Cohesion in Mono and Multicultural Agile Teams: An Exploratory Research through Verbal Behaviours

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ABSTRACT,

In today's rapidly changing business world, Agile methodologies are increasingly adopted by international organizations to stay adaptive and responsive. Therefore, understanding team cohesion, particularly in agile settings, and its relationship with cultural diversity has become crucial. It is especially crucial in agile environments where collaboration and communication are important for adapting to changes and achieving team goals. This thesis explores team cohesion in monocultural and multicultural agile teams within a large Dutch financial institution, focusing on those verbal behaviours that may indicate cohesion. Using a mixed-methods approach, this thesis analysed seven video recordings of team meetings, combining qualitative thematic and episode analyses and quantitative frequency comparison analysis. The results show that while monocultural teams had higher levels of interpersonal cohesion, which involves personal bonds and trust among team members with behaviours such as sharing personal information, both monocultural and multicultural teams demonstrate task-related cohesion behaviours. These behaviours are collaborative actions to execute their tasks, such as agreeing, shaping the discussion and giving positive feedback. Theoretically, this thesis contributes to the understanding of team dynamics by showing that both mono- and multicultural teams can achieve task-related cohesion, with interpersonal cohesion varying more significantly. Monocultural teams show deeper personal interactions, while multicultural teams tend to focus more on task-related interactions. The thematic and episode analysis revealed that monocultural teams often have higher interpersonal trust and comfort among team members. Practically, the findings offer valuable insights for managers in agile settings since, to enhance team cohesion, managers should promote both task-related and interpersonal interactions through activities like regular personal check-ins and social outings. Encouraging positive verbal behaviours, such as humour, positive feedback and giving attention positively, can further strengthen team cohesion regardless of cultural diversity. Future research should explore cohesion differences on a broader scope of organizations and investigate monocultural teams from different cultural backgrounds.

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Keywords

Agile teams, Team cohesion, Mono- vs multicultural teams, Verbal behaviour, Self-managed teams

1. INTRODUCTION

In a world in which the environment of organizations is constantly changing, with increasing interest for green and sustainable practices or continuously improving technology, it is important for companies to adapt to these changes (Miceli et al., 2021). Traditional management models have focused mostly on planning, which has proven to be ineffective in a fast-changing environment. Consequently, the agile approach was developed (Sampietro, 2016). The agile approach has emerged from the IT sector, specifically among software developers. Agile software development consists of methodologies that are progressive and incremental, and its principles are based on the Agile Manifesto (Fowler & Highsmith, 2001). Traditional practices were based on prior planning and strict rules when it comes to change management, but agile practices were developed to adopt and manage change efficiently (Cockburn & Highsmith, 2001). As one of the management skills needed for an agile approach is problem-solving (Woodcock, 2001), certain aspects of agile are, for instance, self-managed teams that should have technical skills related to problem-solving (Rumpe, 2017; Russo, 2021). Since the agile approach emphasizes adjusting to changing environments with incremental improvements (Hoda et al., 2008), it shows the significance of problem-solving skills in dealing with these changes. Besides these technical skills, the social skills self-managed teams should have are related to being able to focus on flexibility, communication, collaboration and trust, since these factors can foster effective teamwork (Salas et al., 2005) and ultimately increase team cohesion (Amoroso et al., 2021). This necessitates a deeper exploration of cohesion within agile settings.

According to Sabin and Szabo (2015, p. 1343) team cohesion "refers to the strengths of bonds between group members and the unity of a group". A positive effect of team cohesion is that it may improve the well-being of an individual, which consequently can improve team performance (Vanhove & Herian, 2015). To develop cohesion in teams, a sense of connectedness between team members must be created (Mudrack, 1989). Since this can be done through collaboration and communication between the members (Altameem, 2015), the interaction between the members through verbal behaviours plays an important role in team dynamics. This suggests that studying the verbal behaviour differences is quite significant, also because recent research on team conflict (Zhao et al., 2019) has underlined the importance of conducting research using different methods, like video observations, to study a phenomenon in a more objective way. Team cohesion, observed through verbal behaviours, in multicultural agile teams, and monocultural agile teams, has not been researched with an objective measurement, yet. Still, this is important, because subjective measures like self-reported surveys are more prone to response bias, therefore having less validity, as direct observation offers a higher validity (Phillips et al., 2021). Considering the need for objective methods to accurately measure how verbal behaviours affect team cohesion, it is essential to examine these dynamics within multicultural teams as well, especially since the strength of bonds may differ between mono- and multicultural teams (Stahl et al., 2009). As cohesion is directly correlated with team performance and effectiveness (Mathieu, 2008), this underlines the importance of exploring cultural diversity within teams.

Cultural diversity in teams tends to have an impact on cohesion, social integration and commitment (Stahl, 2009). Multicultural teams can be characterized as teams that consist of members from different nationalities (Jayanthi & Rajandran, 2012). Contrarily, mono-cultural teams, are teams where the members share a common language and have the same cultural values (Misoc, 2017). Existing literature has already researched the influence of cultural diversity on team performance. For instance, diversity not only may generate new understandings, (Jehn et al., 1999), but it can also be effective by reducing group bias (Carter & Phillips, 2017). Other positive impacts are that cultural diversity in teams enhances the exchange of information and also problem-solving skills, particularly for complicated decisions (Sommers, 2006). Traditional management cannot solve all problems, especially when certain problems need creativity (Cropley, 2005), and according to Gassmann (2001), multicultural teams often bring, for instance, more creativity and innovation. Given these types of advantages in multicultural teams, it is important to observe how cohesion varies within these diverse and agile settings.

Therefore, this study aims to fill in the research gap of *objectively* exploring how *cohesion*, as observed through verbal behaviour, varies between monocultural and multicultural *agile* teams. By focusing on a large Dutch financial institution, where meetings of different agile teams were filmed, this research used a unique method to observe these team dynamics. This leads to the following research question:

How does cohesion, as observed through verbal behaviour, vary between monocultural and multicultural agile teams?

The theoretical relevance of this research is that it contributes to the broader understanding of multicultural teams in an agile organization. By observing the differences in verbal behaviour and its relationship with team cohesion, this research deepens the understanding of how cultural diversity influences this specific case of agile team dynamics. The practical relevance of this research is that it can help team leaders and managers in a multicultural organization to come up with strategies to enhance cohesion, thus the team performance and its effectiveness, by knowing how cohesion varies between multicultural and monocultural teams.

This thesis starts with a thorough research on the relevant theoretical frameworks. Subsequently, the methodology used to answer the research question and the results are presented. Lastly, based on the results, the theoretical and practical implications, conclusions, limitations and future research are drawn.

2. THEORETICAL FRAMEWORK

This segment first reviews the agile approach within teams. Next, it elaborates the importance of team cohesion, especially in light of culturally diverse teams. Then, the relationship between verbal behaviours and team cohesion is analysed. Furthermore, it presents the definition of verbal behaviours. Lastly, it explores the differences between mono- and multicultural teams.

2.1 Agile Way of Working

Based on the detailed characteristics mentioned in the work of Dingsøyr et al. (2012), agile can be defined as an approach for businesses to maximize customer value, through Agile core

characteristic of self-organized teams reacting in a flexible, fast and creative way to the changes in the business and technical areas. The agile approach is meant to support change with proactive and fast reactions to the environment, it also includes self-managed teams involved in innovative experiments with the participation of customers throughout each phase (Sánchez & Oliva, 2022). The agile method encourages collaboration as well (Boccardelli et al., 2017). According to Highsmith and Cockburn (2001, p. 121) values for the agile approach are as followed: "individuals and interactions over processes and tools, working software over comprehensive documentation, customer collaboration over contract negotiation, responding to change over following a plan". In short, the agile way of working focuses on maximizing customer value through self-managed teams that adapt creatively and flexibly to changes, stimulating innovation and collaboration.

These agile teams generally work in development phases of short duration, which are commonly called sprints. These include the following primary meetings: planning, refinement, and retrospective (Bass, 2015). In agile planning meetings, the resources required for the project is estimated, the goal of the team is defined, and the task of each individual becomes clear (Khan et al., 2020). The forming stage, the stage where "group members are involved in initial assessments of the interpersonal relationships and norms within the group" (Miller, 2003, p. 122), may appear in this meeting. Since in the forming stage, the goals get defined and roles get assigned as well (Zakaria et al., 2023). Furthermore, they also start to define the task by understanding its nature and limits and identifying the necessary resources required for the task (Miller, 2003). Additionally, team members are involved in early evaluations of interpersonal relationships and group norms. In the forming stage team members tend to be more polite and cautious. They are quieter and more observant as they are familiarizing themselves with the group and task (Frances & Mary Frances, 2008). Though, these superficial interactions between the team members lack in providing the deeper understanding of genuine cohesion.

The refinement meeting (also referred to as backlog grooming) is a continuous process for proactive adjustments to evolving requirements in the project (Azike, 2021). For instance, they need to identify dependencies and risks, and update their priorities in the project. In the refinement meeting, the work gets decomposed and even more clarified as well (Verwijs & Russo, 2023b). According to Azike (2021), collaboration is needed to make these activities happen. Communication is a key ingredient for collaboration to happen. And cohesion develops through collaboration and communication between the members (Altameem, 2015).

Retrospectives are meetings with a reflection process, for instance identifying areas that can be improved (Baumeister et al., 2017b). According to Evans et al. (2015) there is a relationship between reflection and conflict, reflecting may lead individuals to conflict. Some other important aspects in retrospectives are discussing the obstacles that occurred (how the project went), and members sharing and discussing their feelings (Andriyani et al., 2017). Different perspectives of the members looking at these obstacles can lead to conflicts emerging (Gan et al., 2023). In light of these findings, retrospectives appear to have more conflicts occurring. And conflict lead to the lack of cohesion (Gehring et al., 1990; Mello et al., 2015).

Furthermore, agile relies on self-managed teams, as these are needed for handling change in the environment as well as flexibility in agile (Parker et al., 2015). Important behaviours for these team dynamics are active listening, taking others' word for it sometimes, supporting each other as well as acknowledging other people's achievements and contributions. These behaviours are important as they support team performance (Moe et al., 2010). Similarly, team cohesion is another strong factor for team performance (Gully et al., 2012), especially in tasks where members are interdependent on each other, like in agile processes (Kuthyola et al., 2017b). To create cohesion, communication between the members is required (Altameem, 2015). In summary, as agile methods focus on collaborating and communicating (Moe et al., 2010), these factors may improve cohesion (Altameem, 2015). Therefore, it is crucial to study how that cohesion may be manifested.

2.2 Cohesion

2.2.1 Definition of Team Cohesion

In general, cohesion is defined as "members' mutual social attraction and commitment to the collective task" (Kozlowski, 2017, p. 208). Similarly, according to Carron (2002b, p. 119) cohesion can be defined as: "a dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs". Cohesion dynamics consists of two social perspectives. First one being Group Integration, which reflects the group's overall perceptions of the group's unity, how much common goals and beliefs they share, and how well the bond is within the group. The second perception is Individual Attractions to the Group, which is focused on how the group satisfies the individual member's needs and desires for the member to feel heard and that their opinion matters, thus the individual feeling cohesion in their teams (Carron & Brawley, 2012). These perceptions can be negative or positive based on the more practical side: the task-execution (like individual contribution, individual time invested etc.), but also the socio-emotional side (conflict, the atmosphere in the group, relationships) (Chiriac, 2014). The more positive these perceptions of the individuals are, the stronger the cohesion is, thus the better the team performance (Toseland, Jones & Gellis, 2004). According to Toseland and Rivas (2005, p. 76), Team member behaviours that indicate high level of cohesion are for instance the following: ''perseverance toward group goals", ''willingness to take responsibility for group functioning", ''Expression of positive and negative feelings, ''willingness to listen", and ''Effective use of other members' feedback and evaluations". This is the definition this thesis relies upon, because the literature provides specific behaviours which are utilized to observe the interactions between team members.

2.2.2 Cohesion in Culturally Diverse Agile Teams

Learning is an important aspect in the agile approach to increase team performance (Boccardelli et al., 2017). Even though learning for an individual is about admitting and correcting one's mistake, however initiating learning behaviour might scare the individual, as it might come over as them being incompetent, so they are trying to "save face" (Edmondson, 1999). Thus, a good cohesion within a (agile) team is important to stimulate learning (Mutonyi et al., 2020).

Furthermore, culturally diverse teams have their opportunities and challenges (Stahl, 2009). According to Stahl et al. (2009), diversity in teams bring more creativity for problem-solving compared to monocultural teams. However, according to Podsiadlowski et al. (2013), the challenges diverse teams might face are discrimination, stereotyping and conflicts within the group. This is due to the differing perceptions among the team members regarding each other's cultural identity, influenced by their own background and culture. Therefore, this emphasizes the need for a good management strategy to handle these types of problems. According to Maznevski and Chudoba (2000) culturally diverse teams outperform mono-cultural teams when they actively pursue strategies in effective integration (e.g., approaches focused on improving communication and finding solutions to conflicts). And effective integration is one of the important elements of cohesion dynamics, because a strong social integration leads to increased cohesion (Sidorenkov & Borokhovski, 2023). Thus, these relationships emphasize the differences in cohesion in culturally diverse teams (compared to mono-cultural teams) as well as its importance. In short, depending on how mono- and multicultural teams are managed, both teams have the potential to be effective teams through communication strategies, for instance. Therefore, this shows the significance of verbal behaviours in enhancing communication.

2.3 Verbal behaviour and Cohesion Relationship

According to Keyton (2000), verbal behaviours play a crucial role in the relationships between the members of a group. Those relationships affect the way a group task is done. In his article, he states that group tasks cannot be executed by only depending on the knowledge of the task and the skills of an individual. And Carless (2000, p. 83) further elaborates that cohesion can be divided into two forms: task cohesion, defined as "the degree of commitment to the task" and social cohesion, which is defined as "the extent to which members interacted socially". Task cohesion seemed to be the most related to the team performance results. However, social cohesion does boost task cohesion, thus social cohesion might be essential for groups to form a common commitment to their tasks. Communication (verbal behaviour) has an impact on cohesion, since the better the communication between members of a group, the more united they feel, which can further impact the team performance, thus showing the importance of these factors (Lam, 2015). Therefore, it is significant to further explore the definition of verbal behaviours.

2.4 Verbal Behaviours

According to Skinner (1948, p. 20), verbal behaviour can be defined as "behaviour which is reinforced through the mediation of another organism." The difference between verbal and non-verbal behaviour lies in the time it takes to receive a response. Whilst, non-verbal behaviour, such as "walking" produce an immediate effect, like changing your location immediately. Verbal behaviours are faster behaviours than non-verbal behaviour, since "Talking is faster than gesturing", but do not require the listener to react immediately, as they might need time to process all the information (all the verbal behaviour). Furthermore, verbal behaviour can be immediately reflected upon and corrected. When individuals speak or write, they can

immediately hear or read their words and correct it. This is not as easy with non-verbal behaviour (like gestures for instance).

More recently, Yukl et al. (2002) provided further elaboration on the complex concept of verbal behaviours. Their work classified leadership behaviours into three categories: Task-oriented behaviours, relations-oriented behaviours, and change-oriented behaviours. According to Yukl (2002, p. 26), the task-oriented category is defined as "including clarifying, monitoring, and short-term planning". For relations-oriented behaviours Yukl et al. (2002, p. 17) mentioned "a high level of mutual trust and cooperation among members". Another work of his mentions for relations-oriented behaviours "Task commitment, confidence and cooperation. The specific relations-oriented behaviours include: supporting; developing; recognizing and rewarding; and empowering" (Yukl et al., 2019, p. 4). Lastly, Change-oriented behaviours are primarily about innovative solutions and adapting to change (Yukl et al., 2002). In this research, relations-oriented behaviours are most relevant. The components of relations-oriented behaviours are essential to cohesion, as cohesion is also about commitment (Kozlowski, 2017) and trust (Moe et al., 2010). Furthermore, cohesion is about the relations between the members (Piper et al., 1983). Therefore, with the focus primarily on relations-oriented behaviours given the research question guiding this thesis, it is crucial to explore how these interactions change within mono- and multicultural teams, as challenges may occur in communication dynamics if there is cultural diversity within teams (Podsiadlowski et al., 2013).

2.5 Mono- vs Multi-cultural Teams

Team diversity can be defined as a group having members of different ages, genders, and cultural backgrounds (Verwijs & Russo, 2023). This research focuses specifically on cultural backgrounds. Team cultural diversity is a complex concept as it brings advantages as well as disadvantages with it vis-á-vis team outcomes (Stahl, 2009). On the one hand, monocultural teams may have less communication problems, hence having low rate of conflicts. However monocultural teams might rely heavily on their common identity, which indicates a group bias (Earley & Mosakowski, 2000). On the other hand, multicultural teams can have access to a broader network and information, and thus more innovative solutions can be created for problem-solving (Ancona, 1992). Additionally, multicultural teams do not own common bias, as they have the ability to creatively solve problems (Cox et al., 1991).

Despite these advantages, multicultural teams often have poor communication as well, which could result in misunderstanding, thus leading to conflict (Jehn et al., 1999). Not having a shared language, can lead to misinterpreting information. Having a shared familiar language within a group builds trust and security (Lauring & Selmar, 2012). Besides the unfavourable communication barriers that multicultural teams face, these teams can outperform monocultural teams, because of their increased creativity (Shachaf, 2008). These communication differences between mono- and multicultural teams for instance, emphasize the significance of the exploration of team cohesion among them.

3. METHODOLOGY

3.1 Research Design

This thesis used a mixed methods approach, including both quantitative and qualitative analyses (Östlund et al., 2011). Using a mixed methods approach offers a more comprehensive and detailed understanding that cannot be achieved with a single approach alone (Almalki, 2016). Firstly, for the quantitative part a comparison analysis was executed. Initially, videos are coded deductively utilizing the verbal codebook which is created by the department of Organizational Behaviour, Change Management and Consultancy (OBCC) of the University of Twente. Afterwards, the cohesive verbal codes were quantified as the frequency of cohesion occurrences in agile teams, expressed in percentages. These were compared between mono- and multicultural teams in RStudio. Secondly, for the qualitative analysis part, a thematic analysis and an episode analysis was utilized to understand the context and patterns of these verbal behaviours. This approach provided a deeper understanding of the interactions within mono- and multicultural teams. By analysing the transcripts of the interactions, patterns and theories emerged that show specific behaviours related to team dynamics and cohesion, interpreted by the researcher. Ultimately, the mixed-methods approach increases the reliability and validity of a study (Вивек & Nanthagopan, 2021), therefore making the inclusion of both the quantitative comparison analysis and qualitative thematic and episode analyses necessary.

3.2 Data Collection

The data used in this research is sourced from larger research at a big Dutch financial organization, carried out between 2019 and 2022 by the OBCC department of the University of Twente. At the financial institution, 14 teams were recorded. The meetings that were recorded consist of the planning, refinement and retrospective meetings. The team dynamics in refinement meetings align best with the focus of this thesis, examining cohesion, as the other two meetings lack in providing a deeper understanding of genuine cohesion, because of the team dynamics and goal of the meeting. Thus, all coded and accessible refinement meetings were observed, resulting in a total of seven videos. The rest of the teams were omitted because of accessibility issues with the video files, and other technical challenges, such as audio issues, made it impossible to code these videos. Additionally, some teams did not have recorded refinement meetings.

3.3 Sample

The sample of these seven teams in total consisted of 49 individuals. The age range of these individuals were from 22 to 65. 11 of the members were females, and 37 were males. Two individuals did not specify their gender. The 49 individuals consisted of: 32 Dutch people, seven Indian members, and one member of each of the following nationalities: English, Spanish, Hungarian, Belgian, Slovakian, Thai, Brazilian and Russian. Two individuals did not specify their nationality. Since, multicultural teams are teams that consist of members from different countries (Jayanthi & Rajandran, 2012). Therefore, teams with members from at least two different countries were considered multicultural. Four of the teams had only Dutch people, however the nationality of one person was missing. Though, the language spoken was Dutch in that meeting, therefore these were considered monocultural teams. The other three teams had people from different countries. Additionally, the spoken language was English, thus these were considered as multicultural teams in this research.

3.4 Measures

The videos were coded by the researcher herself and also previous students from the OBCC group. That same verbal coding scheme was utilized in this research. The codebook is divided into three categories namely, self-orienting, steering, and supporting behaviours. The self-orienting category was excluded from the analysis, as this does not indicate cohesion, because an aspect of cohesion is the "individual attraction to the group" to feel supported and engaged, this unified feeling is an indicator of cohesion (Carron & Brawley, 2012), thus not a self-oriented person. Hence, specific behaviours from the other two categories, steering and supporting, were selected and considered for the analysis.

3.4.1 Steering

In this section, the codes that indicate cohesion from this category are explained. "Agreeing", with the given examples of "Approving" and "Consenting", shows the shared perspectives of the team members. And mutual beliefs and goals is an indication of cohesion as it reflects group integration (Carron & Brawley, 2012).

The code "Shaping the discussion", with the example of "structuring the meeting", could indicate high cohesion, as these behaviours show an effort for keeping all members on the same page and keeping them aligned with the task and each other, since "perseverance towards group goals" and "willingness to take responsibility for group functioning" may reflect cohesion (Toseland & Rivas 2005).

3.4.2 Supporting

All the verbal codes given in this category are as follows: "Positive feedback", indicates high cohesion, as feedback increases the cohesion within a team (Handke et al., 2021). "Asking ideas" and "Promoting cooperation", indicates high cohesion, because the sharing of knowledge shows cooperative interactions between the team members, and this cooperation shows cohesion (Van Woerkom & Sanders, 2009).

"Giving attention positively", for instance "showing personal interest", indicates high cohesion, as these behaviours may increase the feeling of being accepted, and this feeling is the core aspect of cohesion (Im et al., 2018). Humour indicates high cohesion, because it shows attraction between members and group harmony (Crowe et al., 2016). "Informing about personal issues" indicates high cohesion, as exchanging personal news, feelings and how they are doing creates a personal level in a team, without that, cohesion will not be attained (Zeuge et al., 2021).

These behaviours that indicate cohesion are showcased in Table 1 for a clear and concise reference on the next page.

Table 1. Chosen behaviours

Codebook behaviours indicative of Team Cohesion
Agreeing
Shaping the discussion
Positive Feedback
Challenging professionally (Asking ideas & Promoting cooperation)
Giving attention positively
Humour
Informing about personal issues

Note: These behaviours were observed and utilized in the frequency quantitative analysis.

3.5 Data Analysis

The analysis of this research firstly, consisted of counting the codes that indicate cohesion. Afterwards, through the quantitative method, the cohesion results between the mono- and multicultural teams were compared (shown in percentages of the frequencies), to explore how cohesion varies between both type of teams. Secondly, the analysis consisted of the observations of the verbal interactions between the team members. This was done by observing the recorded video meetings from the selected sample and reviewing the verbal codes in these recorded videos. Both the literature and the codebook helped in evaluating the cohesion within the teams. On the one hand, the literature provided background knowledge that helps in interpreting the results of this research, and it offered an understanding of the concepts of cohesion and verbal behaviours. On the other hand, the codebook provided a standardized set of criteria for categorizing verbal behaviours, and ensured consistency.

3.5.1 Quantitative Analysis

For the quantitative part of this thesis, a comparison analysis was executed. Smelser (2003, p. 645) defined it as: "Comparative analysis has come to mean the description and explanation of similarities and differences (mainly differences) of conditions or outcomes among large-scale social units, usually regions, nations, societies and cultures". As the core of the research question is based on the differences between mono- and multicultural teams, a comparison analysis is effective in analysing these differences in cohesion. The mean percentages of the total cohesion of the two team types were compared, and the differences between mono- and multicultural teams for each individual behaviour were also compared. Before comparing these mean percentages, the Shapiro-Wilk test was conducted to test the normality of the data. This offers the opportunity to draw reliable conclusions and valid interpretations (De Souza et al., 2023). When the data was normally distributed, a t-test was conducted. When the data was not normally distributed, then the Mann-Whitney U test was conducted, as this is an alternative for the t-test when the data is not normally distributed (Milenović, 2011)

3.5.2 Qualitative Analysis

For the qualitative part of this thesis, firstly a thematic analysis was run. Braun and Clarke (2006, p. 6) define it as: "a method for identifying, analysing, and reporting patterns (themes) within data. In this research, verbal behaviours are *analysed* to *identify* cohesion between mono- and multicultural groups, making

thematic analysis fitting for this research. Additionally, another essential aspect of thematic analysis is familiarising with the data through transcription of verbal data in a text. Given the nature of the video-recorded data of this research, the videos are transcribed into text as well. So, the patterns between the two team types were observed and how they differ were analysed. Secondly, episode analysis was also conducted. Goffman (1986, p. 10), describes an episode as a "slice", a notable moment within the group's ongoing activity. It can be characterized as "occasions of heavy engagement, salient interaction dynamics, and strategically important decisions" (Jarrett & Liu, 2016, p. 370). The episode analysis was conducted to provide a more detailed understanding of particular moments of cohesion, thereby supporting the patterns identified in the thematic analysis.

4. RESULTS

In this section, firstly, the frequency analysis is presented. Subsequently, the results from the statistical tests including the comparison analysis are presented. The comparison analysis consists of both the total cohesion and the individual verbal behaviours for mono- and multicultural teams. Afterwards, for the thematic analysis part, the patterns identified between the mono- and multicultural teams are explained. Lastly, these patterns are elaborated with moments from the episode analysis.

4.1 Frequency and Comparison Analysis of Verbal Behaviours

The frequency of each verbal code per meeting as a percentage of the team's total cohesion frequencies is shown in Table 2 at the top of the next page. The last column, named "Total cohesion per team as % of total behaviours", shows each team's total cohesion as a percentage of the combined behaviours of all teams. These numbers were also used in the comparison analysis.

The differences in total cohesion frequencies in percentages are visualized in the following figure.

Figure 1

Bar chart cohesion percentage comparison between mono- and multicultural teams.

Comparison of Cohesion Percentage by Team Type
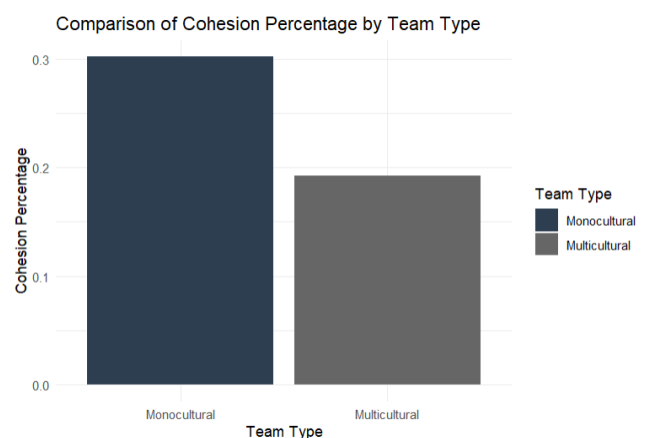
Table 2. Frequency of Cohesive Behaviours per Team: Team Totals and Overall

Team ID	Team Type	Agreeing	Shaping the discussion	Positive feedback	Professionally challenging	Giving attention positively	Humour	Personally informing	Total cohesion per team as % of total behaviours
02001	Mono	17.48%	3.16%	17.48%	0.73%	10.92%	42.71%	7.52%	30.21%
03001	Mono	26.19%	9.52%	6.67%	4.76%	3.33%	46.20%	3.33%	15.40%
04001 (Online)	Mono	32.96%	18.18%	7.95%	14.77%	1.14%	25.00%	0.00%	12.90%
06001	Multi	57.90%	21.05%	3.51%	17.54%	0.00%	0.00%	0.00%	4.18%
07001	Multi	56.71%	9.70%	14.93%	2.24%	8.96%	5.22%	2.24%	9.82%
12001	Multi	35.50%	20.23%	1.15%	1.53%	0.38%	41.21%	0.00%	19.21%
14001	Mono	27.44%	13.27%	7.08%	1.77%	15.93%	24.78%	9.73%	8.28%

Total cohesion behaviours of all teams   **100%**

Firstly, the key metrics were summarized (the mean, median and standard deviation for cohesion frequency percentages) in RStudio. This was for an easy and quick comparison between mono- and multicultural teams before the normality test was done. For the team type "Monocultural", the mean was 16.70%, the median was 14.10%, and the standard deviation was 9.82%. For the team type "Multicultural", the mean was 11.10%, the median was 9.82%, and the standard deviation was 7.59%. These results suggested that there are differences in cohesion between monocultural and multicultural teams. Monocultural teams tend to have a higher mean and median. However, the standard deviation for monocultural teams was higher than monocultural teams, 9.82% > 7.59%. This means that there is more variability in cohesion percentages among the monocultural teams, some teams having more or less cohesive verbal behaviours than the average.

Afterwards, the Shapiro-Wilk test was applied to assess the normality of data distributions. The p-value obtained for the monocultural teams was approximately $p = .382$ and for the multicultural teams it was approximately $p = .728$. Both p-values were greater than the alpha of .05, thus indicating that both teams were normally distributed. Given these results from the normality test, the next step was to execute a Welch's t-test to compare the means between the two types of teams. This t-test was utilized to identify statistically significant differences between the means of mono- and multicultural teams. The p-value result from this test

was a value of $p = .424$. This is greater than .05, thus there was not enough evidence to reject the null hypothesis. That means that there was no significant evidence to conclude that there are differences in cohesion between mono- and multicultural teams.

In addition to the total cohesion analysis, the frequency percentages of individual verbal behaviours were also examined for each team type. Some behaviours had a normal distribution, while some did not, which necessitated the use of both parametric and non-parametric tests. Shapiro-Wilk test was applied to assess the normality of data distribution per behaviour. For normally distributed behaviours, Welch's t-test was used to compare the means between mono- and multicultural teams. For behaviours that were not normally distributed, the Mann-Whitney U test was used. The p-values from the normality tests, the corresponding comparative tests used, and the p-value results from the comparative tests are provided in Table 3. These results indicated that the behaviours "Agreeing", "Shaping the discussion", "Professionally challenging", "Giving attention positively", and "Humour" were normally distributed, since their p-values were greater than .05 (see Table 3 below). Thus, a Welch's t-test was conducted for these behaviours. Meanwhile, the behaviours "Positive feedback" and "Personally informing" were not normally distributed, since their p-values were below .05. Thus, a Mann-Whitney U test was used. All p-value results from the comparative tests were greater than .05, indicating that there are

Table 3. Normality and Comparative Test Results per Verbal Behaviour

Behaviour	Shapiro-Wilk p-value Monocultural	Shapiro-Wilk p-value Multicultural	Comparative test used	Comparative test p-value
Agreeing	0.749	0.089	Welch's t-test	0.063
Shaping the discussion	0.984	0.124	Welch's t-test	0.279
Positive feedback	0.020	0.308	Mann-Whitney U test	0.400
Professionally challenging	0.184	0.075	Welch's t-test	0.809
Giving attention positively	0.605	0.072	Welch's t-test	0.342
Humour	0.106	0.223	Welch's t-test	0.275
Personally informing	0.818	< .001	Mann-Whitney U test	0.199

no significant differences per behaviour between mono- and multicultural teams.

4.2 Thematic Analysis: Patterns identified

After analysing the videos and comparing monocultural and multicultural teams, certain patterns, interpreted by the researcher of this thesis emerged regarding cohesion. In this section, these interpreted patterns are explained. Although the comparison analysis showed no statistically significant difference, the qualitative analysis revealed that behaviours such as "Personally informing" appeared with greater depth in monocultural teams, it suggested a nuanced difference in interpersonal dynamics between mono- and multicultural teams. A notable pattern is the lack of significant differences in task execution between the two types of teams. Most meetings of the multicultural teams, with one exception that is discussed later, went smoothly. Team members generally understood each other well and asked for clarification when needed. However, the interactions were predominantly task-related, and there was a lack of a deep, relationship-focused cohesion based on the observed patterns and interpretations of the researcher. Although there are no significant differences per behaviour according to the comparison analysis results. It stood out to the researcher, that the task-related behaviours such as "agreeing", "shaping the discussion" and "professionally challenging" appeared approximately with similar rates in both team types. Whereas "personally informing" in multicultural teams often showed 0% cases, this can be seen in Table 2. This observation is important to consider, because it shows the potential differences in the depth of interpersonal interactions between the teams, which may not be fully captured by the quantitative analysis alone. While there were no clear indicators of a strong cohesion with deep relationships between the members in multicultural teams, there were also no signs of low cohesion, because of the task-related cohesion. In contrast, one multicultural team had several indicators of low cohesion. Conflicts frequently emerged, since certain topics had to be closed by a member to prevent further escalation. Besides the humorous moments that happened occasionally, the overall atmosphere lacked cohesion, because there was quite some tension in the interpretation of the researcher. Monocultural teams, on the other hand, exhibited higher levels of cohesion. Not only task-related cohesion, but they had verbal behaviours which are indicative of strong interpersonal bonds, such as "personally informing," which appeared more in depth compared to multicultural teams. Monocultural team members often inquired about each other's personal lives, suggesting a bond that is beyond the mere task-focused interactions. They had deeper and longer personal conversations compared to team 07001, which was the only multicultural team that also had "Personally informing" moments (see Table 2). Overall, while both mono- and multicultural teams demonstrated task-focused cohesion by actively engaging in the meeting and collaborating with each other by contributing their opinions to make further progress, monocultural teams showed higher interpersonal cohesion, by more personal and supportive interactions. In the following episode analysis, specific moments that show deep interpersonal cohesion in monocultural teams are highlighted as examples for these patterns.

4.3 Episode Analysis – Cohesion Episodes

The following two episodes were selected and analysed, as they exemplify the personal bond among team members within monocultural teams. These episodes illustrate the personal interactions and emotional support, which show the connection between team members, thus their interpersonal cohesion, aligning with the patterns identified in the thematic analysis. The third episode is the comparison between the multicultural team that had no cohesion (more conflicts and tension) and a monocultural team that did have cohesion, to highlight their differences in verbal behaviour. The last episode shows the only multicultural team that had a "Personally informing" moment, specifically for comparison with monocultural teams.

4.3.1 Team 02001

This monocultural team stood out the most, as it showed strong cohesion between the members. During the second half of their meeting they played a game called "kwaliteitenspel". It is a game where they give cards with good character qualities to a team member they find most fitting. To be able to play this, it can be observed in the video that they should be familiar with each other's qualities to assign a card to the other members. Playing a game, while complimenting team members with good qualities created a comfortable and playful atmosphere, it creates connectedness. This connectedness as well as these positive social interactions really showed cohesion in the interpretation of the researcher. An episode that especially stood out was when they were talking about their personal lives. Which lasted about 2.5 minutes. Follower 9 started by asking follower 7 "You're a bit in the Sinterklaas mood, right?". Follower 7 further said "Yes, I am. I'm going to celebrate Sinterklaas on Friday". Follower 9 also asked follower 6, who responded with "I still had a lot of days off from my holiday. And I'm also moving, you know, and Sinterklaas is coming, Christmas is coming. Well, with a bit of luck, my wife will start working again in January…". Follower 2 is asked as well and answered with: "I officially signed yesterday that the house has really been sold. So now I only have one house", to which follower 9 responded with "Congratulations". These back-and-forth interactions, in which they talk about their private lives and update their coworkers keep going. The full transcript of this moment is provided in Appendix 10.1. These interactions created an environment that felt almost like a friends meetup rather than a superficial gathering of coworkers in a formal meeting. The team showing a genuine interest in each other and being supportive created a warm atmosphere. Them being able to share informal and personal experiences indicates the bond, as well as the trust among the team members.

4.3.2 Team 14001

In this team, the following strong cohesive moment that stood out lasted for 1.5 minute. While they were making a plan, follower 2 personally informed the group that she had to attend a funeral and would not be able to participate. Despite the sensitivity of this topic, follower 4 made a joke saying: "and I wasn't invited?". This joke made all members laugh, including follower 2, indicating the comfort and trust within the team. This shows a high level of cohesion as humour in sensitive topics requires significant trust and respect among the team members. Follower 4 further clarified whether it was "good friends" after follower 2 mentioned it was not family, thus showing an interest in her

personal life. These interpersonal relationships show friendship in the interpretation of the researcher. Moreover, the team was understanding and showed empathy towards follower 2, as follower 4 said "Well, then you should just go there", and follower 1 also said "You can decide for yourself". Additionally, follower 4 assured that the team would be able to manage with her absence by saying "Yes of course! The tent will continue to operate, so we will simply do an extra step, right?". This shows empathy, which in the interpretation of the researcher, indicates strong cohesion. Subsequently, follower 2 responded with "Yes, I know, but I shouldn't always be like that", which showed her concern about not being able to contribute, thus her commitment to the group goals. The full transcript is provided in 10.2 excerpt 1. Lastly, at the end of the meeting, follower 3 mentions "Before we wash it down with alcohol, I think we need another survey for the […]". This indicates that they will go for a drink, showing their interpersonal relationship after workhours. This moment is also provided in 10.2, excerpt 2.

4.3.3 Team 12001 and 03001 Comparison

Team 12001 is a multicultural team that had many conflicts and tension in their meeting. Hence, the researcher of this thesis interpreted based on her observations that there was no cohesion. This can be compared with a moment in which one member made a sarcastic joke and the member targeted by the joke did not laugh in team 12001. However, in team 03001 a sarcastic joke was also made and the targeted member did laugh. In team 12001, follower 2 said to follower 1 "You got exhausted?". However, follower 1 did not laugh. Then follower 2 made sure to clarify that it was a joke and said "You're sighing. I'm just kidding". This moment really shows that throughout the meeting there was a lot of tension and even a small joke like this did not lighten up the mood either. The sarcastic joke made by follower 2 is coded as "Protecting one's own position" and this code is utilized when someone makes a joke, but it was not funny enough and no one laughed about it. Follower 1 further ignored the joke and kept going with the meeting "Okay, so, um, keeping the….." (the transcript can be found in Appendix 10.3.1 excerpt 1). This moment can be compared with the monocultural team 3001. Follower 2 makes a joke about follower 4 and said "David looks puzzled/confused". This joke was coded as humour, as follower 4 and other team members laughed about this joke. Then the team jokes around a bit further. And follower 4 further said: "huh, yes we do that? yeah but well I think that - that really uh - I'm being a bit funny but that really takes some time uh-", the sentence "I'm being a bit funny" is basically a Dutch sentence that means "I was joking around", so follower 4 does clarify that that whole moment had a funny and joking atmosphere. There was no tension when you compare it to team 12001 when a sarcastic joke was made. This shows the cohesion differences between these groups. While this thesis focuses on cohesion rather than conflict, one additional example is provided from team 12001 to show their frequent conflicts, which the researcher of this thesis interpreted as an indication of low cohesion. This team had a lot of conflicts and disagreements throughout the whole meeting. The end of one conflict effectively sums up how the dynamics were with previous conflicts. These conflicts can be characterized by many disagreements and frequent interruptions. Follower 6 opened a conflict again and said "No, one thing is like going to the tax

officer is of <sure> companies", follower 2 then interrupted and wanted to stop the start of the conflict again by repeatedly saying "No, no, no, stop, stop, stop". Follower 6 tried again and said "No, no I'm just talking about <>", and follower 2 further said "End of discussion!" and a bit later he also said "No, I don't want to hear anything about tax officer anymore". The need for the members to interrupt with this type of comments, demonstrates the extent to which these conflicts have escalated and become unmanageable, as well as the tension throughout the whole meeting. This moment was presented to show the lack of cohesion within this team, and to highlight the differences in how jokes are handled and reacted to when there actually *is* cohesion within a team. This transcript is also provided in 10.3.

4.3.4 Team 07001

This was the only multicultural team that had "Personally Informing" verbal codes. It stood out to the researcher of this thesis that the transcript of this moment was more superficial and not as personal compared to the "Personally informing" moments in monocultural teams. In this moment, follower 4 joins the meeting about 20 minutes later. Follower 1 asked "You ok?" to follower 4, which he responded with "Yeah", he also said something about his back, while he had his hand towards it (this is not recorded in the transcript, as the audio was a bit unclear). Then follower 1 said "but you don't look ok". Follower 4 responded with "Yeah you know", not further explaining what happened to his back, or why he doesn't look okay. Follower 4 then said "Do you have time or do you want to skip and uh-. We left you a seat hahah". Follower 4 reacted with "I'll take it yeah, thanks yeah". Follower 1 then said "Maybe you don't want to sit down". Follower 4 then reacted with "Yeah that's right yeah", but he did sit. This is the only moment that was coded as "Personally informing", but according to the researcher's interpretation, this moment was rather superficial and really lacked the part where there was actually "personal informing" compared to the ones in monocultural teams, in which they talked more about their private lives, and explained private matters more in detail, like team 14001, when a follower informed about her personal matter and explained she had to go to a funeral. The transcript of this moment is provided in 10.4.

5. DISCUSSION

5.1 Theoretical Implications

The objective of this thesis was to explore how cohesion as observed through verbal behaviour, varies between monocultural and multicultural agile teams. The results offer a couple of theoretical contributions to the understanding of team cohesion within agile settings, while comparing mono- and multicultural teams. This thesis addresses a significant gap in the literature by providing objective, observational data on verbal behaviours and their relation to team cohesion. Addressing this gap is important because it provides a more nuanced understanding of how team cohesion appears in different cultural environments, which is essential for developing effective management strategies in culturally diverse agile work environments.

Firstly, the results demonstrate that although monocultural teams exhibit more in-depth interpersonal cohesion verbal behaviours, such as personal information sharing, both team types show task-

related cohesion and worked effectively. This is because both mono- and multicultural teams had a "perseverance towards group goals", which is one of the characteristics of cohesion (Toseland & Rivas 2005, p. 76). This finding extends the existing literature on team cohesion, by suggesting that these interpersonal relationship benefits do not necessarily mean higher task-related cohesion. Previous research also often emphasizes the benefits of multicultural teams, highlighting their potential for increased creativity, problem-solving and decision-making due to diverse perspectives (Sommers, 2006; Jehn et al., 1999). However, the findings of this thesis suggest that while multicultural teams have these advantages, they do not necessarily have higher task-related cohesion compared to monocultural teams.

Secondly, the lack of significant differences in task-related cohesion behaviours, as shown by the quantitative analysis, may suggest that some form of effective management or internal team dynamics helped to maintain cohesion. Specifically, the absence of task-related conflicts between mono- and multicultural teams supports this point. Because one multicultural team experienced conflicts. A notable pattern was the high tension within the team, which is an indication of low cohesion for both social and task-related cohesion (Terry et al., 2000), highlighting the importance of conflict management strategies in these settings. This aligns with previous research indicating that management strategies can mitigate potential conflicts arising in multicultural teams, since these teams have higher chances in conflicts (Maznevski & Chudoba, 2000). Therefore, these findings contribute to the theory by emphasizing that affective conflict management is crucial in achieving cohesion in multicultural teams.

Furthermore, the episode analysis provides qualitative observed evidence that monocultural teams often show deeper levels of interpersonal cohesion. This supports existing theories, such as Social Identity Theory, which is described as "individual's knowledge that he belongs to certain social groups together with some emotional and value significance to him of this group membership" (McKeown et al., 2016, p. 6), and these social groups have a shared identity. This thesis highlights the significant role of common cultural backgrounds in fostering interpersonal bonds. For instance, having a common identity (Earley & Mosakowski, 2000) fosters interpersonal bonds (Postmes et al., 2005). The connectedness and the positive social interactions in these interpersonal bonds indicate cohesion (Jennings & Bamkole, 2019). This research reinforces these theories by providing specific evidence from agile team settings, which illustrated how shared cultural identity influences team interpersonal cohesion. It does not align with the quantitative results showing that there is no significant difference, as the qualitative analysis revealed nuances that cannot be captured by numbers alone. While monocultural teams often engage in personal conversations, which show their existing trust and comfort, multicultural teams tend to have more task-related interactions, with personal interactions that are generally less intimate, personal, and detailed. This difference suggests that monocultural teams naturally have this personal bond because of their shared culture, whereas multicultural teams may require more management strategies to achieve similar levels of trust and comfort to create that interpersonal bond. This trust also indicates strong cohesion (Moe et al., 2010). And their interpersonal relationships show friendship, which also indicates strong cohesion (Bulgaru, 2015). Additionally, empathetic behaviour

towards the personal circumstances of a team member, such as expressing understanding and support during sensitive topics, also indicates high cohesion (Rieffe et al., 2010). These findings suggest that while quantitative results show no significant difference in total cohesion and for each verbal behaviour between mono- and multicultural teams, qualitative analysis reveals deeper interpersonal dynamics. This means that effective management in multicultural teams is needed to increase interpersonal cohesion. They may require more effort to build the same level of trust and comfort that monocultural teams have. This adds more depth to the existing theories on team cohesion, emphasizing the importance of both quantitative and qualitative approaches in understanding team dynamics.

Overall, this thesis contributes to the theoretical understanding of observed cohesion in agile teams by highlighting the complex relationship between cultural diversity and team dynamics. Specifically, this research fills the gap of lacking objective observational data on how verbal behaviours impact team cohesion in agile settings, using video recordings instead of subjective surveys. It also enriches Social Identity Theory by highlighting how cultural backgrounds influence the depth of interpersonal cohesion and the need for management strategies in multicultural teams. It shows that cultural diversity is a crucial variable in understanding and fostering team cohesion. It also highlights the importance of considering both task-related and interpersonal aspects of cohesion, as qualitatively there is a difference. By coding and analysing verbal behaviours, this research provided a micro-level understanding of how cohesion manifests in agile teams, adding depth to existing knowledge.

5.2 Practical Implications

Although the quantitative results did not show significant difference in task-related cohesion between mono- and multicultural teams, managers should consider the qualitative insights that show nuanced interpersonal dynamics. While the overall cohesion might seem similar, the quality and details of the interactions can vary between the two team types. Thus, managers should focus on fostering an environment where the subtle details of cohesion are further enhanced

Therefore, the findings of this thesis have practical implications for managers, particularly for those in multicultural agile organizations. Understanding cohesion in different team settings can help managers come up with strategies to increase cohesion, thus the team performance and effectiveness. For HR managers and team leaders (such as the product owner), the insights from this thesis suggest the importance of encouraging an environment that supports both task-related and interpersonal cohesion. For instance, managers should be aware of the different cohesion dynamics in mono- and multicultural teams. As monocultural teams may naturally engage more in personal information sharing and supportive interactions, and multicultural teams might require more efforts to achieve a similar interpersonal cohesion. This could include regular activities that encourage personal interactions, such as the "kwaliteitenspel" game observed in one of the monocultural teams, which can help build interpersonal bonds. Another strategy for the product owner could be to reserve the first 10 minutes of a meeting for instance, to ask team members how their weekend went. This is to create interpersonal bonds, by supporting conversations about their

private lives. Or another strategy could be to plan outings for colleagues outside of work hours

Furthermore, this thesis also highlights the significance of verbal behaviours in indicating team cohesion. Managers or the product owners in agile teams should pay attention to these behaviours during team meetings and their interactions. Encouraging positive feedback, humour, and personal interest among team members can enhance the feeling of connectedness within the team. Moreover, they can organize training workshops to help team members become better at recognizing and utilizing these verbal cues effectively. This training can increase the understanding of the small details in communication that contribute to a stronger interpersonal team cohesion.

In summary, the practical contributions of this thesis provide actionable insights for enhancing interpersonal cohesion in both mono- and multicultural agile teams. By implementing strategies that foster interpersonal relationships among members, managers can create a more cohesive environment.

6. LIMITATIONS AND FUTURE RESEARCH

Like any research, this research also faced several limitations that should be taken into consideration for future research. The most notable limitation is the focus on one singular Dutch financial institution for the data collection. This circumstance may introduce possible biases, because of firm-specific organizational dynamics that are not generalizable across other sectors or circumstances. Furthermore, all teams that were considered monocultural were Dutch, this may influence the findings because of cultural dynamics within teams. To make the research more generalizable, future research should include agile teams from different sectors and monocultural teams from different countries as well.

Another limitation is the relatively small sample size of seven videos, which could also impact the generalizability of the findings. Acknowledging this, the researcher of this thesis also coded video recordings of team meetings, so that the research sample was expanded. However, it would be beneficial for future research to further expand the sample size to increase the generalizability of the results even more.

Additionally, this thesis focused primarily on the frequency of verbal behaviours due to its specific focus, and it was sufficient to address the research question. However, future research could take into account the duration of cohesion moments to enhance the findings of this research, by exploring additional dimensions, beyond just the frequencies. This may provide deeper understanding of how cultural diversity influences team cohesion dynamics.

Moreover, the "kwaliteitenspel" game played in one of the refinement meetings is not a standard activity for such meetings. Although first half of the meeting was their regular activity, the other half included playing this game. This also raises questions about the comparability and generalizability of the meetings observed, as the second half of the meeting is not a standard activity. However it remains interesting that this occurred within a monocultural team, possibly indicating a natural tendency towards such bonding activities. Though, future research could try to account for these differences to ensure more comparable and generalizable results.

Furthermore, the classification of teams as either mono- or multicultural was based only on the observable diversity, primarily their nationality and spoken language in the meeting. However, deeper factors such as the cultural identity or cultural assimilation of the individuals were not taken into account, as these details were not included in the self-reported surveys. To partially mitigate the risk of misclassification, this research utilized a criterion where a team was only classified as multicultural if it had members from at least two different national backgrounds. This method helped in more accurately classifying multicultural teams, but it is worthy to note that a deeper exploration of individual cultural identity and the assimilation of an individual is recommended for future research.

Lastly, the thematic analysis conducted in this research was based on the researcher's interpretation of the verbal behaviours observed in team meetings. While this method provided valuable understandings into the dynamics of team cohesion, it includes some degree of subjectivity that comes with any perspective based on a single researcher, To increase the reliability of the results, patterns identified in the thematic analysis were supported by specific examples and moments highlighted in the episode analysis. However, given the subjectivity in the thematic analysis, it is beneficial for future research to include a second researcher in the observation and analysis process. This may provide a dual perspective, potentially revealing additional interpretations that might have been overlooked.

7. CONCLUSION

This thesis examined the team cohesion differences, through verbal behaviours between monocultural and multicultural agile teams within a large Dutch financial firm. The research revealed different dynamics that appears within these teams. Firstly, interpersonal cohesion, characterized by the personal interactions and supportive behaviours, were more present in monocultural teams than multicultural teams. However, both team types showed task-related cohesion. These insights contribute to a better understanding of how cultural diversity influences team cohesion in agile settings. The adaptability and flexibility from agile methodologies pave the way to apply this understanding in managing all forms of cohesion across both mono- and multicultural teams.

8. ACKNOWLEDGEMENTS

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10. Appendix

10.1 Episode 1 transcript

F9: You're kind of in the Sinterklaas mood, right?

F7: Yes, I am <>. Yes, I'm going to celebrate Sinterklaas on Friday, I'm very happy, I'm very happy that the <ANM> has been adjusted, that's great, that's still a bit flexible, I think it's really great. Thank you!

F9: And on.

F6: Okay and next.

F9: And what about you <F6>?

F6: Well a bit, uhmm, what is that – that thing from Frozen, the snowman?

F9: Olaf?

F6: Yes, Olaf, very good. Well, you know, Sinterklaas is coming. Next week I'll work three more days and then I'll be there < > until January 5, say. Hahaha

F3: Boy, boy, boy

F9: That <cowardly> of you guys.

F6: Yes, I still had a lot of days off from my holiday, so to speak. That and my move is coming, you know, Sinterklaas is coming, Christmas is coming. Well, with a bit of luck, my wife will start working again in January, so that's also a thing. So, ummm, that's how I feel about it.

F9: And you <F2>?

F2: Well, I, uhmm, officially signed yesterday that the house has actually been sold. So now I only have one house.

F9: Congratulations.

F2: < > I am happy and happy to start the year.

F9: And you <F3>?

F3: Well, you're a mess. I, uhmm, got out of bed at five o'clock this morning. <That I really felt like I had already finished the day>.

F9: You still have one, right?

F3: My son has a theory day, where you have to take a whole day of theory and then take an exam. So he had to be out the door by a quarter to seven. <and the queen doesn't use public transport> so, ummm.

F5: Did Dad have to drive a taxi?

F3: Dad had to drive again < >. We had to take quite a detour.

F9: And < >.

F3: I'm just looking forward to that and then I'm going to Africa < > Looking forward to it.

F9: I see

F9: Get out nice and early too. < > nice walk.

F3: Well if it continues like this, < > you know a little bit how it works.

F9: Hey and you <F5> a little Frozen?

F5: At first I thought it was a different one.

F9: What did you think the other thing was?

F5: Kind of like sledding. I always find that nice at this time of year, with Christmas and everything that is coming up, I thought it would be a good <> nice thing to do with the family.

F9: Nice, great. Uh uh then, briefly the goals, who are you bringing with you, who has prepared it, who knows where we stand.

10.2 Episode 2 transcript

Excerpt 1

F5: And tomorrow? Are you coming?

F2: Yeah, no, I can't also tomorrow, because I'm going to a funeral, because we have a funeral in Friesland.

F5: Oh um, so that with Theo is with me eh.

F4: Why?

F2: Well.

F4: So I wasn't invited?

Everyone: Hahaha.

F2: Well, not this one anyway. This no. But now I'm barely there for almost the entire week, it's fine. I can't uh everywhere-

F4: Hello-

F2: But other than that, it's not boring.

F4: It is your loved ones who are heavenly or who will be heavenly. Yes.

F1: That kind of eh- At those kinds of moments you meet your family. So uh-

F2: Well it's not family. But uh-

F4: Good friends then.

F2: But uh <>.

F4: Well, then you should just go there.

F2: Yeah, well.

F4: Yes, then you just go there.

F5: That's really entirely up to you.

F4: Should you just- Just go.

F5: You have to do it yourself if you eh-

F1: You can also know that yourself.

F4: That's entirely up to you.

F2: That means I'll only be there for two weeks- uh two days.

F5: But that appointment with Theo is on Friday?

F2: That's Friday. No, I'm really not going to do that.

F5: Okay.

F4: You don't have to take any days off for this officially. So?

F2: Well um, you know what's kind of the point eh. I just notice that your energy is decreasing enormously, so driving to Heereveen alone is simply not responsible.

F5: No.

F2: So I had already asked my sister, but she already had guests.

F1: Well, just go there.

F4: Yes. Just go there, really.

F2: Yes?

F4: Yes of course! The tent will continue to operate, so we will simply do an extra step. Right?

F2: Yes, I know, but I shouldn't always be like this <>.

Excerpt 2

F3: Before we wash it down with alcohol, I think we need another survey for the eh-

F4: For what?

F3: The one you had last time.

F4: Oh. Well, I'll just call them and then we'll be done.

10.3 Episode 3 transcript

10.3.1 Team 12001 excerpt 1

F2: You got exhausted?

F3: hehe

F2: you're sighing. I'm just kidding.

F1: okay, so, um, keeping the- it is as same, but we know testing and developers, but the point was we are same – so we can have - . But if you want that I should write that, you can also add some points. < >. Okay, so we are < > with main stories. Three of the names <spinning >. Uh, don't think any changes of that.

10.3.2 Team 3001

F2: hahah <F4> looks very puzzled/confused

F5: we execute haha, you uh-

F7: if I understand correctly, this is simply reading two files and clicking on join all these columns -

F4: ssshh

F7: Oh

F6: hahah

F4: if you did the same thing as yesterday, we'll be done with it in no time.

F7: okay

F4: that analysis is seriously something -

F7: <>

F4: huh, yes we do that? yes but well I think that - that really uh - I'm being a bit funny but that really takes some time uh-

10.3.3 Team 12001 excerpt 2

F1: next topic

F6: okay.

F1: yes, last question.

F6: no, one thing is like going to the tax officer is of < sure> companies.

F2: no, no, no, stop, stop, stop

F6: no, no, I'm just talking about < >.

F3: if you-

F2: end of discussion!

F6: okay.

F2: no, I don't want to hear anything about tax officer anymore, I'll deal < > requirements. Then we'll have more discussion.

10.4 Episode 4 transcript

F1: you ok?

F4: yeah <>, it also clear.

F2: ooh that's so <>

F1: oh

F3: oh

F4: nah, nah, its fine

F1: but you don't look ok.

F4: yeah you know.

F1: do you have time or do you want to skip and uh-. We left you a seat hahah

F4: I'll take it yeah, thanks yeah.

F1: maybe you don't want to sit down.

F4: yeah that's right yeah.