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GROUP GOAL SETTING IN AGE-DIVERSE TEAMS: INVESTIGATING THE ROLE OF GOAL CLARITY AND REFLEXIVITY

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ABSTRACT

In a sample of 43 teams, the present study examines goal clarity as a mediator of the relationship between age diversity and team performance. As hypothesized, more age-diverse groups did not obtain high levels of goal clarity, and consequently performed worse than less age-diverse groups. Results further show that team reflexivity moderates the relationship between age diversity and goal clarity, such that the inverse relationship between age diversity and goal clarity will be weaker for teams high on reflexivity, than for teams low on reflexivity. Contrary to expectations, we did not find support for the hypothesized moderated mediation model, as the moderating effect of team reflexivity was not carried all the way through the mediating relationship to affect team performance. Overall, this study highlights the importance of examining the impact of diversity on the group goal setting process and the boundary conditions that impact this relationship.

Keywords: Diversity, Goal Clarity, Team Performance, Reflexivity

INTRODUCTION

In addressing the question as to how age diversity impacts work team performance, the present research can be situated on the crossroads of two important developments in the workplace: team-based work and diversity. Indeed, organizations are increasingly relying on teams to sustain organizational performance (Kozlowski & Bell, 2003; Kozlowski & Ilgen, 2006) and, at the same time, diversity levels in these teams are rising continuously (Ragins & Gonzalez, 2003; Rink & Ellemers, 2010). In view of these trends, the body of research on team diversity is expanding (Bell, Villado, Lukasik, Belau, & Briggs, 2011; see van Knippenberg & Schippers, 2007). While there is a broad range of characteristics on which team members might differ from one another (e.g., race, educational level, goal orientation), given recent demographic trends, furthering our understanding with regard to team age diversity and its effects on performance is becoming particularly relevant. Indeed, with employees getting older, practitioners and researchers alike are confronted with a more and more age-diverse workforce (Wegge, Roth, Neubach, Schmidt, & Kanfer, 2008). Notwithstanding the practical and theoretical relevance of age diversity research, according to a recent review by Shore and colleagues (2009), age diversity research is much less developed than, for instance, gender and race research, yet equally important. Up till now, research on the impact of age diversity on team performance, has yielded equivocal results, with both negative and positive effects (Ely, 2004; O'Reilly, Williams, & Barsade, 1998; Harrison, Price, Gavin, & Florey, 2002; Williams & O'Reilly, 1998). In view of these inconclusive findings research attention has shifted towards the investigation of the processes underlying the effects of diversity on performance and the contingency factors of these processes (Horwitz, 2005). In line with previous theorizing (van Knippenberg, De Dreu, & Homan, 2004), several mediating processes (e.g., collective team identification, task and emotional conflict, elaboration of task-relevant information), and moderators (e.g., interdependence, need for cognition, group longevity) have been examined to shed light on the age diversity – performance relationship (Kearney & Gebert, 2009; Kearney, Gebert, & Voelpel, 2009; Pelled, Eisenhardt, & Xin, 1999; Timmerman, 2000). Strikingly however, team goal setting has been largely ignored as a potential mediating process. This is especially surprising considering the substantial body of research documenting the differences in the goal setting process across the lifespan (Brandtstädter & Renner, 1990; Brandtstädter & Rothermund, 2003; Ebner, Freund, & Baltes, 2006), and the establishment of group goal setting as an important driver of team performance (Kleingeld, van Mierlo, & Arends, 2011).

Research on goal pursuit and aging consistently shows age differences regarding different characteristics of the goal process (Baltes & Carstensen, 2003; Brandtstädter, & Rothermund, 2003; Ebner et al., 2006; Sheldon, 2009). More specifically, over the life course, clear shifts emerge in the mode of goal pursuit that individuals adopt (assimilative vs. accommodative; Brandtstädter & Rothermund, 2002), the goals that individuals select (acquisition of information vs. emotionally meaningful; Carstensen, Fung, & Charles, 2003), and their attitudes towards these goals (promotion vs. prevention; Ebner et al., 2006). These findings suggest that the group goal setting process in age-diverse groups might not be straightforward. More research on this topic is warranted (Latham & Locke, 2007). Indeed, while the basic premises of individual goal setting theory, i.e., the positive performance effects of goal specificity and goal difficulty, have been found to hold for the group level, there remains much to be learned about how team composition (e.g., age diversity) influences the goal setting process and subsequent group performance (Kleingeld et al., 2011; Latham & Locke, 2007, LePine, 2005).

As such, in line with evidence for the motivating role of goal clarity (Cohen, Mohrman, & Mohrman, 1999; Hu & Liden, 2011; Latham & Kinne, 1974; Latham & Yukl, 1975; O'Leary-Kelly, Martocchio, & Frink, 1994), the present study examines how age diversity influences group performance through its effect on goal clarity, i.e., the extent to which team members as a whole clearly understand their subgoals and the connection between their work and the team's objectives (Hu & Liden, 2011). Thereby we conceptually (i.e., conceptualization of age diversity) and theoretically follow a major perspective in diversity research, namely the social-categorization perspective (van Knippenberg & Schippers, 2007), which posits that diversity inhibits team processes and performance by stimulating subgroup formation. As such, it is hypothesized that highly age-diverse groups will have more difficulty in formulating clear team objectives, and thus will perform worse than less age-diverse groups. Moreover, as diversity research suggests that situational influences might inhibit, as well as invite diversity effects on team processes and performance (Joshi & Roh, 2009; Wegge et al., 2008), we investigate the role of reflexivity, as a boundary condition to the age diversity – goal clarity relationship. Indeed, reflexivity, defined as a team's joint and overt exploration of work related issues (Schippers, Den Hartog, & Koopman, 2007) is a factor that has been found to stimulate groups to come to a shared understanding (van Ginkel, Tindale, & van Knippenberg, 2009; West, 1996), and might thus counter the negative effect of age diversity on goal clarity.

In investigating the depicted research model (Figure 1), the present study aims to address several important gaps regarding our understanding of the relationship between age diversity and team performance. First and foremost, by integrating insights from age and goal setting literature we extend

our understanding of the processes underlying the diversity – performance relationship (van Knippenberg & Schippers, 2007). While previous research on the diversity – performance relationship has unravelled social identity mechanisms (e.g., collective team identification), and cognitive mechanisms (e.g., team task elaboration), the present study draws attention to the motivational role of goal clarity as an underlying mechanism. Examining this mediating relationship also allows us to answer recent calls within the goal setting literature regarding how age differences in goal setting (e.g., promotion/prevention focus) affect team performance (Latham & Locke, 2007). Second, by investigating the moderating role of reflexivity, we contribute to building more comprehensive contextual frameworks for diversity research, incorporating contextual factors that potentially influence the effects of diversity (Joshi & Roh, 2009; Wegge et al., 2008). In so doing, we also identify opportunities for managerial intervention. Finally, a recent meta-analysis highlights that most recent studies on group goal setting test their hypotheses in laboratory settings with ad hoc student samples (Kleingeld et al.,2011), resulting in a striking lack of field studies in this domain. As the present study investigates the group goal setting process in real-life organizational settings, it adds to the ecological validity of previous findings in the group goal setting literature.

Insert Figure 1 about here

THEORY AND HYPOTHESES

Age diversity and team performance

Diversity refers to the distribution of differences among the members of a team with respect to one or multiple common attributes (Harrison & Klein, 2007; Williams & O'Reilly, 1998; van Knippenberg & Schippers, 2007). In diversity research, a distinction is generally made between "surface-level" and "deep-level" composition variables (Harrison, Price, & Bell, 1998; Jackson, May, & Whitney, 1995; Milliken & Martins, 1996). Surface-level diversity concerns the heterogeneity of team members regarding overt, biological characteristics, such as race, gender, and age, which are typically reflected in physical features. As these characteristics are generally immutable, easily observable, and measurable in

simple and valid ways (Jackson et al., 1995), this type of diversity variables has theoretically and empirically been found to be used by individuals to divide team members in social categories (e.g., young vs. old, native vs. ethnic) (Fiske, 1998; Krueger & DiDonato, 2008; Van Knippenberg et al., 2004). Deep-level diversity on the other hand refers to differences with respect to more underlying, non-observable characteristics, such as personality and values. While deep-level diversity variables are not directly detectable, they have been suggested to have a strong influence on team performance (Bell, 2007; Harrison et al., 2002; Hollenbeck, DeRue, & Guzzo, 2004).

This duality in diversity types is also reflected in the two opposing perspectives that are generally invoked to explain the performance effect of diversity. The social categorization perspective suggests that diversity may impair team performance by leading to the formation of subgroups. More specifically, as similarities and differences are used as a basis for categorizing the self and others into groups, diverse groups will more likely be a source of 'us vs. them' distinctions. Such distinctions may reduce the quality of team member interaction (e.g., faulty communication), produce conflict (e.g., Mohammed & Angell, 2004), and thus negatively impact team performance. Especially surface-level diversity (e.g., age diversity), which is easily observable and therefore a natural source of categorization, is likely to lead to in-group biases imparing team performance (Milliken & Martins, 1996). This social categorization perspective (Turner, 1982) is similar to and builds on the similarity-attraction paradigm (Byrne, 1971), the attraction-selection-attrition theory (Schneider, 1987), and social identity theory (Tajfel, 1978). In contrast, the information/decision-making perspective points to the potentially positive effects of diversity by outlining how more diverse groups can outperform homogenous groups as they have access to a broader knowledge base, expertise, and differing perspectives. This perspective builds further on the need completion hypothesis or value-in-diversity hypothesis (Jehn, Northcraft, & Neale, 1999; Watson, Kumar, & Michaelsen, 1993) and is often invoked to explain the hypothesized positive effect of deep-level variables (e.g., functional background, educational background). Considering these perspectives research attention has been directed towards the identification of conditions or traits that can weaken the negative effects of social categorizaton and/or leverage the broad base of cognitive resources that diversity might entail (e.g., Kearney et al., 2009).

In the present research age is the focal diversity variable. As age is readily observable and detectable, we follow the social categorization perspective in advocating that age diversity will negatively impact team performance (Wegge et al., 2008). Indeed, social identity theory (Tajfel, 1978, Tajfel & Turner, 1986) posits that one's social identity or self-concept is determined by group membership, which emerges as individuals categorize themselves in a certain social category. Moreover,

since people strive to enhance positive feelings toward their own category or in-group, they tend to place more trust in in-group than in out-group members and see in-group members as more valid sources of information (van Knippenberg et al., 2004). As such, when team members categorize themselves in the younger age group, they will tend to evaluate members of their own group (young colleagues) more positively, than members of other groups (older colleagues), which in turn will lead to the impairment of team processes and poor performance. While this reasoning might seem straightforward and most studies predict a negative effect of age diversity on team performance (e,g, Shore et al, 2009; Tsui, Egan, & Xin, 1995; Williams & O'Reilly, 1998), results are not alway unequivocal with studies finding no effect or a positive effect (e.g., Jackson, Joshi, & Erhardt, 2003; O'Reilly et al., 1998; Pelled et al., 1999). In line with Harrison and Klein (2007), we propose that one possible explanation for the inconsistent findings regarding age diversity might lie in the choice of diversity type and consequent operationalization. Indeed, when the social categorization perspective, predicting a negative effect on team processes and performance, is invoked, separation should be the appropriate construct. However, if researchers assume that age diversity contributes to the broad base of knowledge and cognitive resources, i.e. information/decision-making perspective, one should opt for variety as the appropriate type of diversity construct. As such, we do not only theorize a negative effect of age diversity on team performance, but we also adapt the diversity operationalization to the seperation format, i.e., age standard deviation, as opposed to its more common variety conceptualization and operationalization in several previous research efforts (Jehn et al., 1999; Pelled et al., 1999; Simons, Pelled, & Smith, 1999). As such, following the general tenet in the literature that age diversity has a negative effect on team performance (Ely, 2004; Leonard, Levine, & Joshi, 2004; Timmerman, 2000) and taking into account the appropriate operationalization, we hypothesize:

Hypothesis 1: Age diversity has a negative effect on team performance.

Goal Clarity as a Mediator

While previous research has identified a range of intervening variables, such as collective team identification and task-relevant information elaboration, it is surprising that the role of goal setting, as an important driver of team performance (Kleingeld et al., 2011), has not been investigated yet. Based on literature on diversity, aging, and goal setting, we suggest that goal clarity mediates the age diversity – performance relationship, such that age diversity has a negative effect on team performance through the impairment of team goal clarity. A substantial body of research highlights the importance of goal clarity, or goal specificity for individual, as well as group performance (see O'Leary-Kelly et al., 1994;

Kleingeld et al., 2011 for a review). At the individual level, specific goals are essential to direct individuals' attention and effort to a specific minimum acceptable performance level. Indeed, when individual goals are not specified clearly, the resulting ambiguity is likely to lead individuals to perform more poorly (Locke & Latham, 1990). While ensuring individual goal clarity is not always straightforward, clarifying and specifying goals in the group context poses additional challenges as several goals operate simultaneously. For instance, Zander (1980) suggested that at least four types of goals exist in group contexts: (1) each member's goal for the group, (2) each member's goal for himself or herself, (3) the group's goal for each member, and (4) the group's goal for itself. Considering the numerous and competing goals that are likely to arise in group settings, group goal clarity is considered to be a critical, though challenging, requirement for the group goal effect (O'Leary-Kelly et al., 1994).

To understand how age diversity might impact goal clarity and consequently influence performance, both the social categorization and the information/decision-making perspective might prove insightful. While previous research has mainly focussed on only one of these perspectives, recent theoretical and empirical efforts (Kearney & Gebert, 2009; van Knippenberg et al., 2004) have shown that combining these perspectives may outline the reasons for previous inconclusive findings, and is thus relevant to deepen our understanding. More specifically, it is argued that elaboration and social categorization processes influence one another in that the intergroup biases that may result from social categorization disrupt elaboration of task-relevant information (van Knippenberg & Schippers, 2007). Indeed, when subgroups emerge individuals will tend to like, trust, and interact with in-group members, rather than with out-group members, leaving cognitive resources untapped (De Dreu & West, 2001; Homan, Hollenbeck, Humphrey, van Knippenberg, Ilgen, & Van Kleef, 2008) and preventing the formation of a more complete and shared understanding of direction, task, and team as a result of elaboration (Gurtner, Tschan, Semmer, & Nägele, 2007).

As such, in line with previous research (e.g., Kearney & Gebert, 2009), we consider both perspectives to elucidate how age diversity impacts goal clarity, and consequently influences performance. In view of the complexity of group goal setting and the challenge of clarifying subgoals and the connection of these subgoals with the team's objectives, team members' elaboration on goals is key to come to a common understanding regarding the team's objectives (van Ginkel & van Knippenberg, 2004; van Ginkel, et al., 2009). For example, Gurtner and colleagues (2007) found that teams performed better in a military air-surveillance task when they communicated more often, and that shared mental models partially mediated the relationship between information elaboration and performance. However, research efforts have attested that it cannot be taken for granted that team members

naturally share information with other team members, or elaborate on tasks, goals, and perspectives (Mesmer-Magmus & DeChurch, 2009; van der Vegt & Bunderson, 2005). Indeed, information elaboration and the development of a shared understanding of team goals can be impaired by a number of contextual or intergroup factors (e.g., Rentsch & Klimoski, 2001). We suggest that age diversity is a team composition variable that might keep team members from obtaining clarity regarding their team's objectives.

We propose at least two reasons to explain how age diversity impairs the elaboration on information and thus the emergence of goal clarity. First, social psychology research shows that people use easily observable characteristics such as sex and age, to shape first impressions and categorize one another (e.g., Stangor, Lynch, Duan, & Glas, 1992). Through frequent activation of these categories in daily social perception, they become chronically accessible and are likely to lead to the emergence of subgroups (Brewer, 1979; Tajfel & Turner, 1986), which in turn might give rise to problematic inter-subgroup relations. As such, age-diverse groups are less likely to engage in information elaboration than less age-diverse groups, and consequently will be less likely to develop shared cognitions regarding the team's objectives, i.e., goal clarity. To summarize, we argue that age-based differences divide age-diverse teams into subgroups through social categorization processes, which impair the development of shared representations, such as goal clarity.

A second argument for the negative effect of age diversity on goal clarity lies in the effect of age differences in goal setting, which might impede information elaboration, goal clarity, and consequent performance. With regard to age and goal setting, research indeed suggests that age impacts a number of characteristics of and attitudes towards the goal setting process, such as the strategies for goal pursuit, goal selection, and goal orientation (Brandtstädter & Renner, 1990; Carstensen, 2006; Ebner et al., 2006; Sheldon & Kasser, 2001). For example, with regard to goal selection, research shows that younger individuals tend to select goals that allow them to obtain novel information or experience, whilst older counterparts generally select goals that fulfil their relational and emotional needs (Carstensen et al., 2003). In addition, age has been found to predict individuals' orientation towards their goal, such that younger adults reported a primary goal orientation towards growth, whereas maintenance and loss prevention were more prevalent goal orientations in middle adulthood and older age (Ebner et al., 2006). Moreover, in order to understand the role of age in the goal process, it is not only important to know how age differences translate to goal selection and goal orientation, but also how age differences emerge throughout actual goal pursuit. In line with research on age differences and regulatory focus (Ebner et al., 2006), research on age differences in goal pursuit shows that across the

life span individuals tend to shift from assimilative modes of goal pursuit to more accommodative modes (Brandtstädter & Rothermund, 2002), or from primary control to secondary control (Heckhausen, 1997). Based on the socially shared cognition perspective (Nederveen Pieterse, van Knippenberg, & van Ginkel, 2011), we argue that these age-based differences in attitudes and behaviors towards goals will impair elaboration on the team's objectives, and thus negatively affect goal clarity and subsequent team performance (e.g., Mathieu, Goodwin, Heffner, Salas, & Cannon-Bowers, 2000; Mathieu, Heffner, Goodwin, Cannon-Bowers, & Salas, 2005).

With regard to the impact of goal clarity on performance, goal-setting theory suggests that clear goals enhance team performance by directing team members' attention and encouraging members to be persistent (Hu & Liden, 2011; Locke & Latham, 1990). An important characteristic of goal clarity is that individual team members understand how their subtasks relate to the overall objectives of the team (Sawyer, 1992), which increases individuals' feeling of control over and autonomy in their work, which in turn enhances team potency, and consequent performance (Hu & Liden, 2011). As such, we suggest:

Hypothesis 2: Goal clarity mediates the relationship between age diversity and team performance, such that

Hypothesis 2a: age-based team diversity negatively impacts goal clarity and,

Hypothesis 2b: goal clarity positively influences team performance.

Reflexivity as a Moderator

Previous research suggests that the salience of diversity's effect depends on situational characteristics (Joshi & Roh, 2009), such that these situational characteristics or team-level traits might enhance positive diversity effects, and neutralize or even inverse negative diversity effects (e.g., Kearney et al., 2009; Nederveen Pieterse et al., 2011). As such, to further develop our conceptual model, we focussed on a relevant moderator of the effect of age diversity on goal clarity.

Based on our analysis of the literature, we suggest that factors that stimulate a shared understanding regarding the team's objectives might compensate the disruptive effect of age-based social categorization and age-based differences in goal orientations on goal clarity. Consequently, we integrated a team process factor that has been consistently found to facilitate shared understanding: team reflexivity (van Ginkel et al., 2009; West, 1996). Team reflexivity is defined as the extent to which group members overtly reflect upon, and communicate about the group's objectives, strategies, and processes, and adapt them to current or anticipated circumstances (West, Garrod, & Carletta, 1997, p.

296). Indeed, team reflexivity comprises the careful consideration of the group's approach to the task, learning from different group members' views on the task, adapting one's view where appropriate, and creating a shared understanding that may drive group process and performance more effectively (West, 1996). In line with these reflective activities, it has been consistently shown that team reflexivity improves team functioning, and is related to several outcome variables, such as commitment, innovation, performance and satisfaction (Carter & West, 1998; De Dreu, 2002; Schippers, Den Hartog, Koopman, & Wienk, 2003; Tjosvold, Hui, & Yu, 2003). Several arguments suggest that team reflexivity might attenuate the social categorization effect of age-based diversity and stimulate team members to create a shared and clear understanding of team characteristics, such as team goals.

First, we argue that team reflexivity can serve as a buffer for the social categorization effects of age diversity. When team members collectively reflect on and discuss the team's objectives, strategies, and processes, they are more inclined to look past the initially formed social categories and adjust, or even discard these previous assumptions and judgements about their team members accordingly (Harrison et al., 1998; Kearney et al., 2009). More specifically, team reflexivity allows team members to get to know one another's point of view, to make adjustments to their own judgement where appropriate, and to learn about others' strategies. The insights provided by team reflexivity not only lead team members to get to know one another better, but these insights have also been found to correct for potential biases, keep team members from forming erroneous stereotypes, and from judging others on the basis of stereotypes (Gruenfeld, Mannix, Williams, & Neale, 1996; Gaertner & Dovidio, 2000). As such, team reflexivity should be able to attenuate age diversity's negative effect by minimizing the social categorization consequences of age diversity.

A second argument for the buffering effect of team reflexivity lies in the fact that it is instrumental in surfacing and clarifying differences in team goal and individual subgoal representations. When team members are unaware of the differences in the goal representations that they hold and the subsequent negative performance effect of these differences, the efficiency losses of diversity go unnoticed. However, by engaging in team reflexivity, team members can shed light on the differences in presumably shared representations. The insights gained through this awareness allow team members to more actively develop a shared understanding of task strategies and goals (van Ginkel et al., 2009). As such, team reflexivity seems to be particularly fit to attenuate and counter the social categorization effect and the hidden misunderstandings in the age diversity – goal clarity relationship. Thus, we propose:

Hypothesis 3a: The inverse relationship between age diversity and goal clarity will be weaker for teams high on reflexivity than for teams low on reflexivity.

Assuming team reflexivity moderates the association between age diversity and goal clarity, it is also likely that reflexivity will conditionally influence the strength of the indirect relationship between age diversity and team performance—thereby demonstrating a pattern of moderated mediation between the study variables, as depicted in Figure 1. Because we predict a strong (weak) negative relationship between age diversity and performance when team reflexivity is low (high), we expect the following:

Hypothesis 3b: Team reflexivity will moderate the negative and indirect effect of age diversity on team performance (through goal clarity). Specifically, goal clarity will mediate the indirect effect when team reflexivity is low but not when it is high.

METHOD

Research Population and Sampling Design

Our sample consisted of 43 teams from ten Belgian organizations. While these organizations were engaged in a range of different sectors (banking, health insurance, public administration, pharmaceuticals, engineering, manufacturing, and human resources), the responsibilities of the participating teams were mostly knowledge- and service-related. During our first contact with the organizations, we had an interview with the Human Resources Department to ensure that potentially participating teams could be classified as real teams in the sense that a) the team has clear boundaries that reliably distinguish members from non-members, b) team members are interdependent for some common purpose, and c) have at least moderate stability of membership (Wageman, Hackman, & Lehman, 2005). In a second step the Human Resources Departments checked with the supervisors of selected teams whether they would be willing to participate in the present study, knowing that they would receive feedback afterwards. Finally, we collected data from two sources through a survey questionnaire. Team members provided the data for all study variables, except for team performance, which was rated cross-sectionally by the team leaders. Following the standard method of back-translation (Brislin, 1980), we translated the original English questionnaire items in Dutch.

In total 50 teams, consisting of 2 to 22 team members, and their supervisors participated in the survey. We excluded 7 out of the 50 participating teams because we did not receive data from the team

supervisor. As such, our final sample consisted of 43 teams from which we received data of supervisors and of at least 2 team members (i.e., for an effective team response rate of 86%). The final sample ranged in size from 2 to 15 team members (mean = 5.28, s.d. = 3.11). The mean age was 36.82 years (s.d. = 8.93) and 45 percent of the team members, and 67 percent of the team supervisors were male. Moreover, 39 percent of the team members had a master's degree level of education or higher.

Measures

Age diversity. According to Harrison and Klein (2007) special attention should be given to match the conceptualization, and accompanying substance and pattern of diversity with a specific operationalization. The choice of the appropriate diversity construct, i.e., separation, variety, or disparity, should thus depend on the measured attribute, the study hypotheses, foundational theories, and predicted outcomes. While previous studies have conceptualized age diversity as variety invoking the information/decision-making perspective (i.e., assuming that age differences imply a variety of knowledge, experience, and perspectives), the present study draws attention to the social categorization consequences of age diversity. Indeed, we contend that team members' age differences imply subgroup formation and opposing or differing views on a team- and task-relevant issue, i.e. the team goals. As such, in line with this conceptualization, we operationalize age diversity as separation rather than variety or disparity, and consequently measure age diversity as the standard deviation of team members' age (Harrison & Klein, 2007).

Goal clarity. Team members rated goal clarity with seven items. Five items were taken from existing scales (Anderson & West, 1998; Edmondson, 1999; Sawyer, 1992) and two newly formulated items were added. The complete scale can be found in appendix. The goal clarity items were assessed using a 5-point Likert-type scale ranging from strongly agree to strongly disagree. Sample items of goal clarity read "It is clear what our team is supposed to accomplish", and "In our team, team members know how their work is related to the team objectives" (α = .95). A mean rwg of .93 indicated that team members rated these items similarly. An ICC(1) of .49 and an ICC(2) of .83 confirmed sufficient between-group variance among teams, and adequate reliability of average team perceptions.

Team reflexivity. Team reflexivity was assessed with six items based on Schippers, Den Hartog, and Koopman (2007), and Anderson and West (1998). The complete scale can be found in appendix. Sample items include "In our team, we regularly discuss whether we are working effectively together", and "In our team, we often review our approach to getting the job done". Again a 5-point Likert-type scale ranging from strongly agree to strongly disagree was used (α = .90). We justified aggregation of

item responses at the team-level on the basis of an average rwg of .74, an ICC(1) of .27, and an ICC(2) of .67.

Team performance. Team supervisors rated team performance using eight items taken from Seibert et al. (2004). Each of the four performance aspects, i.e., quality, cost, schedule, and overall performance, were assessed with two items on a 7-point Likert-type scale ranging from 1, not good to 7, exceptional. Two sample items are "How would you judge the quality of this team's work?", and "How would you rate the overall performance of this team?". The eight items were averaged to form a single measure of team performance (α = .92).

Control variables. We controlled for several variables that previously have been associated with team outcomes and processes. Team size, which may impact cohesiveness and intra-team communication (e.g., Carron & Spink, 1995), was measured as the number of persons on a team. In view of supporting evidence for the importance of time in the salience and effect of diversity (Harrison et al., 2002), we also included team longevity as a control variable. Team longevity was conceptualized as the average length of time the team members had been in the team (Pelled et al., 1999). Three items of Campion, Medsker, and Higgs (1993) were used to assess task interdependence. A sample item is "Members of our team depend on each other for information or materials needed to perform their tasks" (1, strongly disagree, to 5, strongly agree; α = .84). Given an average rwg of .70 an ICC(1) of .19, and an ICC(2) of .54, we aggregated the team members' responses to a mean score of team task interdependence. In addition, following suggestions of Harrison and Klein (2007) we accounted for the within-group mean age of the team members. As such, our measure for age diversity (within-group SD of age) cannot be confounded with the mean age within a team.

Confirmatory Factor Analysis (CFA) and Data Analytical Plan.

To establish the distinctiveness of the study variables, we performed a confirmatory factor analysis (CFA) for goal clarity, team reflexivity, and task interdependence. In support for the construct validity of the study variables, the expected three-factor model fitted the data reasonably well (χ^2 = 241.95, $p < .001$; CFI = .96, TLI = .95, RMSEA = .07). Apart from assessing the absolute fit of this three-factor model, we also examined whether it fit the data better than competing models. Results showed that alternative models with fewer factors did not fit our data. For example, a two-factor model that comprised goal clarity and team reflexivity into one factor exhibited a poor fit (χ^2 = 743.25, $p < .001$; CFI = .78, TLI = .75, RMSEA = .17), as did the two other potential two-factor models in which reflexivity and task interdependence (χ^2 = 598.09, $p < .001$; CFI = .83, TLI = .80, RMSEA = .15), and goal clarity and task

interdependence (χ^2 = 611.35, p < .001; CFI = .82, TLI = .80, RMSEA = .15) were combined respectively. For the potential one-factor model we also did not obtain acceptable fit (χ^2 = 1083.02, p < .001; CFI = .66, TLI = .61, RMSEA = .20).

With regard to the data analytical plan, hypotheses were tested in two steps. First, we examined whether the impact of age diversity on team performance was mediated by goal clarity (Hypotheses 1 & 2). Such mediation hypotheses are often tested using the causal steps approach by Baron and Kenny (Baron & Kenny, 1986), or the product-of-coefficients approach developed by Sobel (Sobel, 1982, 1986). However, these procedures both assume multivariate normality of the sampling distribution of total and specific indirect effects, which is rarely the case for finite samples (MacKinnon, Lockwood, & Williams, 2004; Shrout & Bolger, 2002). Therefore recent methodological advancements in mediation analysis (MacKinnon et al. 2004; Preacher & Hayes, 2004, 2008) suggest that bootstrapping, a nonparametric resampling procedure that adjusts for non-normal distributions, should be preferred over both aforementioned procedures. Consequently, we tested the mediation hypotheses using an application provided by Preacher and Hayes (2004). More specifically, the SPSS macro they developed allows for the estimation of the indirect effect, both with a normal theory approach (i.e., Sobel test) and with a bootstrap approach to obtain CI's. In addition, it also incorporates the stepwise approach described by Baron and Kenny (Baron & Kenny, 1986). In the second step we used Preacher, Rucker and Hayes' (2007) moderated mediation SPSS macro to test whether reflexivity moderates the mediated relationship between the age diversity and team performance (Hypothesis 3).

RESULTS

A one-way analysis of variance revealed no significant differences among organizations with respect to our focal variables. We therefore used the entire sample of 43 teams to test our hypotheses. Table 1 presents the means, standard deviations, reliability coefficients, and correlations among the study variables. An inspection of the correlations reveals that age diversity is significantly and negatively related to goal clarity (r = -.43, p < .01), but not significantly related to team performance (r = -.22, ns). Results also indicate that goal clarity is positively related to team performance (r = .43, p < .01).

Insert Table 1 about here

Test of Mediation

The mediation results (Hypotheses 1–2) are reported in Table 2. As shown in Table 2, Hypothesis 1, suggesting a negative relationship between age diversity and team performance, was partially supported considering the marginal significance of the negative regression coefficient for this relationship (β = -.36, $p < .10$). In support of Hypothesis 2a and 2b, we found that the hypothesized negative relationship between age diversity and goal clarity (β = -.60, $p < .01$) and the positive relationship between goal clarity and team performance (B = .46, $p < .05$) were significant. A final test for our mediation hypothesis (Hypothesis 2) showed that after goal clarity was taken into account, the negative effect of age diversity on team performance became non-significant (β = -.08, ns), which indicates that goal clarity fully mediated the effects of age diversity on team performance. Bootstrap results confirmed these results with a bootstrapped 95% CI around the mediated effect not containing zero (–.70, –.08). Thus, hypotheses 1–2 received additional support.

Insert Table 2 about here

Test of Moderated Mediation

Table 3 highlights the results for Hypothesis 3a and 3b which predict that team reflexivity will moderate the relationship between age diversity and goal clarity (Hypothesis 3a) and that reflexivity will conditionally influence the strength of the indirect relationship between age diversity and team performance (Hypothesis 3b). The moderated mediation analyses show a statistically significant interaction between team reflexivity and age diversity (B = .07, $p < .01$) on goal clarity (mediator variable model), providing support for Hypothesis 3a. Using simple slopes analyses (with team reflexivity coded at one standard deviation above and below the mean of the team reflexivity measure), we assessed whether the interaction effect was consistent with the hypothesized pattern. As hypothesized, the slope of the relationship between age diversity and goal clarity was negative but weak for high team reflexivity, whereas this negative slope was stronger for low team reflexivity (Figure 2). This suggests that team reflexivity can serve as a buffer for the adverse effects of age diversity on goal clarity. When teams frequently engage in discussion and reflection regarding their tasks and goals, the impact of age diversity on goal clarity is neutralized. In contrast, for teams scoring low on team reflexivity, age diversity impairs the extent to which team members are clear about team objectives.

We used bootstrapping (n = 5000) (MacKinnon et al., 2004; Preacher et al., 2007) to directly assess the conditional indirect effects of age diversity on team performance (through goal clarity) at

different values of the moderator, team reflexivity (-2SD, -1SD, mean, +1SD, +2SD) (see bottom of Table 3). While the pattern of the conditional indirect effects was in the expected direction – negative/positive indirect effect for low/high levels of reflexivity – this effect was not significant at any of the moderator values. Thus, hypothesis 3b was not supported. This means that the moderating effect of team reflexivity, as identified through the interaction analysis, does not flow all the way through to team performance.

Insert Table 3 and Figure 2 about here

DISCUSSION

In view of an increasingly diverse workforce, practitioners and researchers alike are looking for ways to prevent potential negative consequences of diversity, such as miscommunication and coordination difficulties. Even more intriguing and promising are recent research efforts identifying the conditions that managers can create to promote the positive effects of diversity by tapping the broad range of perspectives, knowledge backgrounds, and experience associated with heterogeneous teams (Kearney & Gebert, 2009; Kearney et al., 2009; Nederveen Pieterse et al., 2011). Parallel to this rise in diversity research, goal setting theory has evolved towards the team level with group goal setting as a clear driver for performance (Kleingeld et al., 2011) and increasing interest in the impact of group composition on the goal setting process (e.g., Latham & Locke, 2007). This study links these two streams of literature by empirically examining goal clarity as an important explanatory mechanism underlying the relationship between age diversity and team performance. Consistent with our predictions, which were based on the self-categorization and information/decision-making perspective, goal clarity mediated the relationship between age diversity and team performance. More specifically, we found that highly age-diverse groups tend to perform poorly, as age differences and the associated biases and misunderstandings may stand in the way of delineating clear team goals. Less age-diverse groups on the contrary, seem to have less difficulty clarifying team goals and consequently perform better. Results further show that team reflexivity can attenuate the debilitating effect of age diversity on goal clarity. However, this moderating effect did not flow all the way through to our team performance criterion. One potential explanation for this is that our reflexivity variable did not show substantial variability (mean = 3.35; s.d. = .55). As such it would be hard to find significant differences in the indirect effect within the -2SD, +2SD range.

Theoretical Implications

The present study extends previous research in several ways. First, as we bring theory and insights from two streams of literature together, namely the diversity literature and the goal setting literature, our findings have implications for both lines of research. With respect to diversity, we provided a theoretical rationale and found empirical support for our proposition that goal clarity is an important path through which diversity affects performance. While previous investigations have examined the direct effect of diversity on performance, or have uniquely focussed on mediators based on the categorization – elaboration model (CEM; van Knippenberg et al., 2004), the present study draws attention to how diversity impacts performance by affecting a key variable in the goal setting process, i.e., goal clarity.

Regarding the goal setting literature, we highlight age diversity as a group level antecedent that impairs the potential positive impact of group goal setting on performance. While goal setting research has examined the impact of personality variables and age differences at the individual level (Brandtstädter & Renner, 1990; Brandtstädter & Rothermund, 2002; Ebner et al., 2006), up till now, insights into the effects of these individual difference variables on group goal setting remains scarce. The present study contributes to the goal setting literature by highlighting the importance of taking team diversity into account in future investigations. Indeed, in line with previous suggestions regarding team diversity's effect on team processes and performance, one cannot expect that members of a heterogeneous team take active steps to prevent negative consequences of diversity (e.g., intergroup bias), and promote its positive impact (e.g., cognitive resources) (Brodbeck, Kerschreiter, Mojzisch, & Schulz-Hardt, 2007; van der Vegt & Bunderson, 2005). As such, with age being considered a surface-level variable conducive to social categorization, age-diverse team members might not naturally clarify and further their understanding of both their individual task goals, and the connection between their own work and the team goals (Hu & Liden, 2011). Indeed, when no information elaboration efforts are made, age-based diversity impairs goal clarity.

Second, the fact that reflexivity moderates the effect of age diversity on goal clarity, suggests support for our claim that reflexivity can compensate the disruptive effect of age-based social categorization and increase shared understanding of the team goals. Along the same lines, it is likely that other conditions that serve the same function, i.e., stimulating team members to come to a shared understanding, may also attenuate the effect of age diversity on goal clarity. For example, previous research has identified team average need for cognition as an important trait motivating team members to elaborate on task-relevant information, and thus curtail the negative effect of age diversity (Kearney

et al., 2009). Similarly, factors external to the team, such as leadership and teamwork design, might also prevent age-based social categorization to occur and influence the shared understanding and representations of the team task, goals, and strategies (Bonacich, 1987; Dionne, Sayama, Hao, & Bush, 2010; Stewart & Barrick, 2000).

Third, heeding Kleingeld et al.'s (2011) call to more often explore team goal setting in real-life organizational settings rather than in lab studies, the present study investigates the mediating role of goal clarity in 43 teams in the field. In addition, as all participating teams were based in Belgium, the present study provides insights into the effect of age diversity in a particular cultural setting. As such, it sheds light on diversity's effects in a particular culture. These insights become increasingly important in today's globalizing world.

Practical Implications

Considering the rate by which the workforce is aging, organizations will inevitably be confronted with more age-diverse teams. Based on the findings in the present study, we suggest that organizations and managers pay more attention to teamwork design. More specifically, the mediating role of goal clarity calls for attention of managerial interventions on goal setting, such as outlining and clarifying team goals, and on team role design, such as connecting individual responsibilities to the team goals. Especially in age-diverse teams these interventions should provide a leverage to neutralize disruptive effects of diversity on goal clarity.

Furthermore, our findings suggest that reflexivity can buffer the detrimental effect of age diversity. As such, organizations working with age-diverse groups might attenuate diversity's negative effect by stimulating reflexivity. Previous research shows that higher levels of team reflexivity can be obtained through training (Gurtner et al., 2007) and by creating contexts that support reflexivity. For example, when employees experience a climate that nurtures collaboration and identification through task and goal interdependence (De Dreu, 2007; van der Vegt, van De Vliert, & Oosterhof, 2003), team members will be more inclined to discuss team objectives and strategies (Tjosvold, Tang, & West, 2004). Apart from teamwork design, leadership behavior has also been shown to affect team reflexivity. More specifically, previous research suggests that transformational leaders are well equipped to engage team members to put forward their ideas, perspectives, and suggestions with the aim of contributing to the team's performance (Schippers, Den Hartog, Koopman, & van Knippenberg, 2008; Kearney & Gebert, 2009).

Limitations and Avenues for Future Research

The results of the present study need to be considered in the light of several study limitations. First, all data was collected using a survey methodology, so common-method biases may have confounded our results. However, as we collected measures of our predictor and outcome variables from different sources, the effects of consistency motifs, implicit theories and social desirability are somewhat reduced (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In addition, given the cross-sectional nature of our research design, i.e., all data has been collected at one point in time, further research is needed to assess issues of causality. Furthermore, our methodology also leaves open the possibility that the effects found were spurious. To reduce the likelihood of this issue, we followed the advice of Rogelberg (2002) and formulated our model based on explicit theory in diversity and goal setting literatures. In addition, we incorporated a number of control variables. Considering these methodological limitations however, further investigation of our propositions by use of longitudinal research design is warranted. Such investigations will also allow researchers to better take into account the effects of time, which has been found to determine the salience of surface- and deep-level diversity effects throughout the team life cycle (Harrison et al., 2002).

Second, the present study invokes the social categorization and information elaboration perspective to identify goal clarity as an important mediating mechanism of the relationship between age diversity and performance. However, we did not empirically verify the role of these perspectives. For example, previous research has measured and modelled the role of collective team identification and information elaboration (Kearney & Gebert, 2009). As such, in line with suggestions of van Knippenberg et al., (2004), future research should make efforts to corroborate the role of these mechanisms in diversity effects by explicitly measuring them (e.g., cognitive accessibility of social categorizations).

Third, while Bell and colleagues (2011) call for the simultaneous investigation of a range of different, specific diversity variables (e.g., education, race, gender) in one model, the present study only focuses on age diversity. Considering our sample, consisting of low gender diverse groups (1/4 of sample is gender homogenous; less than 10% of sample is considered high in gender heterogeneity according to Blau's index), and relatively low levels of educational diversity (in 20% of sample teams there were only 2 of 8 types of educational levels; average Blau's index = .57), educational and gender diversity did not yield any direct or indirect effect on team performance. Future research might make use of more diverse groups in terms of educational background and gender in order to also examine the effect of these types of diversity on team performance via goal clarity. In this way, it will become clear whether

the present model also pertains to cognitive diversity (e.g., educational background). This is especially important given the conceptual differences between demographic and informational diversity (Jackson et al., 2003).

Finally, the present study only investigated one potential moderating mechanism of the negative effect of age diversity on goal clarity, i.e., team reflexivity. Future research might apply a range of existing and new variables that are believed to strengthen or weaken the extent to which diverse groups come to a shared understanding. Previously, average team need for cognition and transformational leadership have been identified as important moderators of diversity's effect (Kearney et al., 2009). Future research might investigate other potential boundary conditions, such as the role of supervisor strategies (e.g., van Knippenberg & Hogg, 2003), and organizational justice (e.g., Blader & Tyler, 2009). In addition, considering the importance of group goal setting and the promising link with group diversity, it might be rewarding for future researchers to apply and investigate how moderating variables in goal setting theory, such as feedback, and commitment, influence diversity's effect on the group goal setting process.

CONCLUSION

Our study breaks new ground in the diversity and goal setting literature by, on the one hand, identifying goal clarity as an important explanatory variable in the age diversity – team performance relationship, and, on the other hand, calling for increased examination of diversity effects in group goal setting research. Our findings further suggest that reflexivity is an important determinant of the degree to which goal clarity is enhanced or impaired by age diversity. As such the present study furthers our understanding regarding a key characteristic of every team, namely that every team exists for the purpose of pursuing some objective or goal (O'Leary-Kelly et al., 1994).

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APPENDIX A

MEASURES

Goal clarity

The following items were used to measure goal clarity: "Our team spends time making sure every team member understands the team objectives.[a] "; "It is clear what our team is supposed to accomplish.[a] "; "In our team, team members know how their work is related to the overall team objectives. [b] " ; "Our team objectives are clearly understood by all team members. [c]"; "Our team formulates clear objectives."; " Team members have clear performance norms, in line with the team objectives."; "In our team, team members know what is expected from them."

[a] Items taken from Edmondson (1999); [b] Items taken from Sawyer (1992). [c] Item taken from Anderson and West (1998).

Team reflexivity

The following items were used to measure team reflexivity: "In our team, we regularly discuss whether we are working effectively together. [a]"; "In our team, the methods we use to get the job done are often discussed. [a]"; "In our team, we often review our approach to getting the job done. [a]"; "We regularly discuss the way we communicate as a team. [a]"; "In our team, we frequently check whether our objectives are still relevant.[b]"; "Our team critically appraises the potential weaknesses in what it is doing. [b]".

[a] Items adapted from Schippers and den Hartog (2007). [b] Item taken from Anderson and West (1998).

FIGURE 1

Conceptual model

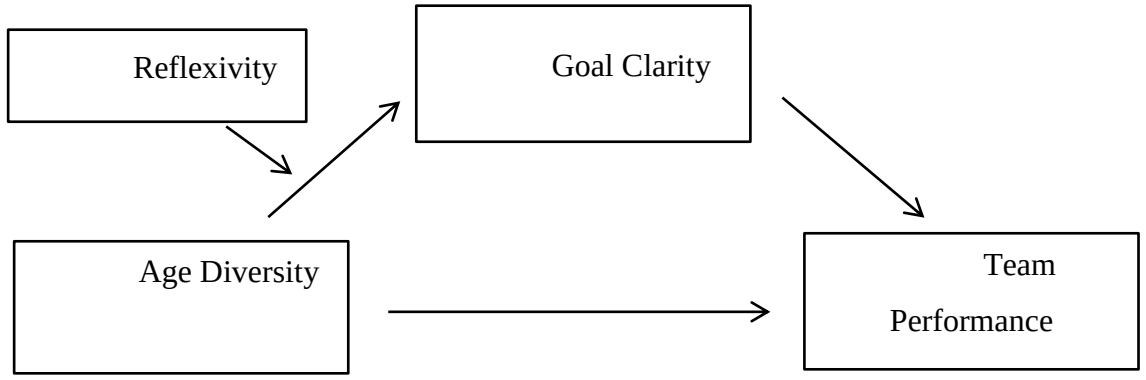


TABLE 1

Means, Standard Deviations, Reliabilities, and Correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8
1. Team Size	5.28	3.11	-							
2. Team Longevity	3.45	.76	.01	-						
3. Task Interdependence	3.39	.59	-.24	.35*	(.84)					
4. Team Mean Age	36.76	4.73	.01	.14	.16	-				
5. Age Diversity (Team Age SD)	6.81	3.64	.34*	.19	-.06	.55**	-			
6. Goal Clarity	3.76	.65	-.35*	.26	.24	-.00	-.43**	(.95)		
7. Team Reflexivity	3.35	.55	-.25	.21	.22	-.01	-.35*	.71**	(.90)	
8. Team Performance	4	.	-	-	-	.	-	.	.	(

			.88	76	.17	.08	.04	06	.22	43**	45**	.92)

Note: The diagonal values in parentheses represent the alpha-reliability coefficients. * p < .05; ** p < .01

TABLE 2

Hierarchical Regressions for the Impact of Age Diversity and Goal Clarity on Team Performance

	β	*SE*	*t*	*p*
Team performance regressed on Age Diversity (YX)	-.36	.21	-1.72	.09
Goal Clarity regressed on Age Diversity (MX)	-.60	.17	-3.56	.00
Team performance regressed on Goal Clarity, controlling for Age Diversity (YM.X)	.46	.19	2.44	.02
Team performance regressed on Age Diversity, controlling for Goal Clarity (YX.M)	-.08	.23	-.35	.73
	Data	Boot	Bias	95% CI
Age Diversity TOTAL	-.28	-.27	.01	{-.70, .-.08}
Goal Clarity	-.28	-.27	.01	{-.70, -.08}

Note: Values are standardized coefficients. Confidence intervals are bias corrected confidence intervals that include correction for median bias in the distribution.

TABLE 3

Regression Results of Moderated Mediation Analysis

	Mediator Variable Model			
Predictor	*B*	*SE*	*T*	*p*
Constant	.05	.07	.77	.45
Age Diversity	-.06	.03	-2.13	.04
Team Reflexivity	.69	.14	4.94	.00
Age Diversity x Team Reflexivity	.07	.03	2.06	.04

	Dependent Variable Model			
Predictor	*B*	*SE*	*T*	*p*
Constant	.02	.12	.21	.83
Goal Clarity	.23	.29	.81	.42
Age Diversity	-.01	.05	-.23	.82
Team Reflexivity	.51	.31	1.66	.11
Age Diversity x Team Reflexivity	.04	.06	.57	.57

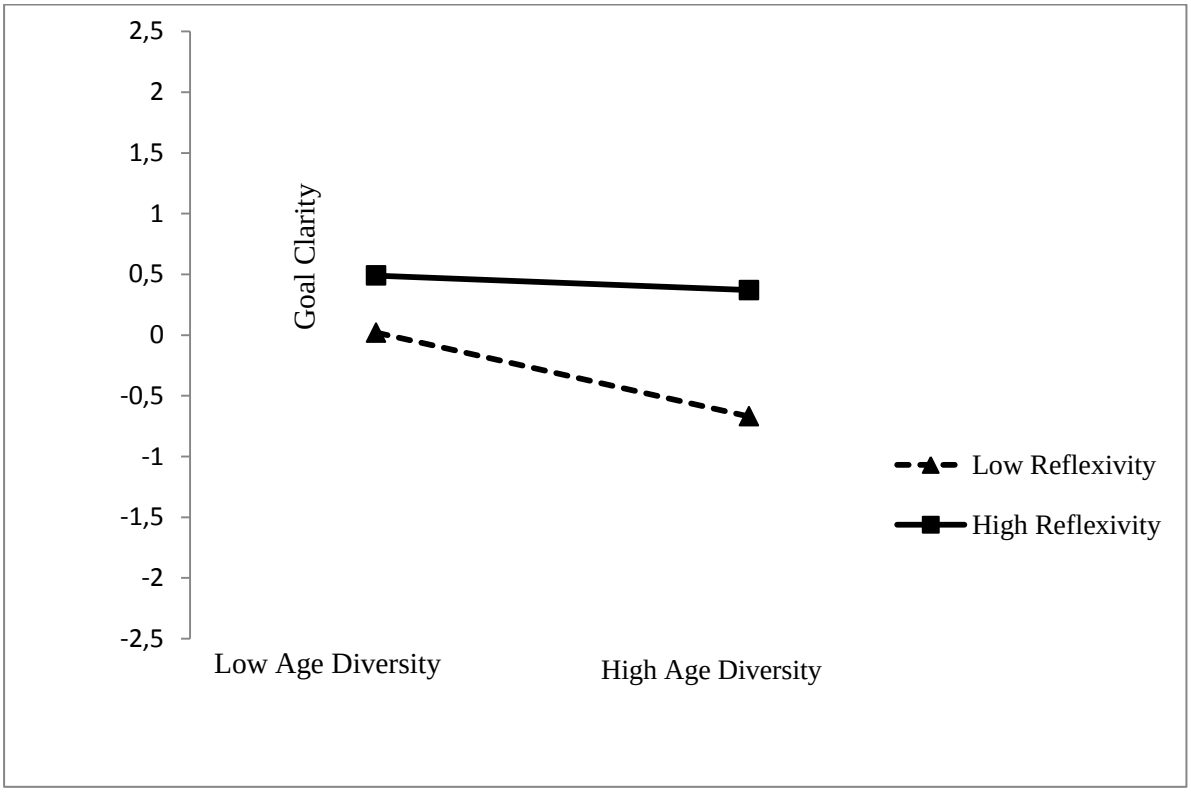
Conditional effects and CIs at range of values of Reflexivity		
Team Reflexivity[a]	*Boot indirect effect*	*Bias corrected and accelerated*
-1.08	-.03	{-.18, .04}
-.54	-.02	{-.12, .03}
0	-.01	{-.08, .01}
.54	-.00	{-.06, .01}
1.08	.01	{-.02, .10}

Note: Bootstrap sample size = 5,000. Unstandardized regression coefficients are reported in line with recommendations of Preacher et al. (2007). Variables were mean-centered before the analysis.

[a] Range of values represent the conditional indirect effect at -2SD, -1SD, mean, +1SD, +2SD of mean-centered values of team reflexivity.

FIGURE 2

Interaction Effect of Age Diversity and Team Reflexivity on Goal Clarity



Note: Mean-centered variables were were used for the interaction analysis.

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