VERBAL BEHAVIORS IN MOMENTS OF CONFLICT: A MIXED-METHOD STUDY OF DIFFERENT MEETINGS IN EFFECTIVE MONO- AND MULTICULTURAL AGILE TEAMS

Author: Kieran Buis
University of Twente
P.O. Box 217, 7500AE Enschede
The Netherlands

ABSTRACT
The adoption of the agile way of working has gained widespread popularity in organizations, accompanied by an increasing emphasis on multicultural teams to enhance creativity and decision-making quality. However, there is conflicting evidence regarding communication challenges and heightened conflicts within multicultural teams. Moreover, the role of conflicts concerning the effectiveness of team meetings remains unclear. Thus, the objective of this thesis is to examine and compare conflicts and their associated behaviors during effective team meetings in mono-and-multicultural agile teams. This study involved the investigation of five multicultural and three monocultural teams during both Planning and Retrospective meetings within the same Sprint. The research employed a mixed-method approach, combining quantitative and qualitative analyses of 8 video recordings. Monocultural teams exhibited more conflicts than multicultural teams, however, the frequency of Process conflicts was higher in the multicultural teams. Regardless of cultural differences, the results of this study revealed a higher frequency of conflicts in effective team meetings. Effective team meetings predominantly featured Task conflicts, with comparatively lower frequencies of Process and Relationship conflicts. In contrast, ineffective team meetings demonstrated similar frequencies of Task and Process conflicts, alongside a lower occurrence of relationship conflicts. This thesis contributes to the literature on agile, conflict, meeting effectiveness, and cultural differences by identifying conflicts in real agile team meetings, utilizing video recordings for observation and analysis, examining both mono- and multicultural teams, and exploring the impact of conflict on meeting effectiveness. Furthermore, This thesis provides practical implications for organizations implementing agile teams, specifically those with cultural diversity, by offering insights into the relationship between conflict occurrence, meeting effectiveness, and the need for improved conflict management skills and strategies to enhance communication, collaboration, and overall team productivity

Graduation Committee members:
Dr. Lara Carminati
Dr. Pauline Weritz

Keywords: Agile teams, Conflict, Effective, Ineffective, Meetings, Monocultural, Multicultural, Verbal behaviors

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution, and reproduction in any medium, provided the original work is properly cited.

CC-BY-NC

1. INTRODUCTION

Many organizations have undergone an agile transformation over the last couple of years (Junker et al., 2021). The agile way of working introduces flexibility and short-term planning and was initially developed to facilitate change in organizations (Fowler & Highsmith, 2001). Agile teams are characterized as self-managing and cross-disciplinary teams (Junker et al., 2021). This means that individuals and teams have more control and responsibility over their work. Agile teams' benefits encompass more team effectiveness (Langfred, 2000) cross-fertilization, and self-transcending. However, the main challenges of these teams are employees prioritizing their work before group work, making their own decisions, and not being aware of the work done by team members (Moe et al., 2010). Agile teams tend to work in Sprints that consist of 1-4 weeks, with 3 iterations, namely Planning, Refinement, and Retrospective. In the Planning, it is established the requirements of the project work, in the Refinement the team clarifies the requirements, and in the Retrospective meeting, you evaluate the work process and determine the areas of improvement (Grapenthin et al., 2015). Since there are no leaders in agile teams and each member of the team is responsible for the project results (Magpili & Pazos, 2018), it is important for the team members to share their opinions on the topic. However, conflict may arise, especially when there is a diversity of opinions (Pelled et al., 1999). Given that usually agile teams consist of a small number of people, in many cases between five and nine (Almadhoun & Hamdan, 2018), keeping conflicts under control is particularly essential for team effectiveness.

In agile teams, conflict is a common element during team meetings (Chiang, 2020). A conflict can have a duration ranging between a couple of minutes to multiple days and is thereby classified into three classes, namely micro, meso, and macro. A micro conflict is when a conflict lasts roughly a couple of minutes; meso conflict refers to when conflicts last hours or multiple times in one day, and macro is when disagreements take place over multiple days (Paletz, Schunn, & Kim, 2011). In this research, only micro and meso conflicts were observed. Conflict may impact team cohesion and needs to be overcome to improve the interaction between team members (Tekleab et al., 2009). In most cases, conflict occurs early in the team development phase called 'the storming phase' as team members express different ideas and values (Tekleab et al., 2009).

This opens the question of whether conflicts can be associated with meeting effectiveness since research indicates that the time spent on meetings in an organization is steadily increasing (Geimer et al., 2015). While some meetings are deemed valuable, estimates according to Geimer et al. (2015) indicate that around 41.9% of meetings are not productive at all. In the cases of non-valuable meetings time is wasted and thus is negative for the organization (McManus, 2006; Rogelberg, Shanock, & Scott, 2012). According to the study done by Geimer et al. (2015), interpersonal conflict was mostly coded as having a negative impact on the meeting's effectiveness. However, the examples of interpersonal conflict mentioned are about destructive feedback. This makes it interesting to look at whether conflicts can also be in a constructive manner and thus increase the positive impact on meeting effectiveness. Hence, exploring the positive and negative verbal behaviors associated with conflict can boost our understanding of its influence on several team outcomes.

In light of this, in the study done by Paletz et al. (2011) conflicts are assessed with the verbal behavior 'Disagreement'. According to Zhao et al. (2019), in current literature conflict is usually measured with surveys that have limitations, such as not being able to explore how conflict is expressed in terms of facial and bodily movements. Thus, in this research, the verbal codebook developed by the OBCC Group was used. In this codebook, the verbal behaviors "Disagreeing", "Giving negative feedback", "Correcting", and "Defending own position" were the most common behaviors leading to conflict.

Indeed, recent research has called for more innovative ways of assessing team conflict such as the use of video recordings, where employee interactions during conflict incidents capture the physical expressions, such as facial and body movements, of those involved as this can provide an opportunity to delve into the actual expression of conflict (Zhao et al. 2019).

The importance of understanding moments of conflict within teams is particularly important in today's globalized and virtual world, in which cultural diversity among employees is more and more common (Groves & Feyerherm, 2011). Cultural diversity is usually favored since it can have perceived benefits such as team creativity and quality decision-making (Stahl & Maznevski, 2021). However, multicultural teams may encounter increasing communication issues and conflicts (Brett, 2006). In the literature, multicultural teams are defined as teams with employees of different national backgrounds (Leifels & Bowen, 2021).
To investigate these relationships and address the lack of conflict studies implementing alternative methodologies, such as video observations (Zhao et al., 2019), the following research question was formulated:

"Can the frequency and nature of conflicts, as well as the behaviors that contribute to conflict, be associated with the effectiveness of team meetings and the team culture?"

The goal of this research is thus to investigate if there are differences between the number and type of conflicts between agile mono-and-multi cultural teams as well as agile teams with effective meetings and non-effective meetings.

By answering the above research question, this thesis contributes to the literature on agile, conflict, meeting effectiveness, and cultural differences in different ways. Firstly, by using real agile team meetings, this thesis tries to identify conflicts in a real agile working environment, which currently lacks in the literature. Secondly, video recordings can serve as an effective tool for observing and analyzing team interactions, instead of using surveys. Thirdly, considering mono- and multicultural agile teams can offer unique perspectives and approaches to problem-solving. Lastly, looking at the impact of conflict on meeting effectiveness. This thesis has also some practical implications for organizations that plan or have implemented agile teams, especially culturally diverse ones. By understanding how the number and type of conflicts relate to moments of conflict in effective and ineffective meetings in mono- vs multicultural agile teams, organizations may manage conflicts better and enhance meeting effectiveness. The findings could also be used to develop training programs for agile team members to improve their conflict management skills and promote better communication and collaboration. Organizations can identify potential areas of improvement in their agile practices and implement strategies to enhance meeting effectiveness by understanding the differences in the number of conflicts between effective and ineffective agile team meetings. The practical implications of this research could help organizations improve their agile practices, enhance team dynamics, and ultimately increase productivity and success.

The structure of the thesis is as follows. First, the theoretical framework will explain the basis of the known research on this subject. Secondly, the methodology will give information about the design of the research, the way of data collection, the sample, measures, and the analysis of the research. Thirdly, the results of the research will be highlighted, followed by an in-depth discussion, limitations and further research, and a conclusion at the end.

2. THEORETICAL FRAMEWORK

In the theoretical framework, is a review of existing literature on the agile way of working, team conflict, verbal behaviors, mono-vs-multicultural teams, effective and ineffective meetings in mono-vs-multicultural teams.

2.1 The Agile Way of Working in Scrum

Agile is a philosophy that provides continuous delivery in short periods of time. The goal is to obtain high-quality products with fast delivery. Agile provides a lot of flexibility and that is a reason to implement it in an organization (A multi-objective agile project planning model and a comparative meta-heuristic approach). Agile can be implemented into the scrum framework. The basic concept of scrum is completing the requirements of a product called the user story in a fixed period of time of about 1-4 weeks called a Sprint. The Sprint has three major meetings and daily stand-up meetings. The three major meetings are the Planning where the plan is created, the Refinement in which the product gets refined, and the Retrospective during which the final results get evaluated (Ozcelikkan et al., 2022). The daily stand-ups are every morning led by the scrum master, during these stand-ups the plan for the current day is discussed (Schwaber & Sutherland, 2015). The user story will be worked on in a scrum team consisting of one product owner, one scrum master, and developers. “The product owner is responsible for improving the value of the product”. “The scrum master is accountable for applying Scrum according to the Scrum guide” and “Developers commit to creating a usable increment for the product in each Sprint” (Ozcelikkan et al., 2022. P, 151).

During the Planning meeting, every important date related to the Sprint is listed. Furthermore, complexity points will be given to each story included in the Sprint. The higher the points the more work it will probably be. Each Sprint has a maximum of points that need to be divided over the stories. Once the sprint plan is defined the team can start implementing the plan (Ozcelikkan et al., 2022).

The Retrospective meeting is designed to frequently evaluate and adjust projects. The evaluation is about the previous work cycle or Sprint and during evaluations the focus lies on the areas of improvement. The evaluation can be about team improvements as well as individual improvements (Baumeister et al., 2013). According to Baumeister et al., (2013), reflection can be classified into five levels: reporting, responding, relating, reasoning, and reconstructing. Levels 1 and 2 would be reporting and responding, level 3 relating, level 4 reasoning, and level 5 reconstructing. During Levels 1 and 2, individuals get to share brief descriptions of their experiences. Level 3 is about connecting those experiences with personal meaning, here it is important to highlight positive and negative points to learn from the experiences. Level 4 is about exploring the shared information related to occurrences. Lastly, level 5 signifies a high level of learning and responding to similar obstacles in the future. For this thesis, the first three levels are interesting, since during these levels’ discussion is most common (Baumeister et al., 2013). Since discussion can lead to conflicts, the Retrospective meeting might include more conflicts than the Planning or Refinement.

2.2 Team Conflict

Conflict is defined as “interpersonal and intrateam disagreement, as when ‘a divergence of values, needs, interests, opinions, goals, or objectives exists’’ (Barki and Hartwick 2004, p. 232). Team conflict has significant consequences on the ability to interact within the team (Tekleab et al., 2009). There are multiple types of conflict, such as Task conflict, Process conflict, or Relationship conflict. Furthermore, conflicts can differ in duration and frequency. These different elements of conflict may determine the effect of the conflict (Paletz et al., 2018). Another aspect that could affect team conflict is the cultural composition of team members (Paletz et al., 2018). Since culturally diverse teams are associated with more social stressors than homogenous teams, it is often mentioned in studies that culturally diverse teams may encounter more tension. Furthermore, according to Leifels and Bowen (2021), culturally diverse teams may perceive more individual differences which may result in a lack of trust between team members (Han & Harms, 2010). When there is trust in a team, the members will feel more likely to give each other the benefit of the doubt. Furthermore, trust can increase openness and accuracy in communication and decrease hidden agendas of team members (Han & Harms, 2010). The amount of trust in a team can influence emotionality and influence the interpretation of ambiguous behavior (Han & Harms, 2010). Thus, conflicts within a team can have consequences on the ability to interact and can vary in duration and frequency. Understanding the different types, phases, and effects of conflict, as well as the impact of cultural diversity can help to improve team dynamics and prevent negative outcomes.

2.1.1 Conflict Duration

Conflicts may vary in duration from minutes to days. That is the reason to distinguish it into three categories micro, meso, and macro conflict (Paletz et al., 2011). “Micro conflicts are minute-long conflicts, which do not have a high level of negative effect on the team” (Paletz et al., 2018. P. 99). To further differentiate the conflicts, Paletz et al. (2018) distinguished 4 phases of conflict, pre-conflict, during conflict, immediate post-conflict, and delayed post-conflict. In the case of meso conflict, a conflict that lasts hours to multiple times a day (Paletz et al., 2011), or macro conflict, a conflict that lasts multiple days (Paletz et al., 2011, p. 315). Implementing the four phases introduced by Paletz et al. (2018) proves challenging as there needs to be a distinct starting and finishing point for each conflict phase. Moreover, it could be interesting to investigate which behavior may cause conflicts.

2.3 Verbal Behaviors

Current research on conflict has mostly relied on survey methods. However, these methods can have biases such as single-point examinations, and “over-reliance on conclusions derived from one aspect and type of measurement of conflict.” (Zhao et al. 2019, p. 131). To overcome such biases, in this research verbal behaviors of individuals will be explored in video meetings. Verbal behavior, which is easier to control and more noticeable than non-verbal behavior (Caso et al., 2006), can be a useful indicator of conflict during which it becomes particularly noticeable (Caso et al., 2006; Tekleab et al., 2009). To determine whether a team is in an effective state, Tuckman’s model of team building tends to get used frequently (Aquino et al., 2022). The team’s operating state affects its effectiveness. In the forming stage, team members

establish relationships and psychological safety. Conflicts may arise after this stage during the storming stage. Effective teams leverage individual strengths and engage in strength-based mentoring. In the next stage, the norming stage, effective teams collaborate and evolve through project work. The performing stage sees increased productivity and communication. The final adjourning stage acknowledges individual contributors and determines whether the team will disband or continue. In every stage verbal behavior is present and is to be distinguished into three meta-categories making it easier to analyze Yukl et al. (2019)

2.3.1 Type of conflict

According to Yukl et al. (2019), verbal behavior is to be distinguished into three meta-categories, Task-oriented, Relations-oriented, and Change-oriented behavior. Task-oriented and Relation-oriented behavior may be linked to conflict. "The primary objective of Task-oriented behavior is to improve the efficiency and reliability of activities carried out by the leader's team or work unit" (Yukl et al. 2019, p. 755) Task-oriented behavior is composed of planning work unit activities, clarifying roles, and objectives, and monitoring operations and performance.

Task-oriented behavior may be linked to Task conflict since both relate to work tasks being performed. Task-oriented conflict refers to "disagreement among group members about the content of the tasks being performed, including differences in viewpoints, ideas, and opinions" (Tekleab et al., 2009, p., 173). "The primary objective of Relations-oriented behavior is to maintain subordinate task commitment, confidence, and cooperation" (Yukl et al. 2019. P, 755) behaviors specific to Relations-oriented are supporting; developing; recognizing, rewarding; and empowering (Yukl et al. 2019). Relations-oriented behavior may be linked to Relationship conflict which refers to conflict "which typically includes tension, animosity, and annoyance among members within a group" (Tekleab et al., 2009. P, 173-174). Lastly, there is Process conflict which is defined as a "conflict about how task accomplishment should proceed in the work unit, who's responsible for what, and how things should be delegated" (Jehn, 1997, p. 540). To determine whether a team is in an effective state, Tuckman's model of team building tends to get used frequently (Aquino et al., 2022). Moreover, it could be valuable to determine whether there exists a dissimilarity in the type of conflicts between teams that are homogenous compared to those that are culturally diverse. Because culturally diverse teams may have different views on conflicts.

2.4 Mono- vs-Multicultural Teams & Conflict

The dual-process model (Srikanth et al 2016; Stahl et al. 2010) suggests that multicultural teams defined in the literature as teams with employees of different national backgrounds (Leifels & Bowen, 2021) experience more conflict due to social identity processes team. Conflict may be seen as an opportunity or as risky and threatening, and national culture may have an impact on the perception (Paletz et al., 2018). For instance, collectivistic cultures are generalized by maintaining harmony and thus avoiding conflict, while individualistic cultures are more likely to engage in conflict (Paletz et al., 2018). Thus, cultures in a team may affect the frequency of conflicts in meetings. According to the research done by Paletz et al. (2018), highly cultural teams expressed significantly fewer micro-conflicts. However, according to Behfar et al. (2006) the conflicts that multicultural teams experience are far more complex. Reasons for the increased complexity are "tolerance for uncertainty, cooperation, and confrontation of conflict" (Behfar et al., 2006, p. 234).

Furthermore, the type of culture can influence conflicts as well. For instance, European countries and the US are more focused on deadlines, while Asian countries are often focused on the quality of work (Leifels & Bowen, 2021). This difference in the focus can give rise to conflicts. Considering the influence of culture on conflicts within multicultural teams is vital when aiming to enhance team dynamics and decrease conflicts. Therefore, teams that function cohesively are likely to be more productive and effective with reduced conflicts.

2.5 Effective and Ineffective Meetings in Mono- and Multicultural Teams

Team dynamics and interaction are key to success in agile teams (Dorairaj et al., 2012). Multiple studies have concluded that the dynamics in an agile team are important characteristics for high performance. In agile teams with great team interaction, the possibility of stating ideas and concerns among team members increases, and furthermore, the opportunity to listen to team members' opinions and problems as well, resulting in an improved work environment (Dorairaj et al., 2012). To improve team dynamics, Dorairaj et al. (2012) suggest six ideas, and four of these are discussed below. Firstly, it is important to create a one-team mindset, to improve this mindset, the team members need to understand the importance of daily stand-ups, and preferably see each other during the meeting (video, or physical). Secondly, implementing physical touch is likewise crucial, either through pictures of team members or planning 15 minutes to talk about personal or fun matters. Thirdly, open communication in the team. Honest and transparent communication in a team increases the overall understanding between members in an agile team. It can be important to engage in coaching as a team to grow the courage for team members to speak up. Lastly, being co-located as a team can also improve team dynamics since it can result in building better team relations and trust, which translates when members are sent back to their distributed locations. Thus, team dynamics and interactions in agile teams can significantly impact verbal behaviors, as communication is essential for high performance (Dorairaj et al., 2012). In fact, open and honest communication is highlighted as an important aspect of improving team dynamics, as it increases overall understanding between team members.

3. METHODOLOGY

In this section, the research methodology used in this thesis is explained. First, the research design is discussed with a reference to why a mixed-method approach was chosen. Second, how data was collected is addressed, followed by the sampling strategy and the measurements used in this thesis. Lastly, the analyses run in this research are detailed to show how the results were obtained.

3.1 Research Design

To explore how many conflicts occur and which verbal behaviors are triggering moments of conflict, a mixed-method design of qualitative and quantitative research is implemented. Using mixed methods offers the advantage of obtaining a more comprehensive understanding of the research during the qualitative part, while also assessing its generalizability by using the quantitative side (Sørensen & Holman, 2014). The qualitative side of this research consists of observing the conflicts per meeting and further investigating the type of conflicts and behaviors leading up to the conflict. The idea of using qualitative methodology is to

provide a detailed in-depth understanding of the type of conflicts (Sørensen & Holman, 2014). After using the qualitative methodology on the conflicts, the number of observed moments, types, and behaviors leading to conflicts had to be determined, thus the quantitative aspect of this research involved counting the number of conflicts observed in a single meeting and comparing the standardized mean number of conflicts between mono-and-multicultural agile teams. Lastly, the duration of conflicts based on the micro and meso, levels were compared. It was not feasible to measure macro conflicts. Most of the conflicts are considered micro as defined by Paletz et al (2018, p. 99)

3.2 Data collection

The data was obtained via an extensive research project carried out at a financial institution in the Netherlands, conducted by the Organizational Behavior, Change Management, and Consultancy (OBCC) Group at the University of Twente. There are different kinds of data collected in the years 2018 to 2022 in the form of surveys, video meetings, and biopic wristbands (which measure arousal). In this research, there are explorative observations of verbal behavior of individuals during the recorded video meetings. The data was gathered by video recording agile team meetings with a duration of on average 50 minutes and transcribing them, as well as measuring arousal levels across multiple agile teams. Each of these teams participated in three recorded meetings, the Planning, the Refinement, and the Retrospective. In this thesis, we focused on the Planning and the Retrospective meetings since due to the reflective nature of a reflection where positive and negative feedback may be given more conflicts are assumed (Dönmez et al., 2016). Thus, a comparison between the two can be interesting.

3.3 Sample

This research was conducted on the individual level, focusing on observed verbal behaviors that could lead to conflicts during agile team meetings. The survey data was used to choose the teams, and thus the participants in this research. The sample consists of 8 agile teams of whom 3 are monocultural agile teams and 5 are multicultural. For the qualitative exploration of conflicts, in the eight agile teams, there are four categories present (mono-cultural effective; multicultural effective; mono-cultural ineffective; multicultural ineffective), and for every category, there is a Planning and Retrospective meeting. In total 49 were male, 11 were female, and 0 members neuter. Thus 81.67 % of the sample is male, 18.33 % of the sample is female, and 0 % neuter. Each agile team has between 5 and 10 members with an average of 6.1 members.

3.4 Measures

3.4.1 Verbal Behaviors for Moments of Conflict

To determine the moments of conflict a verbal behavior codebook developed by the OBCC Group was used since it determined triggers for potential conflicts. In this codebook, the verbal behaviors: “Disagreeing”, “Giving negative feedback”, “Correcting”, and “Defending own position”, are mentioned as the potential triggers for conflict. A study done by Paletz et al. (2011) used disagreeing as the main indication of conflict. Thus, this research uses “Disagreeing” as the main indication of conflict. According to Paletz et al. (2011) answering a question with “no” alone was not enough to justify it as conflict. Furthermore, for every conflict, the type of conflict was determined. The last measure is the difference in duration of the conflict between micro, meso, and macro conflicts “Micro conflicts are minute-long conflicts, which do not have a high level of negative effect on the team. However, when a conflict is brought up multiple times in a single meeting it is considered a meso conflict.

3.4.2 Mono- vs Multicultural Teams

This research defines a multicultural team as an English-speaking team and a monocultural team as a Dutch-speaking team. As different national backgrounds are defined as multi-cultural (Leifels & Bowen, 2021), it is assumed in this research that in an English-speaking team different national backgrounds are present. In this research it is assumed that language can serve as a representative of cultural diversity: whilst an English-speaking team is more likely to consist of members from diverse cultural backgrounds, a Dutch-speaking team is more likely to consist of members from a single cultural background. It should be noted, however, that this representation is not intended to be a comprehensive measure of cultural diversity, since other factors may also contribute to the team’s cultural diversity.

3.4.3 Meeting Effectiveness

The survey data were analyzed to determine the effectiveness of team meetings. In the survey data, each member of a team assessed the extent to which they perceived the meetings as effective and productive answers rated on a scale of 1-7, where 1 indicated a meeting was not effective and 7 indicated it was very effective. As all teams involved in the research scored above the average rating on the scale, the final outcome was determined by computing the median score across all teams. In this research, meetings were identified as effective if the score was higher than the median of 5.85. Teams with effective and ineffective meetings are compared regarding the Number of conflicts, type of conflicts, and duration of conflicts.

3.4.4 Type of conflict

This research identified three types of conflict, Task conflict, Process conflict, and Relationship conflict. Each determined conflict in the Planning and Retrospective was placed in one of the three types of conflict. Every type of conflict was counted and compared with regard to culture, meeting effectiveness, and type of meeting.

3.5 Analysis

To answer the research question, multiple analyses were used to examine the relationship between the arousal level and the moment of conflict. These analyses are divided into qualitative and quantitative research.

3.5.1 Qualitative Analyses: Thematic and Episode Analysis

The study employed a thematic analysis approach following some of the “6-phase guide” outlined by Braun and Clarke (2006). This method was chosen because it allows for a comprehensive and nuanced understanding of the data while remaining adaptable to different contexts and situations (Braun & Clarke, 2006).

The analysis process was initiated by reviewing transcripts and video recordings of meetings where potential conflicts were detected based on predefined behavioral triggers. The coding for verbal behaviors that could trigger conflict was already done by other students and assistants. Upon reviewing the situations, a conflict was identified and marked if a clear disagreement was evident, as per the coding scheme developed by Paletz et al. (2011). To identify clear disagreements, personal interpretation was utilized. To increase the certainty of detecting conflicts and increase the reliability of the research (Brøndum et al., 2011), the conflicts

identified through personal interpretation were cross-referenced with those identified by other students earlier.

After the number of conflicts was determined by interpreting the verbal behavior disagreement mentioned above, the type of conflict was explored. The conflicts were observed and interpreted to compare the difference in the type of conflict between the four categories (monocultural effective; multicultural effective; monocultural ineffective; multicultural ineffective).

Ultimately, an episode analysis (Jarrett & Liu, 2016) was performed on some interesting moments of conflict observed in the videos to offer further insights on the comparison between (in) effective meetings in mono- and multicultural teams. This analysis would add depth to the quantitative results by corroborating or offering potential explanations for contradicting results.

3.5.2 Quantitative Analyses: Comparative tests

The number of conflicts that are qualitatively determined significant was examined with a Shapiro-wilk test to test normality. The Data was found normally distributed. However, since this research uses a small sample of eight teams it is important to note that the Shapiro-Wilk test is sensitive to deviations from normality, especially with small sample sizes. Thus, with larger sample sizes, even minor deviations from normality can lead to a significant p-value, while with smaller sample sizes, the test may not have enough power to detect departures from normality.

The t-test is used to determine if there are significant differences in the number and type of conflicts between the teams of the different categories in the different meetings that were researched.

1. Planning vs. Retrospective
2. Effective meetings vs ineffective meetings
3. Effective Retrospective vs ineffective Retrospective
4. Effective Planning vs ineffective Planning
5. Monocultural teams vs multicultural teams
6. Monocultural Retrospective vs multicultural Retrospective
7. Monocultural Planning vs Multicultural Planning

The paired t-test is used on Planning vs Retrospective and the unpaired t-test is used on the other six categories.

4. RESULTS

The results section of this research presents the obtained findings in a systematic manner, following the same sequence as the research process. Firstly, the section begins with a thematic analysis that qualitatively determines the conflicts observed in the two distinct meetings. Next, a frequency analysis is conducted to examine the types of conflicts that occurred and the behaviors that contributed to their emergence. Lastly, a quantitative analysis is employed to generate statistical outcomes and potentially establish the significance of the findings

4.1 Qualitative Determination of Conflicts

To find clear disagreements, the behaviors identified earlier as "trigger behaviors" that potentially lead to conflict were observed thoroughly. Interestingly, there were also other behaviors causing a conflict in the Planning and Retrospective, such as interrupting (4.9%), own opinion (12.4%), and informing (11.3%). After closely observing the conflicts and seeking to identify their underlying causes, the codes that occurred immediately prior to the conflicts were those behaviors. In total, the trigger behaviors were coded 3.51% of all coded behavior throughout the Planning and Retrospective meetings as is visible in Table 4a. All behaviors were coded by previous students and compared to achieve higher agreement, all differences were discussed and resolved, resulting in one final log.

During instances of conflict, characterized by disagreements among two or more individuals, the identification of conflict types was achieved through personal interpretation and verification via cross-referencing with other students. A total of 16 meetings were subjected to cross-referencing, leading to a complete alignment of findings. The research unveiled a cumulative count of 55 conflicts, 14 in the Planning and 41 in the Retrospective, yielding an inter-reliability rate of 72.7% (Lange, 2018). Given this outcome, the results fall short of being optimal, indicating that additional investigation into moments of conflict would enhance the adequacy of the findings.

The three categories, Task, Process, and Relationship conflict were examined through individual interpretation as well as through cross-referencing with other students' perspectives. When comparing matching conflicts, a reliability rate of 75% was established (Lange, 2018), indicating satisfactory results. Therefore, additional investigation into the comparison is deemed unnecessary.

The majority of conflicts observed exhibited durations ranging from a few seconds to several minutes, with only four conflicts reoccurring. Consequently, the presence of merely four meso conflicts stood in contrast to the occurrence of 51 micro conflicts. Neither culture nor effectiveness had an impact on the duration of the conflicts, thus an in-depth exploration of conflict duration is irrelevant.

4.2 Conflict and behaviors frequency

The most noteworthy findings concerning conflict types and the behaviors contributing to conflict are presented in Tables 1a-f, while less significant findings are included in the appendix (see Appendix 9.2). Tables 1-3 provide a detailed breakdown of the standardized frequency of conflicts, encompassing all relevant variables. The standardized frequency is based on the number of conflicts divided by the duration of the meetings. Tables 4a, and b, specifically focus on the behaviors leading to conflict. For the overall overview of every team and meeting see Table 5. in the appendix

In Table 1a, the number and type of conflicts in the Planning, Retrospective, and combined are reported. The numbers are standardized with the duration of the meetings. The last vertical row indicates the total of the Planning and the Retro. The last horizontal row indicates the total of the type of conflicts.

Table 1a. Standardized percentage and the type of conflicts in the Planning and Retrospective

Conflict type	Planning	Retro	Total
	%	%	%
Task	17.5	37.2	54.7
Relationship	4.4	11.8	16.2
Process	8.7	20.3	29
Total	**30.6**	**69.4**	**100**

In the comprehensive analysis of all conflicts (Table 1a), it becomes apparent that Task conflict is the most prevalent type of conflict, with 54.7% of the total. The second most occurring conflict is Process conflict (29%), while Relationship conflict occurs least frequently (16.2%). Additionally, the number of conflicts during the Retrospective meeting is significantly higher (69.4%) compared to the Planning (30.6%). The total conflicts during the Retrospective are more than two times greater than those observed during the Planning phase. Furthermore, it is noteworthy to observe that the observed types of conflicts display a consistent pattern in terms of the frequency at which they occur between the Planning and Retrospective meetings.

In Table 2a, the effective team meetings are compared to the ineffective ones according to Task, Process, and Relationship conflict. The last vertical row indicates the total of the effective and ineffective meetings. The last horizontal row indicates the total of the type of conflicts.

Table 2a. Standardized values of the frequency and type of conflicts in effective and ineffective team meetings

Conflict type	Effective	Ineffective	Total
	%	%	%
Task	37	17.3	54.3
Relationship	12.3	3.9	16.2
Process	14.1	15.4	29.5
Total	**63.4**	**36.6**	**100**

When observing Table 2a, effective team meetings demonstrate a significantly higher frequency of conflicts (63.4%) compared to ineffective team meetings (36.6%), nearly reaching twice the standardized frequency of conflicts. Moreover, the distribution of conflict types remains consistent when considering their occurrence. However, Process conflict tends to be more prevalent in ineffective team meetings (15.4%), compared to effective meetings (14.1%). Whereas Relationship conflict is more pronounced in effective team meetings (12.3%), compared to ineffective meetings (3.9%)

In Table 2b, the effective meetings and ineffective meetings are compared to the Retrospective meetings. The last vertical row indicates the total of the effective and ineffective meetings. The last horizontal row indicates the total of the type of conflicts.

Table 2b. Standardized values of the frequency and type of conflicts in effective and ineffective team meetings in the retrospective

Conflict type	Effective	Ineffective	Total
	%	%	%
Task	40.2	11.8	52
Relationship	11.1	5.9	17
Process	13.3	17.6	31
Total	**64.7**	**35.3**	**100**

When examining the Retrospective meeting from Table 2b in particular, a noteworthy finding emerges regarding the prevalence of Process conflicts within ineffective team meetings. In comparison to Task conflicts (11.8%), Process conflicts were more frequently observed (17.6%) in ineffective team meetings, whereas effective team meetings exhibited more than three times as many Task conflicts as Process conflicts. Furthermore, it is important to note that Relationship conflict was the least prevalent type of conflict in both effective and ineffective team meetings within this context.

In Table 2c, the effective meetings and ineffective meetings are compared to the Planning meetings. The last vertical row indicates the total of the effective and ineffective meetings. The last horizontal row indicates the total of the type of conflicts.

Table 2c. Standardized values of the frequency and type of conflict in effective and ineffective Planning meetings

Conflict type	Effective	Ineffective	Total
	%	%	%
Task	21.4	35.7	57.1
Relationship	14.3	0	14.3
Process	14.3	14.3	28.6
Total	**50**	**50**	**100**

Table 2c presents the results of effective and ineffective Planning meetings. It indicates that ineffective Planning meetings had no instances of Relationship conflict, while effective Planning meetings encountered 14.3% of the conflicts in the Planning as Relationship conflicts. On the other hand, ineffective Planning meetings experienced a higher occurrence of Task conflicts compared to effective Planning meetings.

In Table 3a, the standardized number and type of conflict in the two types of culture are compared from the Planning and Retrospective combined. The last vertical row indicates the total of the mono-and-multicultural teams. The last Horizontal row indicates the total of the Task, Relationship, and Process conflicts.

Table 3a. Standardized values of the frequency and type of conflicts in mono-and-multicultural teams in both meetings combined

Conflict Type	Monocultural	Multicultural	Total
	%	%	%
Task	29.4	24.9	54.3
Relationship	13.7	3.3	17
Process	13.7	14.9	28.7
Total	**56.8**	**43.2**	**100**

The results from Table 3a reveal a slight difference in the frequency of conflicts between mono- and multicultural teams. One intriguing finding is the relatively low occurrence of Relationship conflicts in multicultural teams, accounting for only 3.3% of all conflicts. In contrast, monocultural teams experienced a higher proportion of conflicts categorized as Relationship conflicts, representing 13.7% of all conflicts

In Table 3b, the standardized number and type of conflict in the two types of culture are compared in the Retrospective. The last vertical row indicates the total of the mono-and-multicultural teams. The last horizontal row indicates the total of the Task, Relationship, and Process conflicts.

Table 3b. Standardized values of the frequency and type of conflicts in mono-and-multicultural teams in the Retrospective meetings

Conflict Type	Monocultural	Multicultural	Total
	%	%	%
Task	28.3	25.3	53.6
Relationship	12.9	4.6	17.5
Process	12.9	16.1	29
Total	**54**	**46**	**100**

The results from Table 3b demonstrate a similarity to Table 3a, indicating that there is a slight difference in the frequency of conflicts between monocultural and multicultural teams. Specifically, monocultural teams exhibit a slightly higher proportion of Task conflicts (28.3%) compared to multicultural teams (25.3%), while Relationship conflicts are more prevalent in monocultural teams (12.9%) compared to multicultural teams (4.6%). On the other hand, multicultural teams have a slightly higher occurrence of Process conflicts (16.1%) compared to monocultural teams (12.9%). Overall, the frequency of conflicts between monocultural and multicultural teams is relatively similar, with minor variations observed across different conflict types.

In Table 3c, the standardized number and type of conflict in the two types of culture are compared in the Planning. The last vertical row indicates the total of the mono-and-multicultural teams. The last Horizontal row indicates the total of the Task, Relationship, and Process conflicts.

Table 3c. Standardized values of the frequency and type of conflicts in mono-and-multicultural teams in the Planning meetings

Conflict Type	Monocultural	Multicultural	Total
	%	%	%
Task	33.4	22.1	55.6
Relationship	16.7	0	16.7
Process	16.7	11	27.7
Total	**66.9**	**33.1**	**100**

The results from Table 3c indicate a notable difference in the occurrence of conflicts during Planning meetings between monocultural and multicultural teams. More specifically, in multicultural teams, there is no recorded occurrence of Relationship conflict during Planning, whereas monocultural teams experienced a considerable proportion (16.7%) of conflicts categorized as Relationship conflicts. In Table 4a, are the standardized values of the frequency of the “trigger” behaviors in the Planning and Retrospective meetings. The reported numbers have been standardized, indicating that the specific behaviors were tallied and divided by the total number of coded behaviors.

Table 4a. Standardized values of the frequency of the four trigger behaviors leading to most conflicts.

	Standardized Frequency in %		
Behavior	**Average Planning**	**Average Retro**	**Average combined**
Disagreeing	0.9317%	1.66212%	1.0064%
Giving negative feedback	0.22412%	1.33640%	0.7803%
Defending own position	0.41357%	1.59915%	1.2969%
Correcting	0.26810%	0.58638%	0.4272%
Total	**1.8375%**	**5.18406%**	**3.5108%**

Moving to the occurrence of the four trigger behaviors of conflict, it is clear that the frequency is higher in the Retrospective meeting compared to the Planning meeting. The most substantial disparity is observed in the behavior of "giving negative feedback," which was coded nearly six times more frequently in the Retrospective (1.33%) compared to the Planning (0.22%). On average, trigger behaviors were identified in approximately 5.18% of instances during the Retrospective, which is more than twice the frequency of 1.84% observed during the Planning

Table 4b presents the results of various behaviors that led to conflicts during the Planning, the Retrospective, and both meetings combined. The last row labeled "Total" provides information on the overall number of conflicts, taking into account both the Planning and Retrospective meetings combined. The percentages listed represent the proportion of

conflicts within the specific meeting type mentioned in the corresponding column (as indicated by the top row) relative to the total number of conflicts.

Table 4b. frequency of Behaviors leading to conflict in the Planning and Retro

	Planning		Retro		Combined	
Behaviors	N	%	N	%	N	%
disagreeing	9	64.3	12	29.3	21	38.2
defending own position	2	14.3	9	22	11	20
negative feedback	1	7.1	8	19.5	9	16.4
delegating	1	7.1	6	14.6	7	12.7
own opinion	1	7.1	3	7.3	4	7.3
informing	0	0	2	4.9	2	3.6
correcting	0	0	1	2.4	1	1.8
Total	**14**	**100**	**41**	**100**	**55**	**100**

Three out of the four identified trigger behaviors account for the majority of conflicts, exhibiting a significant margin over the others. Notably, the behavior of "Correcting" is an exception, as it led to conflict only once in this study. Interestingly, there are additional behaviors besides the trigger behaviors that contribute to conflicts. Specifically, "Delegating" is responsible for 12.7% of the total conflicts, "Own opinion" leads to 7.3% of conflicts, and "Informing" triggers 3.6% of conflicts. It is worth mentioning that a substantial portion of conflicts, amounting to 23.6%, arise from non-trigger behaviors. Furthermore, there is a notable discrepancy in the behaviors that lead to conflicts between the Planning and Retrospective. The most significant finding is that "Disagreeing" is the predominant behavior in the Planning, responsible for 64.3% of conflicts, whereas, in the Retrospective, it accounts for only 29.3% of conflicts.

4.3 Comparative Testing

The Shapiro-Wilk test gives $W(8) = 0.852$, $p = 0.01$, thus the data seems normally distributed. When comparing the means between the Planning and Retrospective meetings using an independent t-test, the following was obtained $t(8) = -1.76$, $p = 0.105$. This p-value suggests that there is no statistically significant difference in means between the Planning and Retrospective. In other words, based on the available data, there is insufficient evidence to conclude that the mean values of the measured variables in the Planning and Retrospective are significantly different. The similarity in means indicates that, on average, there is no substantial variation between these two types of meetings with regard to the variables under investigation. It is important to note that while the p-value does not indicate a significant difference, the specific context and other relevant factors when interpreting the results of statistical tests are also key to be considered.

The quantitative analysis comparing effective and ineffective meetings using the unpaired t-test gives $t(4) = 1.29$, $p = 0.25$. Since this p-value is greater than the chosen significance level (alpha) of 0.05, we do not have sufficient evidence to reject the null hypothesis. Therefore, the result indicates that there is no statistically significant difference in conflicts between effective and ineffective meetings. This finding suggests that, based on the available data, the frequency or nature of conflicts does not significantly vary between effective and ineffective meetings.

In the quantitative comparison between mono- and multicultural teams, the unpaired t-test gives $t(4) = -1.55$, $p = 0.23$. This p-value suggests that there is no statistically significant difference in the mean values of conflicts between the two team cultures. The result indicates that, based on the available data, there is insufficient evidence to conclude that the mean values of the measured variables significantly differ between mono- and multicultural teams. This finding suggests that, on average, there is no substantial variation in the measured variables based on team culture.

Based on the quantitative analysis there is no evidence that there are significant differences in the frequency of conflicts between the various groups. However, during the coding, some differences were noted. Thus, an in-depth analysis was done to provide explanations for the possible differences.

4.4 Interesting video remarks on Team Dynamics

Team 7 was a multicultural team with ineffective meetings, and this team encountered a lot of negative conflicts during the Retrospective. While the Planning phase initially conveyed a positive environment, a significant shift occurred during the Retrospective. Specifically, a notable conflict arose between a designer and the product owner, concerning the attribution of responsibility for not meeting the established goal. Although the conflict was eventually resolved, it is noteworthy that neither the product owner nor the designer reached a mutual agreement or consensus on a conclusive resolution.

Team 12 had effective meetings and was a multicultural team during the Planning and became monocultural during the Retrospective. The team comprised members from diverse nationalities who actively participated in the Planning meeting. However, during the Retrospective, only individuals of Indian nationality were present. Notably, a significant transformation occurred in the team dynamics when only the Indian members were present, as the sense of equality and absence of formal leaders diminished. The role of the scrum master became more pronounced, assuming a position of higher authority within the team. Another intriguing observation was the escalation of conflicts from the Planning to the Retrospective. The frequency and intensity of conflicts notably increased during the Retrospective.

5. DISCUSSION

5.1 Theoretical implications

5.1.1 Mono-vs-Multicultural teams

The results revealed that monocultural teams exhibited a slightly higher frequency of conflicts compared to multicultural teams, which is in line with the research done by Paletz et al. (2018). Notably, the difference in task conflicts between the two types of teams was negligible. However, there was a notable difference in Relationship and Process conflicts between the two types of culture. In monocultural teams, an equal number of conflicts were observed in both the Process and Relationship dimensions. On the other hand, multicultural teams had a higher frequency of Process conflicts compared to Relationship conflicts. A plausible explanation for this finding is that the multicultural teams in this research were in the forming stage of the Tuckman model of team building (Aquino et al., 2022). This could mean that the multicultural teams may have been less experienced in working together and required more assistance and support in navigating and resolving process-related issues (Tekleab et al., 2009). The increased occurrence of Process conflicts

could be attributed to the challenges of understanding and aligning diverse perspectives, norms, and approaches within multicultural teams (Behfar et al., 2006).

Another interesting finding was, just like effective meetings were more fast-paced it felt like monocultural teams were also more fast-paced, which could be due to different perceptions of time, urgency, and pace within the team (Gabelica & Popov, 2020; Behfar et al., 2006). It appeared that monocultural teams, especially those in which conflicts were frequently encountered, exhibited a sense of resolving conflicts by the end of the meeting. In contrast, multicultural teams occasionally experienced unresolved conflicts, which may suggest that conflicts in multicultural teams are indeed more complex as was found in research done by Behfar et al. (2006).

5.1.2 Effective vs ineffective team meetings

There are three interesting differences in the results between effective and ineffective meetings. Firstly, our findings show that effective meetings exhibited a higher frequency of conflicts compared to ineffective meetings. this could be due to several possible explanations. The conflicts observed in effective meetings were predominantly categorized as Task conflicts. It is plausible that Task conflicts have a positive impact (Bradley et al., 2012). Task conflicts may contribute to clarifying uncertainties and promoting a clear understanding of meeting objectives and additionally increase trust (Jehn & Mannix, 2001). Furthermore, ineffective meetings were found to exhibit a relatively higher proportion of Process conflict compared to Task conflict, whereas effective meetings demonstrated a comparatively greater prevalence of Task conflict. Process conflict shows “the strongest negative relation with performance” (O'Neill et al., 2013, p. 252) regarding the three types of conflict.

Secondly, effective meetings demonstrated a faster pace, resulting in the discussion of a greater number of agenda items within a shorter timeframe. The increased efficiency and productivity of these meetings may have led to a higher incidence of conflicts arising from the robust exchange of ideas and perspectives.

Lastly, the ineffective team meetings were mainly of monocultural nature compared to ineffective team meetings. The findings of this research suggest that conflict occurrence appears to be more prevalent within monocultural teams, aligning with the findings reported by Paletz et al. (2018). This implies that teams composed of members sharing a similar cultural background may experience conflicts more frequently compared to multicultural teams. However, it is important to note that other research, conducted by Cheng et al. (2012) and Stahl et al. (2010), indicates contrasting results, suggesting that multicultural teams may encounter increased levels of conflict. A reason may be that cultural diversity, or lack thereof, could potentially influence the frequency and nature of conflicts within a team setting Behfar et al. (2006).

5.1.3 Retrospective vs Planning

Considering the reflective nature of the Retrospective meeting (Dönmez et al., 2016), it was anticipated that a higher number of conflicts would arise compared to the Planning meeting. Additionally, the presence of "trigger behaviors" was found to be more than twice as frequent in the Retrospective meeting compared to the Planning meeting. These two factors contribute to the expectation of an increased level of conflict during the Retrospective, which is in line with the literature (Ozcelikkan et al., 2022). Despite the Retrospective meetings having a longer average duration, it is noteworthy that this factor did not have a significant impact on the outcomes since the results were standardized in terms of duration.

5.1.4 Reflections on Trigger Behaviors and Type of Conflict

The standardized values of "trigger behaviors" were found to be more than twice as prevalent in the Retrospective meeting compared to the Planning meeting. This disparity can be attributed to the inherent nature of the Retrospective (Dönmez et al., 2016). In the Planning meeting, behaviors such as giving negative feedback and defending one's position are less common since they typically involve some form of feedback exchange. However, during the Retrospective, it is logical to expect a higher occurrence of these behaviors as team members reflect on past performance and provide feedback (Ozcelikkan et al., 2022). Additionally, disagreements with feedback can also be reasonably expected during the Retrospective meeting (Baumeister et al., 2013)., further contributing to the higher prevalence of trigger behaviors in this context.

It is noteworthy that some instances of non-trigger behaviors resulted in conflicts. Two plausible explanations can be considered for the behaviors "informing" and "own opinion". Firstly, disagreements arising from members not agreeing with each other's statements can contribute to increased tension and potential conflicts as is in line with the study by Paletz et al. (2011). Different opinions and perspectives can create a fertile ground for conflicts to emerge. Secondly, when members express their own opinions strongly or assertively, it can lead to clashes if others perceive it as dismissive or disrespectful, further exacerbating the potential for conflicts to arise. Regarding the behavior "Delegating", conflicts may occur due to the tone or manner in which a member delegates tasks or responsibilities to another member. According to the literature on the tone of voice of Guyer et al. (2021), even the tone of voice may have an impact on how others perceive your opinion. If the delegation is perceived as condescending, authoritarian, or lacking collaboration, it can strain relationships and lead to conflicts.

The data from the study reveals that Task conflict is the most prevalent type of conflict in all meetings combined. Most conflicts are found in the Retrospective in which previous work and tasks are discussed. Given that most conflict occurs in the Retrospective, it is reasonable to expect that most conflicts in agile team meetings are related to the way tasks are performed

When examining the quantitative findings, it is observed that although the difference in conflicts appears to be substantial in certain comparisons, the statistical analysis indicates a lack of significance. One plausible explanation for this discrepancy lies in the limitation imposed by the small sample size employed in the study. When confronted with restricted sample size, the efficacy and relevance of quantitative analysis tend to diminish. The diminished statistical power resulting from a small sample size reduces the ability to detect genuine differences or associations, thereby increasing the likelihood of committing Type II errors, specifically false negatives (Andrade, 2020). According to Serdar et al. (2021) in such instances, where statistically significant differences may exist but go undetected, the quantitative analysis may not adequately capture the observed disparities, leading to the conclusion of non-significant differences. Thus, it becomes crucial to exercise caution when interpreting the results of quantitative analyses conducted with limited sample sizes.

5.2 Practical implications

The results of this thesis have also some practical implications. Firstly, Agile managers are encouraged to explore the positive dimensions of conflicts, such as their potential to enhance team clarity. Although conflicts often carry negative connotations, it is important to recognize that not all conflicts are inherently detrimental and may have a positive impact on teams (Bradley et al., 2012). Regardless of their nature, certain tensions among employees can be effectively resolved through active conflict engagement. In Dutch agile teams, it is customary to address these tensions by embracing conflicts, whereas multicultural teams tend to exhibit more reservation in this regard (Behfar et al., 2006). It should be noted that this research does not advocate for the pursuit of every conceivable conflict, but rather highlights the potential usefulness of specific conflicts within a team context.

To further enhance meeting effectiveness, it can be advantageous to allocate additional time to conflict resolution (Dincyurek & Civelek, 2008). Investing in training programs that equip team members with the skills to address conflicts effectively and efficiently can prove beneficial (Behfar et al., 2008). Various training opportunities are available to assist individuals in developing conflict-resolution capabilities.

Thus, by fostering a willingness among team members to engage in conflicts constructively and combining it with effective conflict-solving techniques, the overall effectiveness of meetings may be improved (Behfar et al., 2008). This approach acknowledges the value of conflict resolution skills in facilitating productive discussions and decision-making processes within the team.

6. LIMITATIONS AND FUTURE RESEARCH

As with all research, this study has also some limitations. Firstly, since the data was gathered on purely voluntary bases of the participants and squads, data tended to be positively skewed regarding certain variables. For instance, every team included in this research performed well or very well in team meetings which can result in some biases. However, there are still significant differences between team meeting effectiveness to differentiate the teams. In future research teams with less performing or effective teams' meetings could be included.

Secondly, the thesis was grounded in a relatively small sample size of eight agile teams and 49 individuals, since the focus was to explore specifically. on Retrospective meetings given their nature. Even though the sample size was sufficient to perform qualitative analyses on conflicts in highly and less highly performing mono-and-multicultural teams, for the quantitative part larger sample sizes and further research may be needed to provide a more comprehensive understanding of the potential differences or similarities.

Thirdly, this research defined a multicultural team as an English-speaking team and monocultural teams as Dutch-speaking teams. This is based on the assumption that in English-speaking teams, multiple national backgrounds are present. Furthermore, the survey data did not provide information about the cultures participants were from. While the differences between the types of cultures were still visible based on the assumption there should be different national backgrounds in the multicultural teams. It was not provided if the participants came from individualistic cultures or collectivistic cultures, which could affect the research and thus add another dimension to the research. For future research including both types of cultures could be interesting.

Fourthly, for this research a subjective and qualitative way of determining conflicts was used by observing the meetings. Even though every determined moment of conflict was cross-referenced and discussed with another student to increase reliability, there were still differences in determining whether a moment of conflict existed and in defining the types of conflict per se. Since this could be due to the subjective interpretation of what conflict means and how it is manifested, future studies could have multiple people coding moments of conflict to further increase the robustness of the results.

In the present study, a deductive approach was employed to code conflicts, focusing solely on the content of verbal exchanges while disregarding nonverbal cues such as tone of voice. However, it is worth considering the potential benefits of adopting an inductive approach for coding conflicts in future research. An inductive approach to conflict coding involves a more open and exploratory analysis, allowing for the identification of emerging patterns, themes, and nuanced aspects that may not be captured by predetermined categories. By incorporating nonverbal cues, such as tone of voice, into the coding process, researchers can gain a more comprehensive understanding of the intricacies and subtleties inherent in conflict interactions.

Fifthly, on a more technical level, the audio quality of some meetings was poor and thus certain parts of conversations were more difficult to follow and understand. However, with the availability of a transcript most parts could be followed well. Future research could invest in better audio quality which would improve the overall results.

Lastly, all the data was gathered from the same financial organization which has two limitations. Firstly, there could be differences between the way of working and the pressure between a financial organization and the government. Secondly, including another organization that may have different ways of agile working could provide another look at agile team meetings. However, gathering more data would be difficult and time-consuming. Thus, for further research gathering data from different organizations and types of organizations, albeit complex, would be beneficial to the literature on agile.

7. CONCLUSION

This study examined the verbal behaviors that led to conflict within effective mono-and-multicultural agile teams, while also investigating the types of conflict and potential differences in Planning and Retrospective meetings. Monocultural teams exhibited a higher frequency of conflicts compared to multicultural teams. However, multicultural teams had a distinct conflict profile, with a higher prevalence of Process conflicts. A significant disparity was observed between effective and ineffective team meetings. Effective meetings showed a higher overall frequency of conflicts. However, ineffective meetings had a higher incidence of Process conflicts. Furthermore, the Retrospective meetings demonstrated a greater number of conflicts compared to the Planning meetings. These findings shed light on the dynamics of conflict within agile teams, emphasizing the significance of verbal behaviors, team composition, meeting effectiveness, and the specific phase of the agile process. The study contributes to a deeper understanding of conflict management strategies and the factors influencing conflict emergence in agile team contexts. Thus, the practical implications of this research suggest allocating time to conflict resolution.

8. REFERENCES

Akinola, M. (2010). Measuring the pulse of an organization: Integrating physiological measures into the organizational scholar's toolbox. *Research in Organizational Behavior*, *30*, 203–223. https://doi.org/10.1016/j.riob.2010.09.003

Almadhoun, W., & Hamdan, M. O. (2018). Optimizing the Self-Organizing Team Size Using a Genetic Algorithm in Agile Practices. *Journal of Intelligent Systems*, *29*(1), 1151–1165. https://doi.org/10.1515/jisys-2018-0085

Andrade, C. (2020). Sample Size and its Importance in Research. *Indian Journal of Psychological Medicine*, *42*(1), 102–103. https://doi.org/10.4103/ijpsym.ijpsym_504_19

Baumeister, H., Lichter, H., & Riebisch, M. (2013). Agile Processes in Software Engineering and Extreme Programming. In *Springer eBooks*. https://doi.org/10.1007/978-3-319-57633-6

Behfar, K., Kern, M. C., & Brett, J. M. (2006). Managing Challenges in Multicultural Teams. *Research on Managing Groups and Teams*, 233–262. https://doi.org/10.1016/s1534-0856(06)09010-4

Bradley, B. H., Postlethwaite, B. E., Klotz, A. C., Hamdani, M. R., & Brown, K. G. (2012). Reaping the benefits of task conflict in teams: The critical role of team psychological safety climate. Journal of applied Psychology, 97(1), 151.

Brett, J. (2006). *Managing multicultural teams.* https://www.semanticscholar.org/paper/Managing-multicultural-teams.-Brett-Behfar/c8f992706bafc13e04ecc77d3f5d1ded17affd4f

Caso, L., Vrij, A., Mann, S., & De Leo, G. (2006). Deceptive responses: The impact of verbal and non-verbal countermeasures. *Legal and Criminological Psychology*, *11*(1), 99–111. https://doi.org/10.1348/135532505x49936

Cheng, C.-Y., Chua, R., Morris, M., & Lee, L. (2012). Finding the right mix: How the composition of self-managing multicultural teams' cultural value orientation influences performance over time. Journal of Organizational Behavior, 33, 389-411. doi:10.1002/job.1777

Chiang, M. (2020). *The Value Of Conflict In Software Project Team: A Social Network Perspective*. https://www.semanticscholar.org/paper/The-Value-Of-Conflict-In-Software-Project-Team%3A-A-Chiang/0adc7602d0df930c3e806ebc9a9838a8ee8536c3

Dikert, K., Paasivaara, M., & Lassenius, C. (2016). Challenges and success factors for large-scale agile transformations: A systematic literature review. *Journal of Systems and Software*, *119*, 87–108. https://doi.org/10.1016/j.jss.2016.06.013

Dönmez, D., Grote, G., & Brusoni, S. (2016). Routine interdependencies as a source of stability and flexibility. A study of agile software development teams. *Information and Organization*, *26*(3), 63–83. https://doi.org/10.1016/j.infoandorg.2016.07.001

Gabelica, C., & Popov, V. (2020). "One size does not fit all": Revisiting team feedback theories from a cultural dimensions perspective. Group and Organization Management, 45(2), 252-309. doi:10.1177/1059601120910859

Geimer, J. L., Leach, D., DeSimone, J. A., Rogelberg, S. G., & Warr, P. (2015). Meetings at work: Perceived effectiveness and recommended improvements. *Journal of Business Research*, *68*(9), 2015–2026. https://doi.org/10.1016/j.jbusres.2015.02.015

Grapenthin, S., Poggel, S., Book, M., & Gruhn, V. (2015). Improving task breakdown comprehensiveness in agile projects with an Interaction Room. *Information & Software Technology*, *67*, 254–264. https://doi.org/10.1016/j.infsof.2015.07.008

Groves, K. S., & Feyerherm, A. (2011). Leader Cultural Intelligence in Context. *Group & Organization Management*, *36*(5), 535–566. https://doi.org/10.1177/1059601111415664

Guyer, J. J., Briñol, P., Vaughan-Johnston, T. I., Fabrigar, L. R., Moreno, L., & Petty, R. E. (2021). Paralinguistic Features Communicated through Voice can Affect Appraisals of Confidence and Evaluative Judgments. *Journal of Nonverbal Behavior*, *45*(4), 479–504. https://doi.org/10.1007/s10919-021-00374-2

Han, G., & Harms, P. D. (2010). Team identification, trust and conflict: a mediation model. *International Journal of Conflict Management*, *21*(1), 20–43. https://doi.org/10.1108/10444061011016614

Hoogeboom, M. A., Saeed, A., Noordzij, M. L., & Wilderom, C. P. (2021). Physiological arousal variability accompanying relations-oriented behaviors of effective leaders: Triangulating skin conductance, video-based behavior coding, and perceived effectiveness. *Leadership Quarterly*, *32*(6), 101493. https://doi.org/10.1016/j.leaqua.2020.101493

Jarrett, M., & Liu, F. (2016). "Zooming With": A Participatory Approach to the Use of Video Ethnography in Organizational Studies. *Organizational Research Methods, 21(2),* 366-385.

Jehn, K. A., & Mannix, E. A. (2001). The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. Academy of management journal, 44(2), 238-251.

Junker, T., Bakker, A. B., Gorgievski, M. J., & Derks, D. (2021). EXPRESS: Agile Work Practices and Employee Proactivity: A Multilevel Study. *Human Relations*, *75*(12), 2189–2217. https://doi.org/10.1177/00187267211030101

Lange, R. T. (2018*). Inter-rater Reliability.* In J.S. Kreutzer, J. DeLuca, B. Caplan (Ed.), *Encyclopedia of Clinical Neuropsychology* (pp. 1348). Springer, Cham.

Langfred, C. W. (2000). Work-Group Design and Autonomy. *Small Group Research*, *31*(1), 54–70. https://doi.org/10.1177/104649640003100103

Leifels, K., & Bowen, P. (2021). The dark side of teamwork–the relationship between social stressors, social resources and team member well-being in monocultural and multicultural work teams. *Cross Cultural & Strategic Management*, *28*(4), 867–893. https://doi.org/10.1108/ccsm-08-2020-0172

Lewis, P., Critchley, H. D., Rotshtein, P., & Dolan, R. J. (2006). Neural Correlates of Processing Valence and Arousal in Affective Words. *Cerebral Cortex*, *17*(3), 742–748. https://doi.org/10.1093/cercor/bhk024

Magpili, N., & Pazos, P. (2018). Self-Managing Team Performance: A Systematic Review of Multilevel

Input Factors. *Small Group Research*, *49*(1), 3–33. https://doi.org/10.1177/1046496417710500
Paletz, S. B. F., Schunn, C. D., & Kim, K. B. (2011). Intragroup Conflict Under the Microscope: Micro-Conflicts in Naturalistic Team Discussions. *Negotiation and Conflict Management Research*, *4*(4), 314–351. https://doi.org/10.1111/j.1750-4716.2011.00085.x
Paletz, S. B. F., Sumer, A., & Miron-Spektor, E. (2018). Psychological factors surrounding disagreement in multicultural design team meetings. *CoDesign*, *14*(2), 98–114. https://doi.org/10.1080/15710882.2017.1378685
Pelled, L. H., Eisenhardt, K. M., & Xin, K. (1999). Exploring the Black Box: An Analysis of Work Group Diversity, Conflict and Performance. *Administrative Science Quarterly*, *44*(1), 1–28. https://doi.org/10.2307/2667029
Ozcelikkan, N., Tuzkaya, G., Alabas-Uslu, C., & Sennaroglu, B. (2022). A multi-objective agile project planning model and a comparative meta-heuristic approach. *Information & Software Technology*, *151*, 107023. https://doi.org/10.1016/j.infsof.2022.107023
Reisenzein, R. (2017). Varieties of Cognition-Arousal Theory. *Emotion Review*, *9*(1), 17–26. https://doi.org/10.1177/1754073916639665
Serdar, C. C., Cihan, M., Yücel, D., & Serdar, M. (2021). Sample size, power and effect size revisited: simplified and practical approaches in pre-clinical, clinical and laboratory studies. *Biochemia Medica*, *31*(1), 27–53. https://doi.org/10.11613/bm.2021.010502
Stahl, G. K., Maznevski, M. L., Voigt, A., & Jonsen, K. (2010). Unraveling the effects of cultural diversity in teams: A meta-analysis of research on multicultural work groups. Journal of international business studies, 41(4), 690-709.
Stahl, G. K., & Maznevski, M. L. (2021). Unraveling the effects of cultural diversity in teams: A retrospective of research on multicultural work groups and an agenda for future research. *Journal of International Business Studies*, *52*(1), 4–22. https://doi.org/10.1057/s41267-020-00389-9
Tekleab, A. G., Quigley, N. R., & Tesluk, P. E. (2009). A Longitudinal Study of Team Conflict, Conflict Management, Cohesion, and Team Effectiveness. *Group & Organization Management*, *34*(2), 170–205. https://doi.org/10.1177/1059601108331218
Yukl, G., Mahsud, R., Prussia, G. E., & Hassan, S. (2019). Effectiveness of broad and specific leadership behaviors. *Personnel Review*, *48*(3), 774–783. https://doi.org/10.1108/pr-03-2018-0100

9. APPENDIX

9.1 Survey items

9.1.1 Meeting Effectiveness

The perceived meeting effectiveness was measured after every team meeting using four survey items created by the research team at CMOB based on Rogelberg et al. (2006). The survey items were: (1) This past squad meeting was effective, (2) This past squad meeting was productive, (3) This past squad meeting was worth my time, and (4) This past squad meeting was efficient. Responses were collected using a seven-point Likert scale (1 = Strongly Disagree and 7 = Strongly Agree), with a high internal consistency (Cronbach's Alpha = .904).

9.2 Tables

Table 5a. Complete overview of the types of conflict in the effective and ineffective meetings of both cultures in the planning and retrospective *not standardized*

Meeting	**Planning**				**Retrospective**				**Total**
Culture	**Monocultural**		**Multicultural**		**Monocultural**		**Multicultural**		
Meeting Effectiveness	**Effective**	**Ineffective**	**Effective**	**Ineffective**	**Effective**	**Ineffective**	**Effective**	**Ineffective**	
Task	2	2	1	3	10	1	8	3	30
Relationship	2	1	0	0	5	0	0	2	10
Process	1	0	1	1	5	0	1	6	15
Total	5	3	2	4	20	1	9	11	55
% of total conflicts	**9.1%**	**5.5%**	**3.6%**	**7.3%**	**36%**	**1.8%**	**16.4%**	**20%**	**100 %**

Table 5b. Number and type of conflicts in all meetings combined

Conflict type	Planning		Retro		Total	
	N	%	N	%	N	%
Task	8	57.1	22	53.7	30	54.5
Relationship	2	14.3	7	17.1	9	16.4
Process	4	28.6	12	29.3	16	29.1
Total	**14**	**100**	**41**	**100**	**55**	**100**

Table 5c. Number and type of conflicts in effective and ineffective team meetings

Conflict type	Effective		Ineffective		Total	
	N	%	N	%	N	%
Task	21	58.3	9	47.4	30	54.5
Relationship	7	19.4	2	10.5	9	16.4
Process	8	22.2	8	42.1	16	29.1
Total	**36**	**100**	**19**	**100**	**55**	**100**

Table 5d. Number and type of conflicts in effective and ineffective team meetings in the retrospective

Conflict type	Effective		Ineffective		Total	
	N	%	N	%	N	%
Task	18	62.1	4	33.3	22	53.7
Relationship	5	17.2	2	16.7	7	17.1
Process	6	20.7	6	50	12	29.3
Total	**29**	**100**	**12**	**100**	**41**	**100**