Personality and humor in groups: implications for collective emotional intelligence, psychological safety and satisfaction

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Abstract

Purpose – This study aims to explore the role of team personality and leader’s humor style on the use of humor in group communication and the extent to which group humor mediates the association between team personality on the one hand, psychological safety, collective emotional intelligence and group satisfaction on the other hand.

Design/methodology/approach – The authors used a survey to collect data from 304 employees nested in 83 groups working in organizations from various sectors in Romania.

Findings – The study results show that extraversion is positively associated with group affiliative humor, while neuroticism has a positive association with group aggressive humor. The leader’s affiliative humor style had a significant positive effect on group affiliative humor, while the effect of leader’s aggressive humor style on the use of aggressive humor in groups was not significant. Furthermore, the authors examined the mediation role of group humor in the relationship between team personality and team emergent states and satisfaction. The authors found that group aggressive humor mediates the association between neuroticism and group emotional intelligence, psychological safety and satisfaction, while affiliative humor mediates the association between extraversion and emotional intelligence and team satisfaction.

Originality/value – The study reports one of the first attempts to explore the multilevel interplay of team personality and humor in groups as they relate to emergent states.

Keywords Affiliative humor, Aggressive humor, Leadership, Satisfaction, Group emotional intelligence, Psychological safety

Paper type Research paper

Introduction

Group communication is the key process that shapes the emergence of collective states like team cognition, psychological safety, collective emotional intelligence and ultimately drives group effectiveness (Curșeu et al., 2015; Curșeu and Pluut, 2018; Rapp et al., 2021; Waller et al., 2016; Kaur and Ren, 2023; Hindiyeh and Cross, 2022). Literature to date has
extensively explored the role of team personality and leadership influences on interpersonal behavioral patterns enacted in group communication (Acuña et al., 2009; Barrick et al., 1998; Bell et al., 2018; Boies et al., 2015; Macht et al., 2014), yet we know relatively little about how they influence humoristic communication in groups (Plessen et al., 2020; Tremblay, 2021; Gheorghe et al., 2023; Gheorghe and Curșeu, 2023, 2024; Mesmer-Magnus et al., 2012).

Personality impacts interpersonal communication processes through social perception as well as social action (Dijksterhuis and Bargh, 2001; Dill et al., 1997; Molden and Dweck, 2006; Reniers et al., 2016). In particular, group members engage in humoristic communication by selecting interpersonal settings that fit their personalities and enact behavioral patterns consistent with their personality traits. Our study answers the call for multilevel investigations of humor in groups (Gheorghe and Curșeu, 2024) and aims to explore the association between neuroticism and extraversion on the one hand, and the use of aggressive and affiliative humor in groups on the other hand.

As role models, leaders shape the interpersonal behaviors of their followers through social influence as well as interaction synchrony (group members seeking consistency with the leader) (Rosenberg et al., 2021; Son and Yang, 2023; Mayer et al., 2023); therefore, we expect that a leader’s humor style shapes the preferences for humoristic communication in groups (Kong et al., 2019) as well as their interpersonal behaviors in teams (Yang and Yang, 2023). A second aim of our study is to explore the association with leader’s aggressive and affiliative humor styles and the emergence of affiliative and aggressive humor in groups.

Group humor reflects emergent communication patterns in groups that are shaped by individual as well as group-level factors (Curșeu and Fodor, 2016; Romero and Pescosolido, 2008; Romero and Arendt, 2011); therefore, humor in groups warrants more complex multilevel studies (Gheorghe and Curșeu, 2024). With few exceptions (Curșeu et al., 2022; Gheorghe et al., 2023; Nguyen et al., 2022), literature to date did not extensively explore the multilevel interplay between humor in groups and different team outcomes. Although we have preliminary empirical evidence supporting the role of group humor as antecedent for collective emotional intelligence (Curșeu and Fodor, 2016), we still miss empirical evidence concerning the implications of humor for other emergent states and outcomes in groups. Therefore, we set out to test the mediating role of group humor in the relation between members personality on the one hand, and group emotional intelligence, satisfaction and psychological safety on the other hand. Our study is the first to explore the multilevel interplay of personality and humor in group settings, and we present initial empirical evidence concerning the association between leaders’ humor styles and the emergence of humoristic communication in groups.

**Personality and group humor**

As an emergent group-level communication phenomenon (Curșeu and Fodor, 2016; Gheorghe et al., 2023; Gheorghe and Curșeu, 2024), humor can be used to amuse other group members and promote positive social connections and relationships (affiliative humor), or it can be used to promote feelings of superiority and control others by ridiculing, teasing and disparaging them (aggressive humor) (Martin et al., 2003; Curșeu and Fodor, 2016; Mesmer-Magnus et al., 2012). We distinguish here between two ways in which personality impacts the emergence of humoristic communication in groups, and we focus on extraversion and neuroticism as two relevant relationship-oriented personality traits (Prewett et al., 2009) that influence people’s perception and reactions to work events and can have an impact on interpersonal communication (Côté and Moskowitz, 1998) and the status expectations and dynamics in groups (Bendersky and Shah, 2013). In addition, the likelihood of experiencing positive and negative emotions is consistently linked with extraversion and neuroticism.
(Gross and John, 2003), and because humor is associated with positive and negative affect (Gheorghe et al., 2023; Gheorghe and Curșeu, 2024), these two traits are particularly relevant for the current study.

First, at the individual level, we use a social perception lens (Casciaro, 1998) to argue that one’s personality traits impact on the way in which that person perceives the type of humor used in group communication. Extroverts are sociable and active, tend to experience positive emotions and to seek out positive social interactions (Barrick and Mount, 1991; McCrae and Costa, 2008). This tendency to seek out positive interactions might make extrovert people more sensitive to noticing opportunities for positive humor during group conversation, or to perceive communication cues in more positive terms. We thus argue that group members scoring high on extraversion are likely to perceive more affiliative cues in humoristic communication than group members that score low on extraversion (individual-level effect is explained by social perception). Personality also impacts interpersonal behavioral patterns in groups, extraverts being more inclined to avoid conflict and to engage in accommodating conflict management styles (Ayub et al., 2017). According to the behavioral concordance model (Côté and Moskowitz, 1998), extraverts are friendly and agreeable individuals in interpersonal interactions, and we expect that extraversion may translate into greater likelihood for using affiliative humor to strengthen social bonds within groups. Supporting this idea, two meta-analyses found that extraversion correlates positively with the affiliative humor style (Mendiburo-Seguel et al., 2015; Plessen et al., 2020).

Individuals scoring high on neuroticism tend to experience more negative emotions such as anger, anxiety and depression and are more sensitive to negative social cues (Barrick and Mount, 1991; McCrae and Costa, 2008), they tend to experience more hostility in communication and are more reactive in general to negative events (Chi et al., 2013; Pfeiler et al., 2018); therefore, we argue that they are more likely to report the use of aggressive humor in groups than are group members scoring low on neuroticism (individual-level effect). In line with the behavioral concordance model (Côté and Moskowitz, 1998), people scoring high on neuroticism are hostile submissive individuals that are less likely to engage in agreeable behavior and more likely to be quarrelsome. Meta-analytic results report a positive association between neuroticism and aggressive humor (Mendiburo-Seguel et al., 2015; Plessen et al., 2020). In terms of conflict management preferences, group members scoring high on neuroticism tend to adopt less integrative and more dominating approaches in conflict management (Ayub et al., 2017); therefore, we believe that neuroticism triggers more aggressive humoristic reactions in groups.

Second, we focus on the concept of group personality (Peeters et al., 2006b) to argue that group elevation in personality traits is enacted in collective behavior and is ultimately reflected in group processes and emergent states (Bell et al., 2018). In particular, we argue that groups in which members score on average high on extraversion tend to engage in more affiliative humoristic communication as compared to groups in which members score on average lower on extraversion (group-level effect explained by personality enactment in social behaviors). Extraverts tend to use more positive humor in their daily life (Ford et al., 2014), and mean extraversion is associated with higher communication in teams (Macht and Nembhard, 2015), so we would expect that groups composed of people scoring high on extraversion to have more opportunities to use humor to create a positive social environment. In addition, according to the wheel model of humor (Robert and Wilbanks, 2012), the positive affect induced by positive humor is transmitted to other group members through emotional contagion processes that will foster subsequent humor use and a humor supportive climate in the long term. On the other hand, members who score high in neuroticism tend to engage in more hostile interpersonal communication (Grumm and von
Collani, 2009; Molero Jurado et al., 2018; Vernon et al., 2009), and to be sensitive to cues of social rejection (Denissen and Penke, 2008), so we would argue that they tend to experience more aggressive humor than groups that on average score lower in neuroticism (group-level effect). Aggressive humor is indicative of limited concern for others (Vernon et al., 2008), and through mechanisms such as contagion and entrainment (Curșeu et al., 2022), one sarcastic comment from a group member could lead to the emergence of group aggressive humor. Based on the above arguments, we hypothesize that:

**H1.** Extraversion has a positive association with affiliative humor at the individual as well as the group level of analysis.

**H2.** Neuroticism has a positive association with aggressive humor at the individual as well as the group level of analysis.

**Personality, humor, emergent states and satisfaction**

Team composition in terms of personality traits can shape emergent states by influencing the interpersonal behavioral patterns of the members (Bell et al., 2018). In what follows, we will discuss the relationship between humor and: group emotional intelligence, psychological safety and group satisfaction.

Group emotional intelligence refers to an emergent group-level competence to accurately perceive and manage emotions (Curșeu et al., 2015; Druskat and Wolff, 2001; Enigie et al., 2023). At the individual level, genetic studies found a positive correlation between affiliative humor and emotional intelligence, as well as a negative correlation between aggressive humor and emotional intelligence (Vernon et al., 2009). At group level, Curșeu and Fodor (2016) show that affiliative humor has a positive association, while aggressive humor has a negative association with collective emotional intelligence. Regarding the relationship between humor and emotional awareness, Vernon et al. (2009) argue that to amuse others with affiliative humor (the main intention behind this humor style), individuals must be sensitive to others’ emotions and evaluate when something is enjoyable or inappropriate. On the other hand, individuals with an aggressive humor style may lack an understanding or interest in managing other people’s emotions. Therefore, affiliative and aggressive humor relate differently to emotional awareness and regulation.

In their study of interpersonal affect regulation strategies, Niven et al. (2009) distinguish between affect improving and affect worsening strategies. These two categories can be further divided into engagement strategies and relationship-oriented strategies. According to their classification, affiliative humor is a relationship-oriented strategy that is used to improve affect and signals social acceptance. For example, humor can help group members regulate their emotions through distraction and reframing negative events (Kugler and Kuhbandner, 2015; Szabo et al., 2005; Curșeu et al., 2022) or stimulating positive affect (Gheorghe et al., 2023). At the same time, however, we could categorize aggressive humor as a relationship-oriented affect worsening strategy, which signals social rejection, through criticism masked as jokes and due to the negativity bias (Barsade, 2002; Baumeister et al., 2001), the negative affect associated with aggressive humor could be more salient and contagious.

We hypothesized that groups with members scoring high on extraversion tend to experience more affiliative humor, while groups with members scoring high on neuroticism to experience more aggressive humor during interpersonal interactions. Based on the above arguments related to emotional awareness and regulation, we expect that affiliative humor is positively related to emotional intelligence as a relationship-oriented strategy meant to improve affect, whereas aggressive humor is negatively related to emotional intelligence as
a possible relationship-oriented strategy meant to worsen affect. Therefore, we expect that affiliative humor mediates the relationship between extraversion and group emotional intelligence, and we expect that aggressive humor mediates the relationship between neuroticism and group emotional intelligence.

Psychological safety represents “a shared belief that the team is safe for interpersonal risk taking” (Edmondson, 1999, p. 355). In their model of humor and group effectiveness, Romero and Pescosolido (2008) argue that humor can contribute to the development of psychological safety by fostering open communication inside the team, improving personal rapport and lowering stress levels. This does not mean, however, that all types of humor can induce similar effects. Humor can sometimes act as a social lubricant or an abrasive (Martineau, 1972), and previous research shows how affiliative and aggressive humor have different interpersonal and emotional consequences (Cann et al., 2016; Gheorghe et al., 2023).

We expect that groups with members scoring high on extraversion to experience more affiliative humor, and as a consequence, to foster a climate of psychological safety inside the team. Humor itself involves a degree of interpersonal risk-taking in groups (Bitterly et al., 2017), and on the condition that it is met with positive interpersonal consequences, such as the case of affiliative humor that aims at amusing others and promoting positive interactions (Martin et al., 2003), it could foster a climate of psychological safety where members feel comfortable to speak up about sensitive topics. In addition, the positive atmosphere engendered by affiliative humor (Robert and Wilbanks, 2012), along with the tendency of extroverts to be assertive in communication, can help members feel relaxed and confident to expose their thoughts and ask questions.

With respect to neuroticism, we expect that groups with members scoring high on neuroticism experience more aggressive humor, which in turn will have a negative effect on the level of psychological safety they perceive inside the team. In a longitudinal study, neuroticism was a significant negative predictor of psychological safety over time (Edmondson and Mogelof, 2006). Due to the tendency of individuals scoring high on neuroticism to experience negative affect and feelings of inferiority, they might be more prone to perceive the work climate as hostile (Edmondson and Mogelof, 2006), which might be associated with increased aggressive humor as a way to overcompensate for their feelings of inferiority. Aggressive humor can decrease speaking-up behaviors in a group (Li et al., 2022), so through repetitive use of aggressive humor inside a team, members could fear that speaking up will lead to ridicule, so they might refrain from future risky behaviors. Therefore, we expect that aggressive humor mediates the relationship between neuroticism and psychological safety.

Finally, regarding team satisfaction, Peeters et al. (2006a) argue that people’s personality makes them prone to enjoying or dreading working in a team. As previously explained, we expect that teams with members scoring high on extraversion are more likely to engage in affiliative humor, while teams with members scoring high on neuroticism are more prone to using aggressive humor. According to the affective events theory (Weiss and Cropanzano, 1996), work events can trigger positive and negative affect, which can lead to further behavioral or attitudinal consequences. Humor is considered an affective event (Robert and Wilbanks, 2012; Gheorghe and Curșeu, 2024) because it can lead to positive or negative affect in individuals, or spread to other members of the group and subsequently influence behaviors. In their study of organizational teams, Romero and Arent (2011) found a positive association between affiliative humor and satisfaction with coworkers and a negative association between aggressive humor and satisfaction with coworkers. Based on the propositions of the affective events theory, the relationship between humor and satisfaction could be explained as follows: affiliative humor, which aims at improving interpersonal relationships, is a type of work event
that can induce positive affect (Gheorghe et al., 2023; Nezlek et al., 2021), with further behavioral
responses like seeking future interactions with the members of the group, and attitudinal
consequences like increased satisfaction with the group atmosphere. On the other hand,
aggressive humor can lead to the experience of increased negative affect (Gheorghe et al., 2023;
Nezlek et al., 2021), with further behavioral responses like relationship conflicts or withdrawal
from the conversation depending on the level of arousal experienced or appraisal of personal
resources, as well as attitudinal consequences like reduced satisfaction. Even when not directly
targeted by aggressive humor, group members can be affected as well when they perceive their
colleagues to experience a negative work event (Priesemuth et al., 2014). Therefore, we believe
that extroverts will create a positive team climate through their use of affiliative humor, which
can contribute to higher team satisfaction, whereas members scoring high on neuroticism
might create a negative team climate through their use of humor, which can lower team
satisfaction.

Based on the above arguments, we hypothesize that:

H3. (a) Affiliative humor mediates the association between extraversion on the one hand,
and group emotional intelligence, psychological safety and satisfaction on the other
hand, while (b) aggressive humor mediate the association between neuroticism on the
one hand, and group emotional intelligence, psychological safety and satisfaction on
the other hand.

When it comes to the exploration of possible antecedents for group humor, apart from
compositional characteristics of team members such as personality, we were also interested
in the effect of leader humor. We propose that a leader’s humor style can influence the
development of group humor due to their influence as role models for the team, whose
behaviors are highly visible and easily imitable. We draw our arguments from the social
influence literature providing evidence for the contagion–convergence relationship between
leaders and team members (Barsade et al., 2018; Johnson, 2009; Sy and Choi, 2013; Sy et al.,
2005; Tee, 2015; Yang and Yang, 2023; Son and Yang, 2023; Mayer et al., 2023). In their
model of mood convergence in groups, Sy and Choi (2013) propose that the mood of a leader
can activate emotional contagion processes, which are then spread among the group
members and possibly amplified through emotion cycles (Hareli and Rafaeli, 2008), finally
leading toward behavioral convergence. As humor and affect are inextricably linked, we
expect that a leader’s humor style will act as an input that influences the emotions and
behaviors of the team members (Neves and Karagonlar, 2020; Yang and Yang, 2023; Ji, Liu
and Wang, 2023) and invite similar humorous comments in the future. We believe the
influence will run from leader to group and not the other way around because of evidence
regarding asymmetry in emotional convergence showing that people with less power
changed more broadly to increase similarity with the more powerful actors (Anderson et al.,
2003). Therefore, we hypothesize that (Figure 1):

H4. Leader’s affiliative humor style has a positive association with the use of affiliative
humor in groups.

H5. Leader’s aggressive humor style has a positive association with the use of aggressive
humor in groups.

H6. (a) Affiliative humor mediates the association between leader’s affiliative humor on the
one hand, and group emotional intelligence, psychological safety and satisfaction on
the other hand, while (b) aggressive humor mediate the association between leader’s
aggressive humor on the one hand, and group emotional intelligence, psychological safety and satisfaction on the other hand.

**Methods**

**Sample and procedure**

In total, 304 employees (180 women) with an average age of 31.5 years old nested in 83 groups (having 3 to 24 members) in various Romanian organizations that agreed to participate in the study. Group members filled a survey that assessed their neuroticism, extraversion, the use of affiliative and aggressive humor in their groups as well as their satisfaction with the group, psychological safety and group collective emotional intelligence. Further, 83 leaders (41 women, with an overall age of 36.13 years old) filled in a survey in which they reported the group size and also reported on their own aggressive and affiliative humor styles. Based on the group size reported by the leaders, we have estimated the response rate for our study at 60.42% acceptable for group-level research.

**Measures**

Affiliative and aggressive group humor were evaluated with the eight items of the group humor scale presented in Curs and Fodor (2016). Item example for affiliative: “My team mates regularly told jokes and funny stories” and for aggressive humor: “Some group members disturbed the group by making ironic and inappropriate anecdotes and remarks” (answers coded from 1 – fully disagree to 5 – fully agree). Cronbach’s alpha for affiliative humor was 0.89 and for aggressive humor was 0.88, while the omega score (Hayes and Coutts, 2020) was 0.89 for affiliative humor and 0.88 for aggressive humor, indicating very good reliability of the two scales.

Leaders’ (individual) affiliative and aggressive humor styles were evaluated with 12 items from the humor styles questionnaire (Martin et al., 2003). For affiliative humor item example: “I laugh and joke a lot with my closest friends,” while for aggressive humor “If someone makes a mistake, I will often tease them out” (answers recorded from 1 – fully disagree to 5 – fully agree). Cronbach’s alpha for the affiliative humor style of the leader was 0.81, and for the aggressive humor style of the leader was 0.64. As Cronbach’s alpha for the aggressive humor style was lower than the recommended 0.70, we used the omega score derived from Hayes and Coutts (2020), and the omega is 0.65, with the negatively keyed items of the aggressive humor style loading on a separate factor.

Extraversion and neuroticism were evaluated with the scales presented in Eysenck and Sybil (1964). For extraversion, the scale included six items, Cronbach’s alpha was 0.75, while
omega (Hayes and Coutts, 2020) was 0.74, and examples of items include “Do you like plenty of excitement and bustle around you?” (coded from 1 – not at all to 5 – always). For neuroticism, the scale included six items, Cronbach’s alpha was 0.73, while omega was 0.74, and examples of items include “Do you ever feel ‘just miserable’ for no good reason?” (rated on a 1 to 5 scale similar to extraversion).

Psychological safety was evaluated with six items presented in Edmondson (1999). Item example: “When someone makes a mistake in this team, it is often held against him or her” – reversed coded, answers recorded from 1 – fully disagree to 5 – fully agree. Cronbach’s alpha was 0.52, and because alpha was lower than the recommended value of 0.70, we have used omega, derived from an exploratory factor analysis (Hayes and Coutts, 2020), and the value was 0.62, with all negatively worded items loading into a separate factor.

Group emotional intelligence was evaluated with an eight-item scale presented in Curșeu et al. (2015). Example of items: “We usually had a good sense of how each team member felt, even if they did not express it in words,” answers recorded from 1 – fully disagree to 5 – fully agree. Cronbach’s alpha for this scale was 0.71 and omega 0.72, indicating a sufficient reliability of the scale.

Team satisfaction was evaluated with seven items presented in Wageman et al. (2005). Item examples: “I very much enjoy talking and working with my teammates,” “Working in this team is an exercise of frustration” – reversed coded (answers rated from 1 – fully disagree to 5 – fully agree). Cronbach’s alpha for this scale was 0.78, while omega was 0.74, indicating a sufficient reliability of the scale.

We included gender, age and group size (evaluated by asking the group leaders to report the number of members in their group) as control variables.

Results
Means, standard deviations and correlations are presented in Table 1.

For the scales filled in by the group members, Harman’s single-factor analysis revealed that the first factor only covered for 19.2% of the variance in scores; therefore, there is no major concern related to the common method bias for the evaluations collected from group members. We have used the within group agreement index to check whether for the scales that used groups as referent individual members report similar scores within groups. The means, standard deviations for RWG are presented in Table 2 showing sufficient within group agreement for these scores.

To test our hypotheses, we used multilevel mediation analyses (Rockwood and Hayes, 2017) for the personality predictors and bootstrapping (Hayes and Preacher, 2010) for the group-level analyses for leader’s humor styles.

To test H1 to H5, we have used the multilevel mediation macro (Beta 2 version) for SPSS developed by Rockwood and Hayes (2017). This multilevel mediation procedure estimates the within group effects (level 1 – individual group members) and the groups effects (Level 2); therefore, we can test the main effects hypotheses as well as the mediation hypothesis using this procedure. We have ran separate mediation analyses for extraversion and neuroticism, to be able to estimate their within as well as between group effects on the outcome variables. As Level 1 predictors, we have entered the respondents’ gender, age as well as their scores for extraversion, neuroticism, and as Level 2 predictors, we have leaders’ humor styles (aggressive and affiliative) as well as the group size. All variables were grand-mean centered before the analyses (Enders and Tofighi, 2007), and the results for the main effect hypotheses were extracted from the overall mediation model.

As indicated in Table 3, extraversion had a significant positive association with affiliative humor within (W) as well as between (B) groups (W = 0.31, SE = 0.07, p < 0.001;
<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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<tbody>
<tr>
<td>1. Gender</td>
<td>0.59</td>
<td>0.49</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Age</td>
<td>31.54</td>
<td>9.23</td>
<td>-0.260**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<td>3. Group size</td>
<td>7.45</td>
<td>4.99</td>
<td>0.017</td>
<td>-0.127*</td>
<td>1</td>
<td></td>
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<tr>
<td>4. Neuroticism</td>
<td>2.36</td>
<td>0.65</td>
<td>0.150**</td>
<td>-0.252**</td>
<td>0.029</td>
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<td>5. Extraversion</td>
<td>3.42</td>
<td>0.67</td>
<td>0.122*</td>
<td>-0.276**</td>
<td>0.018</td>
<td>-0.050</td>
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<tr>
<td>6. LAffHum</td>
<td>3.89</td>
<td>0.63</td>
<td>0.089</td>
<td>-0.219**</td>
<td>-0.038</td>
<td>0.013</td>
<td>0.120*</td>
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<tr>
<td>7. LAggHum</td>
<td>2.73</td>
<td>0.60</td>
<td>0.079</td>
<td>-0.054</td>
<td>-0.097</td>
<td>0.173**</td>
<td>0.043</td>
<td>0.099</td>
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<td>8. AFFHum</td>
<td>3.79</td>
<td>0.84</td>
<td>0.048</td>
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<td>0.005</td>
<td>0.343**</td>
<td>0.226**</td>
<td>0.059</td>
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<td>9. AGGHum</td>
<td>1.99</td>
<td>0.84</td>
<td>-0.163**</td>
<td>-0.026</td>
<td>0.199**</td>
<td>0.284**</td>
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<td>-0.018</td>
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<td>10. GEI</td>
<td>3.64</td>
<td>0.53</td>
<td>0.073</td>
<td>-0.082</td>
<td>-0.222**</td>
<td>-0.117*</td>
<td>0.271**</td>
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<td>11. Psychological safety</td>
<td>3.57</td>
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<td>0.067</td>
<td>-0.093</td>
<td>-0.096</td>
<td>-0.157**</td>
<td>0.254**</td>
<td>0.129*</td>
<td>0.123*</td>
<td>0.286**</td>
<td>-0.022**</td>
<td>0.365**</td>
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<td>12. Team satisfaction</td>
<td>4.09</td>
<td>0.60</td>
<td>0.066</td>
<td>-0.066</td>
<td>-0.140*</td>
<td>-0.276**</td>
<td>0.271**</td>
<td>0.092</td>
<td>-0.004</td>
<td>0.364**</td>
<td>-0.356**</td>
<td>0.474**</td>
<td>0.419**</td>
</tr>
</tbody>
</table>

Notes: gender was coded as a dummy variable 1 = women, 0 = men; LAffHum = leader affiliative humor; LAggHum = leader aggressive humor; AFFHum = group affiliative humor; AGGHum = group aggressive humor; GEI = group emotional intelligence; *p < 0.05; **p < 0.01

Source: Table created by authors
B = 0.31, SE = 0.16, p = 0.04); therefore, H1 was supported by the data. In addition, neuroticism had a significant positive association with aggressive humor within as well as between groups (W = 0.34, SE = 0.08, p < 0.001; B = 0.49, SE = 14, p < 0.001), supporting H2. Regarding the effect of leader humor, the leader’s affiliative humor style had a significant positive effect on group affiliative humor (B = 0.23, SE = 0.10, p = 0.02); therefore, H4 was supported. The positive effect of leader aggressive humor style on group aggressive humor was not significant (B = -0.06, SE = 0.11, p = 0.61); therefore, H5 was not supported by the data.

The results of the multilevel mediation analyses are reported in Table 4. The indirect effect of extraversion on group emotional intelligence through group affiliative humor was positive and significant at within level and only marginally significant at the between level, while both within and between indirect effects of neuroticism on group emotional intelligence through aggressive humor were negative and significant as the 95% Monte Carlo confidence intervals did not include zero (see Table 4 for the values).

The indirect effect of extraversion on psychological safety through affiliative humor was positive and not significant, while the indirect effect of neuroticism on psychological safety through aggressive humor was negative and significant both within and between groups as the 95% Monte Carlo confidence intervals did not include zero (see Table 4 for the values).

Finally, the within-indirect effect of extraversion on group satisfaction through affiliative humor was positive and significant, while the indirect effect of neuroticism on psychological safety through aggressive humor was negative and significant both within and between groups as the 95% Monte Carlo confidence intervals did not include zero (see Table 4 for the values). In line with these results, H3b stating that aggressive humor mediates the association between neuroticism and outcomes was fully supported. H3a was only partially supported by the data as the mediating role of affiliative humor in the relation between extraversion and psychological safety was not supported by the data.

To test H6, we have used the bootstrapping procedure (Hayes and Preacher, 2010) with the PROCESS macro (Hayes, 2012) with the group-level aggregated scores, as the leader humor is a Level 2 variable. The results of the mediation analyses are presented in Table 5.

None of the indirect effects of leader’s aggressive humor on the outcome variables was significant as all 95% confidence intervals included zero. Nevertheless, all indirect effects of leader’s affiliative humor via group affiliative humor on the outcome variables were significant as the 95% confidence intervals did not include zero. We therefore conclude that H6a was supported, while H6b was not supported by the data as none of the indirect effects via aggressive humor on the three outcome variables was significant.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean RWG (SD)</th>
<th>Median RWG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiliative humor</td>
<td>0.91 (0.08)</td>
<td>0.93</td>
</tr>
<tr>
<td>Aggressive humor</td>
<td>0.90 (0.11)</td>
<td>0.91</td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.94 (0.05)</td>
<td>0.95</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>0.94 (0.05)</td>
<td>0.95</td>
</tr>
<tr>
<td>Group emotional intelligence</td>
<td>0.96 (0.04)</td>
<td>0.97</td>
</tr>
<tr>
<td>Psychological safety</td>
<td>0.95 (0.05)</td>
<td>0.97</td>
</tr>
<tr>
<td>Team satisfaction</td>
<td>0.96 (0.03)</td>
<td>0.96</td>
</tr>
</tbody>
</table>

Table 2. Aggregation statistics for the variables evaluated at the individual level.

Notes: RWG = within group agreement index; SD = standard deviation
Source: Table created by authors
<table>
<thead>
<tr>
<th>Variable</th>
<th>Affiliative humor</th>
<th>Aggressive humor</th>
<th>Group emotional intelligence</th>
<th>Psychological safety</th>
<th>Group satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Within</td>
<td>Between</td>
<td>Within</td>
<td>Between</td>
<td>Within</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.01 (0.06)</td>
<td>-0.009 (0.06)</td>
<td>3.65** (0.03)</td>
<td>3.57*** (0.03)</td>
<td>4.10*** (0.03)</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.09 (0.12)</td>
<td>-0.13 (0.13)</td>
<td>-0.08 (0.08)</td>
<td>0.002 (0.10)</td>
<td>-0.02 (0.10)</td>
</tr>
<tr>
<td></td>
<td>-0.09 (0.12)</td>
<td>-0.13 (0.13)</td>
<td>-0.08 (0.08)</td>
<td>0.002 (0.10)</td>
<td>-0.02 (0.10)</td>
</tr>
<tr>
<td>Age</td>
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<td>-0.02* (0.007)</td>
<td>0.005 (0.005)</td>
<td>-0.04 (0.006)</td>
<td>0.006 (0.006)</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>0.03 (0.08)</td>
<td>-0.09 (0.07)</td>
<td>0.07 (0.04)</td>
<td>0.01 (0.07)</td>
<td>0.11 (0.08)</td>
</tr>
<tr>
<td></td>
<td>0.03 (0.08)</td>
<td>-0.09 (0.07)</td>
<td>0.07 (0.04)</td>
<td>0.01 (0.07)</td>
<td>0.11 (0.08)</td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.31*** (0.07)</td>
<td>0.31* (0.16)</td>
<td>0.14 (0.18)</td>
<td>0.10* (0.05)</td>
<td>0.14 (0.09)</td>
</tr>
<tr>
<td></td>
<td>0.31*** (0.07)</td>
<td>0.31* (0.16)</td>
<td>0.14 (0.18)</td>
<td>0.10* (0.05)</td>
<td>0.14 (0.09)</td>
</tr>
<tr>
<td>LD affiliative humor</td>
<td>0.23* (0.11)</td>
<td>0.11 (0.11)</td>
<td>0.04 (0.05)</td>
<td>0.03 (0.06)</td>
<td>-0.01 (0.06)</td>
</tr>
<tr>
<td></td>
<td>0.23* (0.11)</td>
<td>0.11 (0.11)</td>
<td>0.04 (0.05)</td>
<td>0.03 (0.06)</td>
<td>-0.01 (0.06)</td>
</tr>
<tr>
<td>LD aggressive humor</td>
<td>0.06 (0.11)</td>
<td>-0.06 (0.11)</td>
<td>-0.02 (0.05)</td>
<td>0.10* (0.06)</td>
<td>-0.02 (0.06)</td>
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<tr>
<td></td>
<td>0.06 (0.11)</td>
<td>-0.06 (0.11)</td>
<td>-0.02 (0.05)</td>
<td>0.10* (0.06)</td>
<td>-0.02 (0.06)</td>
</tr>
<tr>
<td>Affiliative humor</td>
<td>0.31*** (0.04)</td>
<td>0.32*** (0.05)</td>
<td>0.04 (0.05)</td>
<td>0.27*** (0.06)</td>
<td>0.16** (0.09)</td>
</tr>
<tr>
<td></td>
<td>0.31*** (0.04)</td>
<td>0.32*** (0.05)</td>
<td>0.04 (0.05)</td>
<td>0.27*** (0.06)</td>
<td>0.16** (0.09)</td>
</tr>
<tr>
<td>Aggressive humor</td>
<td>-0.17*** (0.04)</td>
<td>-0.23*** (0.05)</td>
<td>-0.16** (0.05)</td>
<td>-0.25*** (0.06)</td>
<td>-0.21** (0.09)</td>
</tr>
<tr>
<td></td>
<td>-0.17*** (0.04)</td>
<td>-0.23*** (0.05)</td>
<td>-0.16** (0.05)</td>
<td>-0.25*** (0.06)</td>
<td>-0.21** (0.09)</td>
</tr>
<tr>
<td>Group size</td>
<td>0.005 (0.01)</td>
<td>0.04** (0.01)</td>
<td>-0.02** (0.008)</td>
<td>-0.004 (0.007)</td>
<td>-0.01* (0.007)</td>
</tr>
<tr>
<td></td>
<td>0.005 (0.01)</td>
<td>0.04** (0.01)</td>
<td>-0.02** (0.008)</td>
<td>-0.004 (0.007)</td>
<td>-0.01* (0.007)</td>
</tr>
</tbody>
</table>

Notes: Unstandardized coefficients are presented in the table with SE in parentheses; gender is coded as a dummy variable 1 = women, 0 = men; country is a dummy variable 0 = The Netherlands or low power distance country, 1 = Romania or high power distance country; †p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001
Source: Table created by authors.
TPM

Discussion

The present study explored how team member’s personality and leader’s humor style influence the emergence of group humor that ultimately impacts collective emotional intelligence, psychological safety and satisfaction. We answer the call for multilevel investigation of humor in groups (Gheorghe and Curşeu, 2024), and we contribute to the team personality literature that has mainly investigated performance as an outcome variable (Bell, 2007; O’Neill and Allen, 2011; Peeters et al., 2006b) and shed light on the

<table>
<thead>
<tr>
<th>Model/mediator</th>
<th>Effect (SE)</th>
<th>95% mCCI</th>
<th>Effect (SE)</th>
<th>95% mCCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXT (\rightarrow) AffH (\rightarrow) GEI</td>
<td>0.10** (0.03)</td>
<td>[0.05; 0.15]</td>
<td>0.10* (0.06)</td>
<td>[-0.006; 0.21]</td>
</tr>
<tr>
<td>EXT (\rightarrow) AggH (\rightarrow) GEI</td>
<td>0.02 (0.01)</td>
<td>[-0.008; 0.04]</td>
<td>-0.03 (0.04)</td>
<td>[-0.12; 0.04]</td>
</tr>
<tr>
<td>NEU (\rightarrow) AffH (\rightarrow) GEI</td>
<td>0.008 (0.03)</td>
<td>[-0.04; 0.06]</td>
<td>-0.05 (0.05)</td>
<td>[-0.15; 0.04]</td>
</tr>
<tr>
<td>NEU (\rightarrow) AggH (\rightarrow) GEI</td>
<td>-0.06** (0.02)</td>
<td>[-0.10; -0.02]</td>
<td>-0.11** (0.04)</td>
<td>[-0.21; -0.02]</td>
</tr>
<tr>
<td>EXT (\rightarrow) AffH (\rightarrow) PS</td>
<td>0.01 (0.02)</td>
<td>[-0.02; 0.05]</td>
<td>0.08* (0.05)</td>
<td>[-0.005; 0.18]</td>
</tr>
<tr>
<td>EXT (\rightarrow) AggH (\rightarrow) PS</td>
<td>-0.01 (0.01)</td>
<td>[-0.007; 0.04]</td>
<td>-0.03 (0.04)</td>
<td>[-0.12; 0.05]</td>
</tr>
<tr>
<td>NEU (\rightarrow) AffH (\rightarrow) PS</td>
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<td>[-0.01; 0.01]</td>
<td>-0.04 (0.04)</td>
<td>[-0.13; 0.03]</td>
</tr>
<tr>
<td>NEU (\rightarrow) AggH (\rightarrow) PS</td>
<td>-0.05* (0.02)</td>
<td>[-0.10; -0.02]</td>
<td>-0.12* (0.05)</td>
<td>[-0.22; -0.04]</td>
</tr>
<tr>
<td>EXT (\rightarrow) AffH (\rightarrow) GS</td>
<td>0.05* (0.02)</td>
<td>[0.01; 0.09]</td>
<td>0.10* (0.06)</td>
<td>[-0.006; 0.22]</td>
</tr>
<tr>
<td>EXT (\rightarrow) AggH (\rightarrow) GS</td>
<td>0.02 (0.02)</td>
<td>[-0.01; 0.03]</td>
<td>-0.02 (0.03)</td>
<td>[-0.10; 0.03]</td>
</tr>
<tr>
<td>NEU (\rightarrow) AffH (\rightarrow) GS</td>
<td>0.004 (0.01)</td>
<td>[-0.02; 0.03]</td>
<td>-0.05 (0.05)</td>
<td>[-0.15; 0.04]</td>
</tr>
<tr>
<td>NEU (\rightarrow) AggH (\rightarrow) GS</td>
<td>-0.07** (0.02)</td>
<td>[-0.12; -0.03]</td>
<td>-0.09** (0.04)</td>
<td>[-0.18; -0.02]</td>
</tr>
</tbody>
</table>

Notes: EXT = extraversion; NEU = neuroticism; AffH = affiliative humor; AggH = aggressive humor; GEI = group emotional intelligence; PS = psychological safety; GS = group satisfaction; LDAffHum = leader’s affiliative humor; LDAggHum = leader’s aggressive humor; MCCI = Monte Carlo confidence intervals; values marked in italic are all significant; **p < 0.01; and *p < 0.05; † p < 0.10

Source: Table created by authors

<table>
<thead>
<tr>
<th>Mediation path</th>
<th>Effect (SE)</th>
<th>95% bCCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDAffHum (\rightarrow) AffH (\rightarrow) GEI</td>
<td>0.08 (0.03)</td>
<td>[0.02; 0.16]</td>
</tr>
<tr>
<td>LDAffHum (\rightarrow) AggH (\rightarrow) GEI</td>
<td>-0.03 (0.03)</td>
<td>[-0.11; 0.02]</td>
</tr>
<tr>
<td>LDAffHum (\rightarrow) AffH (\rightarrow) PS</td>
<td>0.08 (0.04)</td>
<td>[0.02; 0.18]</td>
</tr>
<tr>
<td>LDAffHum (\rightarrow) AggH (\rightarrow) PS</td>
<td>-0.03 (0.03)</td>
<td>[-0.12; 0.01]</td>
</tr>
<tr>
<td>LDAffHum (\rightarrow) AffH (\rightarrow) GS</td>
<td>0.08 (0.03)</td>
<td>[0.03; 0.16]</td>
</tr>
<tr>
<td>LDAffHum (\rightarrow) AggH (\rightarrow) GS</td>
<td>-0.03 (0.03)</td>
<td>[-0.10; 0.01]</td>
</tr>
<tr>
<td>LDAggHum (\rightarrow) AffH (\rightarrow) GEI</td>
<td>0.02 (0.03)</td>
<td>[-0.04; 0.08]</td>
</tr>
<tr>
<td>LDAggHum (\rightarrow) AggH (\rightarrow) GEI</td>
<td>0.01 (0.03)</td>
<td>[-0.04; 0.06]</td>
</tr>
<tr>
<td>LDAggHum (\rightarrow) AffH (\rightarrow) PS</td>
<td>0.02 (0.03)</td>
<td>[-0.04; 0.10]</td>
</tr>
<tr>
<td>LDAggHum (\rightarrow) AggH (\rightarrow) PS</td>
<td>0.01 (0.03)</td>
<td>[-0.04; 0.06]</td>
</tr>
<tr>
<td>LDAggHum (\rightarrow) AffH (\rightarrow) GS</td>
<td>0.02 (0.03)</td>
<td>[-0.04; 0.09]</td>
</tr>
<tr>
<td>LDAggHum (\rightarrow) AggH (\rightarrow) GS</td>
<td>0.01 (0.02)</td>
<td>[-0.04; 0.04]</td>
</tr>
</tbody>
</table>

Notes: EXT = extraversion; NEU = neuroticism; AffH = affiliative humor; AggH = aggressive humor; GEI = group emotional intelligence; PS = psychological safety; GS = group satisfaction; LDAffHum = leader’s affiliative humor; LDAggHum = leader’s aggressive humor; 95% bCCI = 95% bias corrected confidence intervals; values marked in italic are all significant as the confidence interval does not include zero

Source: Table created by authors
influence of team personality on emergent states and team satisfaction through affiliative and aggressive humor. In line with the behavioral concordance model (Côté and Moskowitz, 1998), our results supported the hypothesized positive association between extraversion and group affiliative humor within as well as between groups. The within-group association between extraversion and affiliative humor is in line with previous meta-analytical results supporting a positive association between extraversion and the affiliative humor style (Plessen et al., 2020). On the one hand, extroverts are more susceptible to affiliative cues in communication, including the use of affiliative humor in groups and on the other hand, because they also tend to use affiliative jokes, through reciprocation, the extroverts are also more likely to be exposed to similar affiliative humor in the group communication. In addition, our results show that group members scoring high on extraversion tend to report higher scores for psychological safety and group satisfaction, results aligned with the gregarious nature of extroverts that are more likely to have positive evaluations of group emergent states. At the group level of analysis, our results add to the group personality literature (Bell et al., 2018; Peeters et al., 2006b) and show that in general, groups composed of members scoring high on extraversion tend to use more affiliative humor in communication.

Moreover, the results concerning neuroticism are also in line with the behavioral concordance model (Côté and Moskowitz, 1998) as neuroticism was positively associated with aggressive humor within as well as between groups. Group members scoring high on neuroticism also tended to be less satisfied with their group than members scoring low on neuroticism, and at the group level, groups in which average neuroticism was high reported lower satisfaction compared to groups in which average neuroticism was low. These results are in line with meta-analytic individual-level results (Plessen et al., 2020), showing support for the tendency of individuals scoring high on neuroticism to perceive social events and communication cues in negative terms, and as a result, to engage in more aggressive interactions that can escalate at group level through reciprocation (Grumm and von Collani, 2009; Molero Jurado et al., 2018). In line with the behavioral concordance model (Côté and Moskowitz, 1998), our study focused on the effect of personality on predicting communication behavior in groups (humor expression or telling jokes).

We must consider, however, the impact of both personality and the situation in predicting interpersonal behavior. For example, the strong situation hypothesis (Cooper and Withey, 2009) posits that the impact of personality on behavior is attenuated in strong situations where cues, expectations, incentives and required skills are clear and uniform across individuals. Applying this framework to the study of group dynamics and humor is a compelling future research avenue. We could expect that when everyone knows what to do, the reasons behind acting are clear, and the influence of group personality traits on group humor will be attenuated. On the one hand, in situations deemed strong such as military contexts or emergency response teams, it is expected that the relation between personality and group humor as well as the relation between humor and other dimensions of group dynamics will be weaker, as interpersonal relations conform more closely to the normative frameworks, cultural values and expectations. On the other hand, in moderate (project teams with defined roles) or weak (brainstorming sessions) situations, the diversity of individual perceptions and skills within the group may result in varied expression of affiliative and aggressive humor, reflecting the influence of extraversion and neuroticism rather than the situational constraints. Under weak situational constraints, neuroticism might influence the risk-taking aspect of humor, potentially leading to more unconventional or bold comedic ideas. Alternatively, we could envisage that extraversion may have a non-monotonic role in predicting aggressive humor. Previous research has supported a decreasing positive...
association between extraversion and contributions to teamwork in teams (Curșeu et al., 2019). Group members scoring very high on extraversion could be showy, overly reactive and behave in a dominant and aggressive rather than affiliative manner in group settings.

The humor cross-over from the leader to the group was only supported for affiliative humor, such that a leader’s preference for affiliative jokes in communication spurs more affiliative humor in groups. With respect to humor, thus, the preference for affiliative humor of the leader does not seem to be as contagious for group members as affiliative humor. One possible explanation for the lack of contagion spurring from a leader’s aggressive humor might be the fact that this type of humor is a risky interpersonal behavior that can harm one’s status (Bitterly et al., 2017; Gheorghe and Curșeu, 2023; Kim and Plester, 2021). In a qualitative study on workplace humor, Kim and Plester (2021) report that leaders usually have more liberty when using humor, whereas employees consider humor to be risky and have to pay attention to status differences when responding to humor to avoid penalties. Given the associated negative consequences of risky interpersonal behaviors, employees might refrain from reciprocating or imitating humorous comments coming from the leader that have an aggressive nature. This lack of contagion, however, should not be interpreted lightly. Even though employees might not imitate their leader’s aggressive humor, the sustained use of verbal aggression in the form of humor can fall in the category of abusive leadership (Tepper, 2000) that has documented negative effects for both the target of the abusive behavior, bystanders and the group (Mitchell et al., 2015; Priesemuth et al., 2014) such as increased anger and reduced cooperation, organizational citizenship behaviors and team performance. Recent work shows how leader aggressive humor is associated with bystander rumination and anxiety that further promotes withdrawal behaviors for employees with low organization-based self-esteem (Chen et al., 2022). Future research could look more explicitly at this type of abusive supervision as aggressive humor and examine the impact for individual and team outcomes. The literature investigating the contagious effect of leaders has focused mainly on affective contagion (Clarkson et al., 2020); therefore, we believe our results contribute to the expansion of this field by looking at contagious humoristic communication styles and taking into account both positive and negative aspects of emotional contagion.

In our discussion of the relationship between personality and group humor, we put forward arguments related to affectivity and we focused solely on the dimension of valence. However, according to the circumplex model of affect (Russell, 1980), another important dimension of emotions is arousal that represents the intensity or activation level of an emotion. A recent study (Čekrlija et al., 2022) analyzed the relationship between humor styles and the alternative five-factor model of personality (Zuckerman et al., 1993) and found that sensation seeking (a trait based on the idea that differences in the level of arousal have an impact on people’s behavior) was a significant predictor of all humor styles. While sensation seeking might be the source of people’s general tendency to use humor, other personality traits (e.g. extraversion, neuroticism) influence the inclination toward a benign or harmful humor style. These results point towards promising avenues of study investigating how different levels of arousal within a group affect the choice and prevalence of humor styles and how sensation seeking, as a personality trait, interacts with other traits to shape the group’s humor dynamics. This exploration would provide a more comprehensive understanding of how both valence and arousal dimensions of emotions contribute to the interplay between personality and group humor.

Another important result concerns the positive indirect association between extraversion and group emotional intelligence through the use of affiliative humor in groups. The within-group effect reveals that members who perceive more affiliative humor used in group
communication also tend to report higher scores for group emotional intelligence. The between-group mediation effect of affiliative humor was only marginally significant and such pattern of results reveal the multidimensional nature of emotional emergence in groups and the different mechanisms that shape emotional emergence in groups at the individual and group level of analyses. Group members could differ in the way they use humor for interpersonal emotion regulation (Niven et al., 2009), and as such, it is important to explore the interplay between humor and group affect in multilevel studies. As humor was often acclaimed as an effective stress management strategy in interpersonal communication, it is important to explore the extent to which aggressive and affiliative humor drive emotional experiences in groups, which in turn alleviate or accentuate distress and eustress (Pluut et al., 2022) as these are affect-laden experiences of group members. Moreover, multilevel explorations of group affect in relation to humor could further explore the similar pattern of mediation results (significant within group effect and only marginally significant group effect) reported in our study for the indirect association between extraversion and group satisfaction mediated by the affiliative humor.

For psychological safety, only the between-groups indirect association of extraversion channelled through affiliative humor was marginally significant. We could explain the lack of significance of this indirect effect of extraversion on psychological safety with one idea suggested by Edmondson and Mogelof (2006), namely, that the difference between extraverts and introverts in relation to psychological safety is not related to perceptions of safety, but with differences in behavior. As we evaluated perceptions of psychological safety, not actual behaviors (e.g. speaking up), this might be a reason for the lack of a significant relationship within groups. Future studies could examine this effect by using behavioral measures for psychological safety.

An important pattern of results was that all mediation paths through aggressive humor hypothesized for neuroticism were supported at both levels and for all dependent variables. At the group level, average neuroticism triggers aggressive humor, which in turn decreases psychological safety, satisfaction and group emotional intelligence. We believe these generic results, concerning the mixed support for the mediation at the group level of analysis, speak to the heterogeneity of group personality as a construct. Extraversion could be one of the personality dimensions that has less salience and entitativity when aggregated at the group level of analysis and, as a consequence, it has less impact on the emotional emergence in groups. By contrast, neuroticism seems to have consistent effects both within as well as between groups, showing that group-level neuroticism impacts the humor communication, which in turn shapes the emotional emergence in groups. All in all, neuroticism seems to be more salient than extraversion as a group-level personality construct, at least in what emotional emergence is concerned. Future studies could further explore the heterogeneity of the big five personality dimensions at the group level.

An emergent result concerns the strong negative association between the group size and group emotional intelligence. Larger groups have more difficulties to attend to the emotional needs of their members, and future research could explore more in depth this effect. Another emergent results concerns the significant negative association between group effect of gender on aggressive humor, showing that groups composed predominantly of men tend to engage in more aggressive use of humor in communication, compared to the groups predominantly composed of women. Such result is aligned with previous empirical evidence showing such differential gender preference for aggressive humoristic communication (Hofmann et al., 2020). The interaction between personality and gender in using humor in groups deserves further investigation. It might be the case that the influence of personality on humor varies in groups with different gender composition. For example, as men exhibit a
higher preference for the use of aggressive humor than women (Hofmann et al., 2020), it might be the case that the use of aggressive humor is more normative in predominantly male groups, and the impact of individual differences in neuroticism may be less pronounced. On the other hand, in groups composed predominantly of women, a higher level of aggressive humor driven by differences in neuroticism might be more disruptive. Aggressive humor in this case might be perceived as a violation of the group's communication norms, leading to frustration and affecting the quality of interpersonal relationships within groups or their level of cohesion.

**Limitations**
Given the cross-sectional nature of our data, we cannot make any claims regarding causality, although it is unlikely that the use of humor in groups could impact neuroticism and extraversion. Future research could try to replicate our results using a longitudinal design. Moreover, we used self-report methods to collect the data that rely heavily on participants' perceptions of events and emergent states inside the team. To limit concerns with the common method bias, we have used multiple sources to collect data on our predictors, yet the evaluations collected from team members might be susceptible to such effects. For parsimony, we have only selected extraversion and neuroticism as predictors of affiliative and aggressive humor use in groups, yet the other big five personality dimensions could have meaningful contributions to the use of humor in groups; therefore, their association with group humor warrants further explorations. Finally, as we did not have personality data on intact groups, we have used average personality scores of the respondents as an indicator of group personality, yet other metrics are also relevant, especially in settings in which intact groups can be investigated so that different ways of estimating group personality (min, max, fragmentation, variance, etc.) are more meaningful.

**Practical implications**
The results of our study support the idea that team composition in terms of personality traits influences the type of humor used by the group, with either positive or negative effects for group emotional intelligence, psychological safety and team satisfaction. In light of these effects, one might be tempted to conclude that we could use personality as a selection criteria when composing teams. Taking into consideration the fact that this study is cross-sectional, we believe more research is required before suggesting such recommendations. In addition, many teams nowadays go through frequent member changes, so a more pragmatic approach would be to train team members to become aware of the configuration of personality traits inside their team and how it can impact the things they say and do. With respect to humor, explaining the deleterious effects of aggressive humor and discouraging team members from using it during group communication might have long-term benefits for the team. Especially in teams scoring high on neuroticism, managers and leaders should strive to create a climate of psychological safety to decrease the chances of team members misinterpreting humorous cues. With regard to the effect of leader humor, it is important to get more insight into contagion effects in leader–group exchanges as leaders are in a powerful position to influence others, they could try using more affiliative humor as a means to promote this type of humor at team level and improve emotional awareness, safety and satisfaction. Even though the relationship between leader aggressive humor and team aggressive humor was not significant, pointing toward a lack of contagion, we would still advise against using this humor style by leaders because aggressive humor can have other negative effects for their followers (Kong et al., 2019; Rosenberg et al., 2021). Organizations should aim to develop artifacts, values and cultural practices that model an adaptive use of
affiliative humor (e.g. humorous mission and vision statement, moderated channels for humor sharing, humorous recognition and awards, trainings on positive communication and humor) and discourage the use of aggressive humor, especially by the leaders in their communication with the groups.

References


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