealing with day-to-day operational problems. Task-oriented leadership behavior directly supports the process of accomplishing shared objectives (Behrendt et al., 2017, p. 6). Hence, the goal of task-oriented behaviors is to work in an efficient and reliable way to reach organizational or team targets

(Yukl, Gordon, & Taber, 2002). In a meeting context, previous research mainly focused for instance on having agendas or structuring the meeting, e.g., by starting and ending on time.

Task oriented behavior was selected for this study, because previous research found out that procedural and design characteristics of meetings, for instance focus on tasks or open communication are related to meeting effectiveness (Leach et al., 2009; Nixon & Littlepage, 1992). For the task-oriented behavior specific behaviors were used as these behaviors are regarded as important task-oriented behaviors (Hoogeboom & Wilderom, 2015). They are: Clarifying, task-monitoring, enforcing, structuring and providing direction. In the next part task-oriented behaviors will be explained and will be linked to NVB and how it might have a positive influence on meeting effectiveness.

2.5.1.1 Clarifying

In this part leaders make sure that their employees understand what to do and how to do it in order to reach their goals. This includes explaining work responsibilities, assigning tasks, communicating objectives, priorities and deadlines (Yukl et al., 2002). Further, leaders need to set performance standards, explaining relevant rules, policies and standard procedures (Yukl, 2012, p. 70). The performance of a group could be improved if the group gets clear and realistic goals. Emergent leaders are using gazing especially at the end of a statement, to invite others to speak up and to make an open climate. This might be helpful for clarifying because all employees are able to speak up and the leader could check if everybody has the right information and knows what to do (Darioly & Schmid-Mast, 2013). Smiling and humor might be helpful for clarifying as it helps to build interpersonal work relationships (Darioly & Schmid-Mast, 2013). Upward palms could be helpful for this part because trust is important for it. The leader needs to trust the followers and the other way around, especially for work responsibilities but also for deadlines. As upward palms have a positive influence on listeners they might enhance the effectiveness of meetings too (Kendon, 2004).

2.5.1.2 Task-Monitoring

Task-Monitoring is important for leaders as they observe whether the employees are carrying out the planned tasks and if they are progressing as planned. It is also helpful for checking previously made agreements (Hoogeboom & Wilderom, 2015). The information gathered from monitoring is helpful for the leaders to identify if there are problems and if changes are needed (Yukl, 2008, 2012). This can be done by observations of work operations, reading reports from the employees, performance data or meetings. For this part looking towards to the group could be important for monitoring. The leader needs

to know what the employees need to reach a certain goal. So, it is important that they have an open climate and that the employees feel confident in order to speak up (DePaulo & Friedman, 1998; Remland et al., 1983). Smiling might be helpful for task-monitoring as it builds interpersonal work relationship between leader and followers (Robert & Yan, 2005). But also, upward palms might play a crucial role. Upward palms could be helpful for the leader as the participants might grade the leader as more efficient and this might lead to higher meeting effectiveness (Kendon, 2004).

2.5.1.3 Enforcing

Enforcing means to force a follower to do or to not do something or to admonish an employee (Hoogeboom & Wilderom, 2015). Looking towards to group could be helpful as it makes the employees feel more confident and further could make this meeting more efficient (Darioly & Schmid-Mast, 2013). While enforcing people it is important that the leader does not seem too strict, the employees should not be intimidated, smiling might be therefore helpful as it makes leaders more sympathy and lower in dominance (Edinger & Patterson, 1983; Keating et al., 1981). Also, trust is important, and the employees should feel confident. During enforcing, upward palms might be helpful to build mutual trust between the leader and the followers (Kendon, 2004).

2.5.1.4 Structuring the conversation

Structured leader behavior is important while having a meeting and it might be helpful to reach specific meeting goals. It is important that the leader interrupts if the meeting goes into a different direction (Hoogeboom & Wilderom, 2015). Looking towards the participant could help the leader to direct them into the right direction (Darioly & Schmid-Mast, 2013). Lehmann & Willenbrock (2013) found out that some meetings are not efficient and that it is important that a meeting is structured and that social conversations will be interrupted. Smiling, especially while interrupting could be important as it makes the leader not too strict and friendlier (Edinger & Patterson, 1983; Keating et al., 1981). Also, effective hand coordination, especially upward palms and structuring could enhance meeting effectiveness because upward palms are influencing the participants in a positive manner (Kendon, 2004).

2.5.1.5 Providing direction

Providing direction means that a leader provides the group specific guidance or directions to accomplish tasks (Martin, Liao, & Campbell, 2013). Griffin (1979) described directive leadership as giving clear direction and instruction to the employees on what is expected to them, what should be

done and how they can accomplish their goals. This might increase meeting effectiveness as during providing direction the employees should get a clear idea what is expected (Griffin, 1979).

Looking towards to the group could play a crucial role as the leader is perceived as emergent if he/she is oriented towards the followers during providing a clear direction to them. Robert and Yan (2005) suggested in their article that humor is helpful to build interpersonal work relationship and can influence organizational outcomes, which might be helpful for the leader while directing the employees. Also, upward palms might help the leader during providing a direction as it has a positive influence on the perception of the leader (Kendon, 2004).

Hence, these findings lead to the following hypotheses:

H2a: If a leader shows more looking towards to group during task-oriented behavior, this meeting is perceived as more effective.

H2b: If a leader shows open smile during task-oriented behavior, this meeting is perceived as more effective

H2c: If a leader shows more upward palms during task-oriented behavior, this meeting is perceived as more effective

2.5.2 Relation-oriented behavior

In addition to task-oriented behaviors leaders are using relation-oriented behaviors to enhance the skills of their employees and to motivate them (Yukl, 2012). For instance, it is important to improve and maintain the relationship between leaders and employees, to enhance the identification with the work units or organization and to improve the commitment to the mission (Yukl, 2008). Leaders are expected to provide mentoring and coaching, consult with their employees about decisions that are affecting the employees and empower subordinates. Such behavior is necessary to gain higher job satisfaction and lower turnovers. In short: relation-oriented behaviors are helpful for supporting employees, in developing skills of their work unit members, in providing recognition for achievements and for empowering their subordinates (Yukl, 2008;2012, p.712;719). Also, for the relation-oriented behavior specific behaviors were used as previous research found out that these behaviors are regarded as important relation-oriented behaviors (Hoogeboom & Wilderom, 2015). These behaviors are: Asking for ideas, agreeing, being friendly, providing positive feedback, encouraging and showing personal interests.

2.5.2.1 Asking for ideas

This behavior is about stimulating the employees to come up with ideas or solutions on how they can reach certain goals. The leader should also stimulate the employees to think critical about their tasks and come up with new ways on how they can reach the tasks (Hoogeboom & Wilderom, 2015). The leader should also invite the participants for a discussion, so he/she gets clearer ideas what the employees needs are. For this part gazing towards the group might help the leader to be efficient especially at the end of a statement This invites the followers to speak up and to create an open climate (Darioly & Schmid-Mast, 2013). Smiling while stimulating might help the leader to appears more sympathy (Otta et al., 1994). Also, upward palms gesture might play a crucial role as it could help the leader to gain trust and therefore might make the employees feel confident, which could be positively related to meeting effectiveness (Kendon, 2004).

2.5.2.2 Agreeing

Here it is important that the leader shows a compliant behavior and that he agrees with the follower (Hoogeboom & Wilderom, 2015). Therefore, looking towards the group might help the leader to be perceived as more successful and to gain trust, which might make meetings more effective (DePaulo & Friedman, 1998; Miller, 1981). Smiling while agreeing might also be important as it helps the leader to be friendlier and might make as a further consequence also a meeting more successful (Edinger & Patterson, 1983; Keating et al., 1981). Upward palms while agreeing could be helpful for the leader as he/she gains trust through it, which is important while agreeing and which might lead to higher effectiveness (Kendon, 2004)

2.5.2.3 Being friendly

Leader should create an open a friendly environment where participants feel confident. By doing so the leaders encourage the employees to get a deeper understanding of what their tasks and visions are (Berson & Avolio, 2004). Therefore, gazing might help the leader as this invite others to speak up and to further create an open climate (Darioly & Schmid-Mast, 2013). This might be helpful and could increase meeting effectiveness. Upward palms communicate trust and confidence, and this is important for an open climate (Kendon, 2004). This might help the leader to be more effective and might make meetings more successful. While showing sympathy smiling might be important as it makes the leader friendlier and supportive (Edinger & Patterson, 1983; Keating et al., 1981). This might lead to higher effectiveness.

2.5.2.4 Providing positive feedback

MacKenzie, Podsakoff, and Rich (2001) found out that leaders using positive feedback can influence the performance of the employees positively. In this part the leader evaluates and rewards the behavior of the followers. Here it might be important that the feedback is of course critical, but he/she needs to say it in a friendly way in order not to intimidate the participants. Gazing towards while giving the feedback show interest and leaders are perceived as more effective which might have an influence on the meeting effectiveness (Darioly-Schmid-Mast, 2013). Smiling could help to be friendly and shows sympathy. The research of Gaddis, Connelly, and Mumford (2004) found out that employees performed better on tasks if the leader delivered positive feedback with a smile after failure feedback. Showing upward palms while giving positive feedback might make meetings more effective as the leader gains trust and is also perceived as more effective (Kendon, 2004).

2.5.2.5 Encouraging

According to Avolio and Bass (1995) leaders should encourage their followers to be creative and think about complex problems. Through encouraging, follower start to behave in ways which can improve their performance (Piccolo & Colquitt, 2006). Here it might be important that there is not only an open environment but also a good atmosphere. Therefore, looking towards the group, but also humor is highly important during a meeting. Smiling might have an influence as it might help the leader to be friendly (Darioly & Schmid-Mast, 2013; Robert & Yan, 2005). Upward palms might be helpful as the leader gains trust and this might make meetings more efficient (Kendon, 2004).

2.5.2.6 Showing personal interests

Hereby, the leader should have interests for the employees as individuals to understand the followers' skills and needs and further provide them with customized coaching (Wang & Howell, 2010). Therefore, looking towards might be highly important as it gives the employees the feeling that the leader is listening carefully to their situation and might make meetings more successful (DePaulo & Friedman (1998). Smiling helps to build up interpersonal work relationships, which is also important for this part (Darioly & Schmid-Mast, 2013). Upward palms might also help to gain more trust which can help the employees to speak up. (Darioly & Schmid-Mast, 2013).

In sum it can be said that if a leader is using NVB while stimulating the employees to be creative and innovative, which is defined as relation-oriented behavior might have a positive influence on meeting effectiveness (Avolio & Bass, 1995). Hence, hypotheses 3:

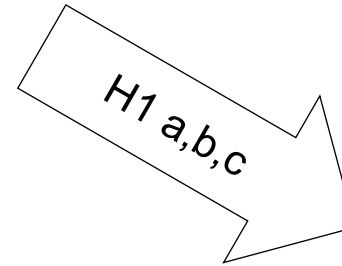
H3a: If a leader shows more looking towards to group during relation-oriented behavior, this meeting is perceived as more effective.

H3b: If a leader shows more open smile during relation-oriented behavior, this meeting is perceived as more effective.

H3c: If a leader shows more upward palms during relation-oriented behavior, this meeting is perceived as more effective.

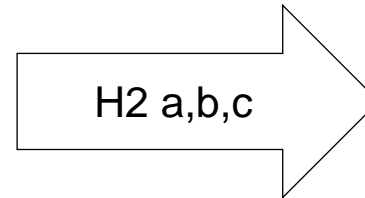
NVB independently

- Looking towards the group
- Open smile
- Upward palms



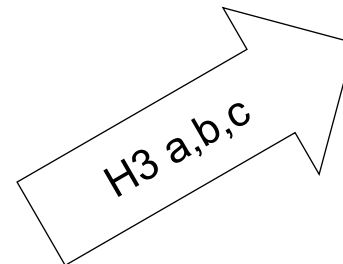
NVB during task-oriented behavior

- Looking towards the group
- Open smile
- Upward palms



NVB during relation-oriented behavior

- Looking towards the group
- Open smile
- Upward palms



Meeting Effectiveness

2.6 Research design

To answer the research-question, a quantitative study was set up. It is based on a cross-sectional design with two different data sources; (1) a survey, which is measuring the followers' perception of the meeting effectiveness and (2) a systematic video-based coding to quantify the NVB and verbal behavior of the leaders during their staff meeting.

2.6.1 Sampling

All the 44 team leaders are working in one large public organization in the Netherlands. The leaders were called by telephone by one of the researchers. All leaders were also invited to attend a voluntary information meeting regarding the video-observation method and procedure. Three cameras were positioned at fixed places and all the participants were recorded during the meetings. To reduce obtrusiveness, no video-technicians were present during the meetings. Before starting with the coding, the coders were trained in using pre-developed codebook and the video observation software from Noldus Information Technology, the "Observer XT" (Noldus, Trienes, Hendriksen, Jansen, & Jansen, 2000)

2.6.2 Respondents

All the data (observational and survey) were collected from 44 leaders and 488 followers. In this study only 439 followers will be considered as those followers filled out the survey completely. 34 leaders were male; 10 leaders were female, and they had an average age of 50.45. Over 40% of the leaders were educated on a higher level (Master's or Bachelor's degree). 296 of the followers were male, 143 of the followers were female, they had an average age of 49.53. About 20 % of the followers obtained a Master's or Bachelor's degree.

2.6.3 Measures

Overall Meeting Effectiveness. Overall meeting effectiveness has been assessed by using three specific questions about meetings which had to be answered by the followers directly after the meeting. These questions are also based on research by Baran, Shanock, Rogelberg, and Scott (2012) and Nixon & Littlepage (1992). The questions were: (1) "*The meetings are a more satisfying experience than a frustrating one*", (2) "*Overall, our meetings are productive*" and (3) "*The meetings I attend are*

worth my time” and ranged from 1 (“I strongly disagree”) to 7 (“I strongly agree”). The whole questionnaire is available upon request. The Cronbach’s alpha is .89.

Non-verbal behavior. This study focused on three different non-verbal behaviors the leaders were displaying during their staff meeting. These behaviors were, *looking towards to group*, *open smile* and *upward palms*. To gain reliable results a specific coding scheme was developed, which can be send upon request. Both the duration and the frequency of these behaviors were being measured by two different coders in the video lab of the University of Twente. Beforehand the coders got a detailed instruction on how to code each behavior and how to use the coding scheme. All three non-verbal behaviors were coded as a start-stop behavior in the software program “The Observer XT”. This means that the coders started coding when the leader started showing specific NVB and stopped coding when he/she stopped showing the NVB. During the coding process the sound was switched off in order to focus merely on the NVB. The results of both independent coders were later compared for reliability. The Inter-rater reliability from all videos was above 80% and Cohen’s Kappa was continuously above .80.

Verbal behavior. Also, for the verbal behaviors a specific coding scheme was developed with specifications and descriptions of the verbal behaviors. For measuring the verbal behavior, the same procedure like for NVB was used (Hoogeboom & Wilderom, 2015).

Control variables. Age and gender were chosen as control variables as the research from Avolio and Bass (1995) and the research from Liden, Stilwell, and Ferris (1996) found out that these aspects could influence leader effectiveness and therefore might also influence meeting effectiveness.

2.6.4 Data analysis

For all analyses we used SPSS version 24 and a standard alpha of .05 was handled. To analyze how meeting effectiveness is associated with leaders’ verbal and non-verbal behavior three models of non-verbal behavior (general, relation oriented and task oriented) are evaluated via hierarchical regression analysis to a control model (age and gender). To check for the applicability of hierarchical regression analyses possible multicollinearity between the predictors was checked via variance inflation factor (VIF). The ranges of VIF are for model 1 [1.16; 1.21], for model 2 [1.05; 1.18] and for model 3

[1.10; 1.37]. Within the complete model three variables were excluded due to reached limit of 0.00 tolerance of collinearity diagnostics. The VIF of the remaining six predictors ranged from [1.21; 2.51].

3 Results

3.1 Correlation

As it can be seen in Table 1, the NVB variables, in isolation and during relation- and task-oriented behavior are displayed.

For hypothesis 1, if a leader shows more looking towards to group, open smile and upward palms the correlation testing showed a positive trend only between meeting effectiveness and looking towards the group on a significance level of $p < .10$ ($r = .248$, $p < .10$).

For hypothesis 2 we determined whether NVB (looking towards the group, open smile and upward palms) during task-oriented behavior has an influence on meeting effectiveness. Correlation testing showed a positive trend just between meeting effectiveness looking towards the group on a significance level of $p < .10$ too ($r = .224$, $p < .10$).

In case of Hypothesis 3, which is about NVB (looking towards the group, open smile and upward palms) during relation-oriented behavior and how these aspects influence meeting effectiveness, correlation testing showed again a positive correlation only between meeting effectiveness and looking towards the group on a significance level of $p < .10$ ($r = .231$, $p < .10$).

Age showed a negative correlation with independent upward palms ($r = -.356$, $p < .01$) and task-oriented upward palms ($r = -.367$, $p < .01$) but also for independent open smile ($r = -.299$, $p < .05$), which is an interesting point. It seems that the older leaders are using less upward palms gestures and showing fewer open smiles.

Table 1

| | | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | | | |
|----|---------------------------------------|-------|------|-----------------------|------|------|-------------------|---------------------|--------------------|--------------------|---------------------|--------------------|-------------------|--------------------|-------|--------------------|---------------------|
| 1 | Meeting Effectiveness | 4.78 | 0.55 | | | | | | | | | | | | | | |
| 2 | NVB independent of verbal behavior | | | Upward palms | 0.03 | 0.04 | .131 | | | | | | | | | | |
| 3 | | | | Looking towards group | 0.76 | 0.15 | .248 ⁺ | .347 ^{**} | | | | | | | | | |
| 4 | | | | Open smile | 0.07 | 0.06 | -.058 | .085 | -.003 | | | | | | | | |
| 5 | NVB during task-oriented behavior | | | Upward palms | 0.03 | 0.04 | .032 | .776 ^{**} | .376 ^{**} | .248 ⁺ | | | | | | | |
| 6 | | | | Looking towards group | 0.75 | 0.15 | .224 ⁺ | .383 ^{**} | .911 ^{**} | .031 | .414 ^{**} | | | | | | |
| 7 | | | | Open smile | 0.01 | 0.02 | -.119 | .100 | .069 | .387 ^{**} | .149 | -.011 | | | | | |
| 8 | NVB during relation-oriented behavior | | | Upward palms | 0.03 | 0.05 | .169 | .892 ^{**} | .234 ⁺ | -.057 | .406 ^{**} | .260 ⁺ | .038 | | | | |
| 9 | | | | Looking towards group | 0.77 | 0.18 | .231 ⁺ | .268 ⁺ | .936 ^{**} | -.029 | .292 ⁺ | .707 ^{**} | .128 | .18 | | | |
| 10 | | | | Open smile | 0.12 | 0.12 | -.032 | .072 | -.008 | .989 ^{**} | .237 ⁺ | .043 | .246 ⁺ | -.066 | -.051 | | |
| 11 | Age (mean) | 49.61 | 9.81 | | | | -.019 | -.356 ^{**} | -.111 | -.299 ⁺ | -.367 ^{**} | -.083 | -.182 | -.252 ⁺ | -.126 | -.270 ⁺ | |
| 12 | Gender | 1.32 | 0.47 | | | | .047 | .141 | .053 | .304 ⁺ | .154 | .095 | .269 ⁺ | .092 | .011 | .269 ⁺ | -.272 ^{**} |

Note: * p < .05, ** p < .01, + p < .10, meeting effectiveness was measured on a 7-point Likert-Scale, Gender was coded as 1 = male, 2 = female.

3.2 Hierarchical regression analyses

Hierarchical regression was used to test whether NVB has an influence on meeting effectiveness and further to test whether NVB during task-oriented and relation-oriented behavior influences the effectiveness of meetings. The NVB were clustered as previous research found out that clustering different NVB cues might be useful to better understand their interactions and combinations in order to get more insight about their effects (Darioly & Mast, 2013).

The hierarchical regression analyses each compare the predictive value of the NVBs, verbal behaviors and the combination of NVBs and verbal behavior on meeting effectiveness (Table 2). All hypotheses are rejected, because there was no significant outcome.

First, the relationship between NVB and meeting effectiveness was determined. To test hypothesis 1, which states that if a leader shows more [a] looking towards the group, [b] open smile and [c] upward palms during a meeting, this meeting is perceived as more effective, a model consisting of control variables and NVB variables was developed and tested via hierarchical regression analysis. The NV cues were clustered because it can be seen how they affect meeting effectiveness as a whole. This has the advantage that it can be explained how they perform together. As it can be seen in Table 2, hypothesis 1 could not be confirmed ($\beta_a = .030$, $\beta_b = .025$, $\beta_c = -.148$, $p = .373$).

To test whether NVB during task-oriented behavior has an influence on meeting effectiveness, as proposed in hypothesis 2, a second model was developed consisting of control variables and NVB variables during task-oriented behavior. The hierarchical regression analysis did not show any significant outcome and must be also rejected ($\beta_a = .210$, $\beta_b = -.097$, $\beta_c = .105$, $p = .377$).

The same procedure was used to test hypothesis 3, namely whether NVB during relation-oriented behavior has an influence on meeting effectiveness. Therefore, a third model, consisting of control variables and NVB variables during relation-oriented behavior was developed. There was also no significant outcome, hypothesis 3 must be rejected too ($\beta_a = .243$, $\beta_b = -.187$, $\beta_c = -.099$, $p = .317$).

Model 4 consists of all variables, controls, NVB variables, NVB variables during task-oriented behaviors [x_{task}] and NVB variables during relation-oriented behavior [x_{rela}]. It must be noted that some NVB variables were excluded due to reached limit of 0.00 tolerance of collinearity diagnostics ($\beta_{a_{task}} = .057$, $\beta_{b_{task}} = -.211$, $\beta_{c_{task}} = -.159$, $\beta_{a_{rela}} = .244$, $\beta_{b_{rela}} = -.027$, $\beta_{c_{rela}} = .164$, $p = .452$). Due to this it was decided to make three times a regression analysis where the author tested the relation between the independent non-verbal variables on their own and meeting effectiveness. But they were also not statistically

significant. Results can be seen in Table 3. First, it was tested if looking towards the group has an influence on meeting effectiveness, but this was not statically significant ($\beta_a = .297$, $p = .060$). Second, also not a significant outcome, if open smile influences the effectiveness of meetings ($\beta_b = -.017$, $p = .921$). Last it was tested if upward palms have a positive influence on meeting effectiveness, but this is also not statically significant ($\beta_c = .170$, $p = .319$).

Table 2: Hierarchical regression analysis explaining meeting effectiveness by NVB models, compared to a control model

| | meeting effectiveness | | | | meeting effectiveness | | | | meeting effectiveness | | | | meeting effectiveness | | | | meeting effectiveness+ | | | |
|---------------------------------------|-----------------------|------------|------|-------|-----------------------|------------|-------|-------|-----------------------|------------|-------|-------|-----------------------|------------|-------|-------|------------------------|------------|-------|-------|
| | B | SEB | t | p | B | SEB | t | p | B | SEB | t | p | B | SEB | t | p | B | SEB | t | p |
| Age (mean) | 0.00 | 0.02 | 0.11 | 0.917 | -0.01 | 0.02 | -0.35 | 0.725 | -0.01 | 0.02 | -0.29 | 0.774 | -0.01 | 0.02 | -0.41 | 0.681 | -0.02 | 0.03 | -0.61 | 0.548 |
| Gender | 0.38 | 0.23 | 1.67 | 0.103 | 0.38 | 0.23 | 1.64 | 0.108 | 0.37 | 0.23 | 1.59 | 0.120 | 0.40 | 0.23 | 1.71 | 0.095 | 0.42 | 0.24 | 1.75 | 0.090 |
| NVB | | | | | | | | | | | | | | | | | | | | |
| | | | | | 0.90 | 0.64 | 1.41 | 0.167 | | | | | | | | | | | | |
| | | | | | -1.37 | 1.10 | -0.91 | 0.366 | | | | | | | | | | | | |
| | | | | | 0.42 | 2.73 | 0.15 | 0.880 | | | | | | | | | | | | |
| NVB during task-oriented behavior | | | | | | | | | 0.70 | 0.51 | 1.37 | 0.180 | | | | | 0.81 | 0.74 | 1.10 | 0.280 |
| | | | | | | | | | -0.47 | 0.78 | -0.60 | 0.550 | | | | | -0.13 | 0.83 | -0.16 | 0.873 |
| | | | | | | | | | 1.28 | 1.89 | 0.68 | 0.500 | | | | | 2.00 | 2.10 | 0.95 | 0.347 |
| NVB during relation-oriented behavior | | | | | | | | | | | | | 0.95 | 0.68 | 1.40 | 0.171 | 0.22 | 0.93 | 0.24 | 0.811 |
| | | | | | | | | | | | | | -5.63 | 4.72 | -1.19 | 0.241 | -6.64 | 4.98 | -1.33 | 0.191 |
| | | | | | | | | | | | | | -1.68 | 2.98 | -0.56 | 0.567 | -2.70 | 3.31 | 0.82 | 0.420 |
| | ΔR^2 | ΔF | df | p | ΔR^2 | ΔF | df | p | ΔR^2 | ΔF | df | p | ΔR^2 | ΔF | df | p | ΔR^2 | ΔF | df | p |
| | 0.067 | 1.47 | 2/41 | 0.241 | 0.073 | 1.07 | 3/38 | 0.373 | 0.072 | 1.06 | 3/38 | 0.377 | 0.082 | 1.22 | 3/38 | 0.317 | 0.134 | 0.98 | 6/35 | 0.452 |

Note. + NVBs were excluded due to reached limit of 0.00 tolerance of collinearity diagnostics.

Table 3: Hierarchical regression analysis explaining meeting effectiveness by NVB independently

| | | meeting effectiveness | | | | meeting effectiveness | | | | meeting effectiveness | | | |
|------------|---------------------------|-----------------------|------------|--------|-------|-----------------------|------------|--------|-------|-----------------------|------------|--------|-------|
| | | B | SEB | t | p | B | SEB | t | p | B | SEB | t | p |
| Age (mean) | | 0.02 | 0.14 | 0.83 | 0.41 | 0.01 | 0.10 | 0.56 | 0.58 | 0.02 | 0.17 | 0.90 | 0.37 |
| Gender | | 0.14 | 0.05 | 0.31 | 0.76 | 0.15 | 0.06 | 0.31 | 0.76 | 0.15 | 0.06 | 0.32 | 0.75 |
| NVB | [a] Looking towards group | 2.19 | 0.30 | 1.94 | 0.06 | | | | | | | | |
| NVB | [b] Open smile | | | | | -0.30 | -0.02 | -0.10 | 0.92 | | | | |
| NVB | [c] Upward palms | | | | | | | | | 5.45 | 0.17 | 1.01 | 0.32 |
| | | ΔR^2 | ΔF | df | p | ΔR^2 | ΔF | df | p | ΔR^2 | ΔF | df | p |
| | | 0.096 | 1.381 | 3 / 39 | 0.263 | 0.096 | 0.121 | 3 / 39 | 0.947 | 0.185 | 0.460 | 3 / 39 | 0.712 |

4 Discussion

Meetings are essential for organizations to achieve their goals; leaders are able to increase effectiveness of those meetings by behaving in a certain way (Lehmann-Willenbrock et al., 2013; Poel et al., 2008).

There is already a lot known about leadership effectiveness and how NVB and verbal behavior could help leaders to be more effective and to make further meetings more successful. But there is still a missing gap on how and which cues of NVB could enhance meeting effectiveness and much less if a combination of NVB and verbal behavior could make meetings more efficient. Yet, because leadership behavior is important for meeting effectiveness, studies should indicate which specific behavior a leader should display to make meetings more efficient. In the present study 44 staff meetings were recorded on video in a large public organization in the Netherlands. The focus of this study was to identify effective task-oriented, relation-oriented and non-verbal behaviors of the leaders, both in isolation and simultaneously, which might enhance perceived meeting effectiveness. This research is guided by the following research question: How can a leader use his or her non-verbal behaviors during task- and relation- oriented behavior to enhance meeting effectiveness?

In the first analysis it was examined whether [a] looking towards to group, [b] open smile and [c] upward palms have an influence on meeting effectiveness. The hypothesis that they correlate positively was not confirmed. It seems that these NV cues a leader displayed during a meeting, do not have an impact on meeting effectiveness. This contradicts with previous researches, which stated that leaders who are gazing their followers or smiling and using hand gestures are perceived as effective leaders and could further make meetings more efficient (Darioly & Mast, 2013; Edinger & Patterson, 1983; Keating et al., 1981; Nixon & Littlepage, 1992; L. Talley & Temple, 2015). But it could be that those NV cues are more related to leadership effectiveness and less on meeting effectiveness. However, correlation testing showed a positive trend for looking towards the group on meeting effectiveness on a significance level of $p < .10$. It seems that looking towards the group is helpful during a meeting, the employees might feel included and involved and this might lead to higher effectiveness of meetings. Anyway, the fact that it is not statistically significant lead to the believe that clustering various categories of NVB might not be handy. It seems that they are not complementary enough. This would also match with a more recent study that focused just on specific types of gestures (L. Talley & Temple, 2015). Knapp et al. (2013) divided NVB into different categories: eye gaze or behavior (i.e., looking towards

group, looking away from group and functional looking behavior), facial expressions (i.e., open smile, closed smile or lip corners down), touching behavior (i.e., self-touch or object touch) and (hand) gestures (i.e., open palms, upward palms, downward palms). Maybe it would be more helpful to specify just on one type of NVB rather than different categories or take all cues into account, instead of picking just one. For example, if somebody would like to find out if gaze is helpful for meeting effectiveness it might be useful to take all cues from the category gaze into account. This might give stronger results.

Correlation testing with age showed that the older the leader is, the less upward palms and open smile he/she is using. This is an interesting point. It might be the case that older leaders are not aware of their NVB or maybe they are not trained in NVB. It was stated that leader interpersonal skill training might be very useful to make leaders aware of their NVB, and organizations should be interested in such kind of training as it possibly increases leadership effectiveness and further maybe also meeting effectiveness (Darioly & Mast, 2013).

Secondly, it was hypothesized that [a] looking towards to group, [b] open smile and [c] upward palms during task-oriented behavior enhance meeting effectiveness. This hypothesis was not confirmed either. Unfortunately, there is not much known about this specific combination of NVB and task-oriented behavior. In general, there are a lot of studies who are focusing either on NVB or task-oriented behavior, but not in combination. However, for example the research of Nixon and Littlepage (1992) showed that especially a task-oriented focus is positively related to meeting effectiveness. As stated above also NVB might enhance meeting effectiveness which led to the not verifiable assumption that a combination would lead to even better results, which was unfortunately not clearly identifiable in this study. Bonaccio et al. (2016) stated that researching on NVB is extremely complex and there need to be a lot of factors taken into account. The same goes out for task-oriented behavior, so a combination might make it even more complex. It could be that this combination was too complex and therefore did not result significantly. Anyway, also for this hypothesis there was a positive trend for looking towards the group on meeting effectiveness on a significance level of $p < .10$, which led to the believe that NVB during task-oriented behavior might be useful under certain conditions. It could be that the variables for task-oriented behavior (i.e., clarifying, task-monitoring, enforcing, structuring, and providing direction) are more related to leadership effectiveness rather than meeting effectiveness. For instance, the research from Cohen et al. (2011) demonstrated that specific meeting design characteristics, like temporal characteristics, physical characteristics procedural, and attendee characteristics, which were not all considered in this study are related to higher meeting effectiveness.

The last hypothesis assumed that [a] looking towards to group, [b] open smile and [c] upward palms during relation-oriented behavior enhance meeting effectiveness. This hypothesis was not statistically significant and must be rejected too. A reason, why there are no significant effects could be that relation-oriented behavior is also quite complex and therefore a combination might not be useful as thought. It might be that also relation-oriented behavior is more related to leader effectiveness like for task-oriented behavior and that more meeting related variables are needed.

4.1 Limitations and Future research

Despite the fact that it was tried to avoid disadvantages and potential problems this study has some limitations. The first limitation is the small sample size. In this research only 44 meetings were recorded and coded. Also, the fact that there was just one meeting per leader is a limitation. For future research it is recommended to use a higher sample size and to record meetings several times in order to get better results.

Another limitation is that it seems that there are some meeting related variables missing, which might lead to more meaningful results, for instance preparation or planning. Yukl stated in his article from 2012 that leaders who have a good planning and preparation are perceived as more effective. This is also in line with the study from Behrendt et al. (2017) who stated that the planning is an essential instrument to achieve certain goals. Also, the study of Leach et al. (2009) highlighted that planning is important for meeting effectiveness as meeting effectiveness will be improved for example by using an agenda and if the meeting starts and ends on time. It could be that the codebook that was used for this study is more related to leader effectiveness. For future research the author recommends including more meeting related variables into the codebook to get better results.

As stated above, both NVB and verbal behavior are extremely complex. Before researching on how a combination could enhance meeting effectiveness it might be a better idea to do a further research on how NVB or verbal behavior could enhance meeting effectiveness independently. There is still a lot unknown about what kind of NVB and what combinations of NVB categories are helpful or what kind of verbal behaviors are needed for effective meetings. Also, it is not clear yet, what exactly make meetings more effective, which role micro behaviors are playing and what variables are crucial during verbal behavior. This might give more in-depth understanding about these complex behaviors. If there will be further research on those behaviors and if there are more information about what exactly makes meetings sufficient or not, researching on a combination might give even more helpful results.

What might also give better or more objective results is including NVB experts, which attend the meeting and fill out the survey too. In this study, only the followers filled out the survey. It could be that some surveys are not objective enough, for instance if the leader has not a good relationship with his/her followers, they might grade him/her as bad anyway. To counteract this experts rating might be useful.

4.2 Scientific and Practical implications

Various studies underline the importance of NVB and verbal behavior on meeting effectiveness. Bonaccio et al. (2016) argued that management scholars could need more understanding about NVB. But there is still a gap between those forms of behavior and how they are related to meeting effectiveness. Therefore, further research on this interesting but complex topic is needed in order to get more in-depth information.

Also, organizations could benefit from researching on leadership behavior. They need effective leaders in order to stay ahead and to reach their goals (Darioly & Mast, 2013). Therefore, organizations need to implement NVB training. It is already known that NVB training is useful and could make leaders more successful, but there is still a lot unknown about which kind of NVB or verbal behavior is useful and in which context. Organizations need to know for their trainings which NVB cues are useful and which cues are negatively related. So further studies would deliver useful results which can be implemented in NVB and verbal behavior training and might help organizations to be more successful.

5 Conclusion

In conclusion, the hierarchical regression analysis did not provide any statistical evidence for a significant relation between NVB independently and a combination with NVB, task-oriented behavior and relation-oriented behavior. However, correlation analysis showed that there are trends which are related to meeting effectiveness; in all three categories, independent, task-oriented and relation-oriented, looking towards the group was significant on a $p < .10$ level. Although this was not confirmed in this study, examining specific leader NVB and verbal behavior is an interesting field and important for organizations to make meetings more efficient in order to reach their goals. Because of that fact additional research on NVB and verbal behavior is needed.

Reference List

- Avolio, B. J., & Bass, B. M. (1995). Individual consideration viewed at multiple levels of analysis: A multi-level framework for examining the diffusion of transformational leadership. *The Leadership Quarterly*, *6*(2), 199-218. doi:[10.1016/1048-9843\(95\)90035-7](https://doi.org/10.1016/1048-9843(95)90035-7)
- Baran, B. E., Shanock, L. R., Rogelberg, S. G., & Scott, C. W. (2012). Leading Group Meetings: Supervisors' Actions, Employee Behaviors, and Upward Perceptions. *Small Group Research*, *43*(3), 330-355. doi:[10.1177/1046496411418252](https://doi.org/10.1177/1046496411418252)
- Behrendt, P., Matz, S., & Göritz, A. S. (2017). An integrative model of leadership behavior. *The Leadership Quarterly*, *28*(1), 229-244.
- Berson, Y., & Avolio, B. J. (2004). Transformational leadership and the dissemination of organizational goals: A case study of a telecommunication firm. *The Leadership Quarterly*, *15*(5), 625-646.
- Bonaccio, S., O'Reilly, J., O'Sullivan, S. L., & Chiochio, F. (2016). Nonverbal behavior and communication in the workplace: A review and an agenda for research. *Journal of Management*, *42*(5), 1044-1074.
- Cohen, M. A., Rogelberg, S. G., Allen, J. A., & Luong, A. (2011). Meeting design characteristics and attendee perceptions of staff/team meeting quality. *Group Dynamics: Theory, Research, and Practice*, *15*(1), 90.
- Darioly, A., & Mast, M. S. (2013). The role of nonverbal behavior in leadership. *Leader interpersonal and influence skills: The soft skills of leadership*, 73.
- DePaulo, B. M., & Friedman, H. S. (1998). Nonverbal communication.
- Edinger, J. A., & Patterson, M. L. (1983). Nonverbal involvement and social control. *Psychological Bulletin*, *93*(1), 30.
- Forbes, R. J., & Jackson, P. R. (1980). Non-verbal behaviour and the outcome of selection interviews. *Journal of Occupational Psychology*, *53*(1), 65-72.

- Gaddis, B., Connelly, S., & Mumford, M. D. (2004). Failure feedback as an affective event: Influences of leader affect on subordinate attitudes and performance. *The Leadership Quarterly*, 15(5), 663-686.
- Griffin, R. W. (1979). Task design determinants of effective leader behavior. *Academy of Management Review*, 4(2), 215-224.
- Guéguen, N., & Fischer-Lokou, J. (2004). Hitchhikers' smiles and receipt of help. *Psychological reports*, 94(3), 756-760.
- Hoogeboom, M., & Wilderom, C. P. (2015). *Effective leader behaviors in regularly held staff meetings: Surveyed vs. Videotaped and Video-Coded Observations*. Paper presented at the The Cambridge handbook of meeting science.
- Jackob, N., Roessing, T., & Petersen, T. (2011). The effects of verbal and nonverbal elements in persuasive communication: Findings from two multi-method experiments. In: Walter de Gruyter GmbH & Co. KG.
- Kaiser, R. B., Hogan, R., & Craig, S. B. (2008). Leadership and the fate of organizations. *American Psychologist*, 63(2), 96.
- Keating, C. F., Mazur, A., Segall, M. H., Cysneiros, P. G., Kilbride, J. E., Leahy, P., . . . Wirsing, R. (1981). Culture and the perception of social dominance from facial expression. *Journal of personality and social psychology*, 40(4), 615.
- Kendon, A. (2004). *Gesture: Visible action as utterance*: Cambridge University Press.
- Knapp, M. L., Hall, J. A., & Horgan, T. G. (2013). *Nonverbal communication in human interaction*: Cengage Learning.
- Kraus, S. J. (1995). Attitudes and the prediction of behavior: A meta-analysis of the empirical literature. *Personality and social psychology bulletin*, 21(1), 58-75.
- Leach, D. J., Rogelberg, S. G., Warr, P. B., & Burnfield, J. L. (2009). Perceived Meeting Effectiveness: The Role of Design Characteristics. *Journal of Business and Psychology*, 24(1), 65-76.
doi:[10.1007/s10869-009-9092-6](https://doi.org/10.1007/s10869-009-9092-6)

- Lehmann-Willenbrock, N., Allen, J. A., & Kauffeld, S. (2013). A sequential analysis of procedural meeting communication: How teams facilitate their meetings. *Journal of Applied Communication Research, 41*(4), 365-388.
- Liden, R. C., Stilwell, D., & Ferris, G. R. (1996). The effects of supervisor and subordinate age on objective performance and subjective performance ratings. *Human Relations, 49*(3), 327-347.
- MacKenzie, S. B., Podsakoff, P. M., & Rich, G. A. (2001). Transformational and transactional leadership and salesperson performance. *Journal of the academy of Marketing Science, 29*(2), 115.
- Martin, S. L., Liao, H., & Campbell, E. M. (2013). Directive versus empowering leadership: A field experiment comparing impacts on task proficiency and proactivity. *Academy of Management Journal, 56*(5), 1372-1395.
- McGough, E. (1974). *Your silent language: William Morrow.*
- Miller, P. W. (1988). *Nonverbal Communication. What Research Says to the Teacher:* ERIC.
- Myrsiades, L. (2000). Meeting sabotage: Met and conquered. *Journal of Management Development, 19*(10), 870-885.
- Nixon, C. T., & Littlepage, G. E. (1992). Impact of meeting procedures on meeting effectiveness. *Journal of Business and Psychology, 6*(3), 361-369.
- Noldus, L. P., Trienes, R. J., Hendriksen, A. H., Jansen, H., & Jansen, R. G. (2000). The Observer Video-Pro: new software for the collection, management, and presentation of time-structured data from videotapes and digital media files. *Behavior Research Methods, Instruments, & Computers, 32*(1), 197-206.
- Otta, E., Lira, B. B. P., Delevati, N. M., Cesar, O. P., & Pires, C. S. G. (1994). The effect of smiling and of head tilting on person perception. *The Journal of psychology, 128*(3), 323-331.
- Phutela, D. (2015). The importance of non-verbal communication. *IUP Journal of Soft Skills, 9*(4), 43.
- Piccolo, R. F., & Colquitt, J. A. (2006). Transformational leadership and job behaviors: The mediating role of core job characteristics. *Academy of Management Journal, 49*(2), 327-340.

- Poel, M., Poppe, R., & Nijholt, A. (2008). *Meeting behavior detection in smart environments: Nonverbal cues that help to obtain natural interaction*. Paper presented at the Automatic Face & Gesture Recognition, 2008. FG'08. 8th IEEE International Conference on.
- Priest, R. F., & Swain, J. E. (2002). Humor and its implications for leadership effectiveness. *Humor, 15*(2), 169-190.
- Remland, M., Jacobson, C., & Jones, T. (1983). Effects of psychological gender and sex-incongruent behavior on evaluations of leadership. *Perceptual and Motor Skills, 57*(3), 783-789.
- Robert, C., & Yan, W. (2005). *Why would a duck walk into a bar*. Paper presented at the A theoretical examination of humor and culture in organizations, Academy of Management Best Conference Paper (Organizational Behavior Division), Honolulu.
- Rogelberg, S. G., Leach, D. J., Warr, P. B., & Burnfield, J. L. (2006). "Not another meeting!" Are meeting time demands related to employee well-being? *Journal of Applied Psychology, 91*(1), 83.
- Rogelberg, S. G., Shanock, L. R., & Scott, C. W. (2012). Wasted time and money in meetings: Increasing return on investment. *Small Group Research, 43*(2), 236-245.
- Schell, A. (2010). Meeting-Kultur in europäischen Unternehmen: Ad-hoc-Umfrage unter Mitarbeitern und Führungskräften, die regelmäßig an Business-Meetings teilnehmen [European business meeting culture: An ad-hoc survey of employees and managers who regularly participate in business meetings]. *Munich: Schell Marketing Consulting*.
- Schwartzman, H. B. (1986). The meeting as a neglected social form in organizational studies. *Research in organizational behavior*.
- Skinner, B. (1957). Century psychology series. Verbal behavior. East Norwalk, CT, US: Appleton-Century-Crofts. In.
- Talley, L., & Temple, S. (2015). How leaders influence followers through the use of nonverbal communication. *Leadership & Organization Development Journal, 36*(1), 69-80.
- Talley, L. L. (2012). *Influence of Leader Hand Gestures on the Perception of Nonverbal Immediacy*. Walden University,

- Tjosvold, D. (1984). Effects of leader warmth and directiveness on subordinate performance on a subsequent task. *Journal of Applied Psychology, 69*(3), 422.
- Wang, X.-H. F., & Howell, J. M. (2010). Exploring the dual-level effects of transformational leadership on followers. *Journal of Applied Psychology, 95*(6), 1134.
- Yukl, G. (2008). How leaders influence organizational effectiveness. *The Leadership Quarterly, 19*(6), 708-722.
- Yukl, G. (2012). Effective leadership behavior: What we know and what questions need more attention. *Academy of Management Perspectives, 26*(4), 66-85.
- Yukl, G., Gordon, A., & Taber, T. (2002). A hierarchical taxonomy of leadership behavior: Integrating a half century of behavior research. *Journal of Leadership & Organizational Studies, 9*(1), 15-32.

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Appendix B Demonstrating NVB cues



Figure 1: Looking towards the group



Figure 3: Open smile

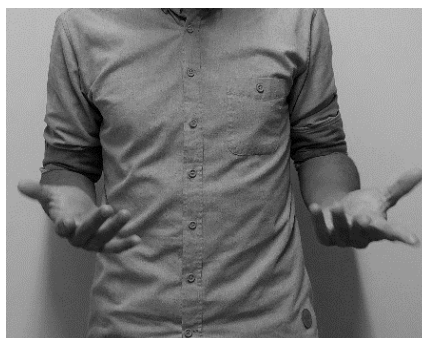


Figure 2: Upward palms