



HHS Public Access

Author manuscript

Appl Psychol Health Well Being. Author manuscript; available in PMC 2022 December 14.

Published in final edited form as:

Appl Psychol Health Well Being. 2020 November ; 12(3): 787–807. doi:10.1111/aphw.12207.

Growing into “Us”: Trajectories of Social Identification with College Sport Teams Predict Subjective Well-Being

Scott Graupensperger*,

University of Washington, Seattle, WA, USA

The Pennsylvania State University, University Park, PA, USA

Michael J. Panza,

The Pennsylvania State University, University Park, PA, USA

M. Blair Evans,

The Pennsylvania State University, University Park, PA, USA

Ross Budziszewski

Trauma Services Department, St Christopher’s Hospital for Children, Philadelphia, PA, USA

Abstract

Background: Groups are often a source of social identification that may elicit subjective well-being. When joining and maintaining membership of groups such as sport clubs, it is anticipated that members will experience varying trajectories of identification strength, but it is unclear how these trajectories may relate to well-being.

Method: Participants were 697 college students (64% female), nested within 35 club-level sport teams. The current study longitudinally assessed students’ social identification with sport teams at three timepoints (3-month lags) across a school year to examine the extent that growth trajectories in identification strength predicted indices of well-being (i.e. life satisfaction, happiness, and subjective health) at the end of the school year.

Results: Multilevel latent growth modeling revealed that end-of-year well-being was positively predicted by social identification intercepts ($b = .24, p = .010$) and growth trajectories ($b = .75, p < .001$). Accounting for baseline identification, steeper increases in social identification (upward trajectories) predicted greater well-being.

Conclusions: Findings support established theory that social identification relates to well-being, while adding novel insights that students may experience unique benefits when their social identity strengthens over the course of a school year. Considering recent declines in college student well-being, groups like sport teams represent a source for social identification that should be fostered throughout the course of one’s group membership.

*Address for correspondence: Scott Graupensperger, Department of Psychiatry and Behavioral Sciences, University of Washington, Seattle, WA, USA., Graups@uw.edu.

SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Keywords

group dynamics; latent growth models; social identity theory; subjective well-being

INTRODUCTION

Conventional wisdom may suggest that college is the “time of your life” or “the glory days”. However, there is a growing concern for the well-being of college students (Baik, Larcombe, & Brooker, 2019). Evidence of steep rises in psychological distress over the past decade have led experts to conclude that emerging adults—and particularly college students—are quickly becoming a high-risk population in terms of poor well-being (e.g. Larcombe et al., 2016). There is nevertheless a burgeoning literature indicating that joining a social group can have profound positive effects on health and well-being (Haslam, Jetten, Postmes, & Haslam, 2009). These positive effects can be explained, in part, through psychosocial processes such as satisfying the need to belong and facilitating perceptions of purpose and meaning in life (Lambert et al., 2013). Yet, the groups we belong to also shape perceptions of who we are and our place in the social world—producing social identities around group memberships that have numerous individual benefits. This has led researchers to tout social identification with groups as a *social cure* for improving health and well-being (Jetten, Haslam, & Haslam, 2012).

Links between social identity and well-being have been studied in a variety of group contexts, including nationality-based identities (Greenaway et al., 2015), in rehabilitation settings (Haslam et al., 2019), and in other clinical settings such as stroke recovery (Haslam et al., 2008). Studies have also examined this link within naturally occurring groups such as large college student cohorts (Greenaway, Cruwys, Haslam, & Jetten, 2016), but identification with smaller proximal peer groups may be particularly salient (Hogg, Abrams, Otten, & Hinkle, 2004). For example, involvement in extracurricular social groups and clubs can have pronounced benefits on college students’ well-being (Doerksen, Elavsky, Rebar, & Conroy, 2014). In particular, there has been growing interest in sport participation as a context for developing meaningful social connections and a positive source of social identification (Graupensperger, Panza, & Evans, 2019; Rees, Haslam, Coffee, & Lavalley, 2015; Rodrigues, Evans, & Galatti, 2019). College club sport teams are readily accessible small groups that include several characteristics that are likely to produce strong social identities (e.g. task interdependence, groupness, social cohesion; Eys, Bruner, & Martin, 2019; Eys & Evans, 2018). There is thus a strong rationale for examining the link between social identification and well-being within college club sport teams.

Exploring the link between-group memberships and well-being necessitates recognising the different sources of well-being. Well-being is a complex construct involving physical, psychological, and social wellness—focusing on individuals’ subjective experiences of healthy and successful human functioning across these three dimensions (Biglan, Flay, Embry, & Sandler, 2012). Subjective well-being commonly involves assessing both hedonic experiences (e.g. happiness) along with eudemonic perceptions involving deeper forms of flourishing and actualisation (e.g. Ryan & Deci, 2001). Despite the diverse evaluations at the

heart of well-being, recent evidence indicates that well-being may be effectively represented as a global construct (Disabato, Goodman, Kashdan, Short, & Jarden, 2016). Indeed, researchers studying well-being largely integrate dimensions of individuals' evaluations related to life satisfaction, overall happiness, and subjective perceptions of one's overall health (e.g. Greenaway et al., 2015). We draw upon this conceptualisation of well-being within the current study.

SOCIAL IDENTITIES AND WELL-BEING

When people become aware that they are a member of a group, they develop social identities that represent the part of their self-concept that is derived from shared group membership and social connections with fellow group members (i.e. social identity theory; Tajfel, 1981). Thus, one's social identification strength reflects the meaning and significance that one places on a particular group membership (Postmes, Haslam, & Jans, 2013). Focusing on identity in this way highlights how it is the psychological significance of one's social identities, rather than simply being a member of a group, that dictates the extent to which one derives pride and self-esteem from their group identities (Jetten et al., 2012).

Social identities have often been studied as an outcome that emerges from one's group memberships, but there has been a recent focus on downstream positive effects of social identification on health and well-being (Jetten, Haslam, Haslam, & Branscombe, 2009). Findings from a recent meta-analysis highlight how simply belonging to different groups can support well-being, but that these benefits are particularly experienced by people who strongly identify with their groups (Steffens et al., 2019). It is less the quantity of group memberships, and more the quality of those memberships in relation to identification that influences well-being. As such, studies have shown that those who identify strongly with a social group are less likely to suffer from depression (Sani, Herrera, Wakefield, Boroch, & Gulyas, 2012), experience less work-related burnout (Avanzi, Schuh, Fraccaroli, & van Dick, 2015), and adjust more easily to challenging life transitions (Iyer, Jetten, Tsivrikos, Postmes, & Haslam, 2009).

As evidence of the health benefits related to identifying with social groups accrues, it becomes especially critical to carefully operationalise social identity. Researchers have accordingly contrasted social identification with constructs that represent the sense of affiliation with a group or integration of group members (e.g. group cohesion; Cruwys et al., 2020). Social identification differs from feelings of affiliation because it entails the degree to which a person perceives that a group positively informs their self-definition (Postmes et al., 2013). Identification is also distinct from discrete behaviors among members. For instance, although social support among group members could foster identity, social identities are emergent social cognitions that are inherently more idiosyncratic and flexible compared to support among members. Finally, individuals are often motivated to identify with groups as a potential source of belongingness, meaning, distinctiveness, continuity, self-esteem, and efficacy (Easterbrook & Vignoles, 2012). For example, it has been reported that social identification generates feelings of belongingness, self-esteem, and control over one's life (Cameron, 1999; Greenaway et al., 2015). As such, social identities are a cognition drawn

from various social contexts—like small groups—that can be a means of satisfying more generalised needs or expectations.

Cameron's (2004) tripartite model is one approach to operationalising social identity relative to other social cognitions stemming from group membership. This conceptualisation describes one's social identification as entailing perceptions of (a) ingroup ties representing similarity and connectedness with fellow group members, (b) ingroup affect, referring to the positive feelings emerging from group identities, and (c) cognitive centrality referring to the salience of one's group membership. Researchers have often leveraged this operationalisation when studying small groups (e.g. teams, work groups) as opposed to larger sources of identity. Nevertheless, measures that leverage this conceptualisation align with recommendations of Steffens et al. (2019) by measuring how strongly individuals identify with small groups within each dimension.

Pathways Linking Social Identification to Well-Being

Social identity scholars have also recognised the need to establish mechanistic explanations for the potential positive effects on well-being (Cruwys et al., 2014; Haslam et al., 2009). Researchers have theorised that social identification can produce several complementary influences on well-being. First, social identification has a salient effect on one's life as a source of cognitive, perceptive, and affective resources that help individuals to overcome adversity (Greenaway et al., 2016; Jetten, Haslam, Haslam, Dingle, & Jones, 2014). Second, internalising group memberships into one's sense of self may elicit well-being because identification provides individuals with a sense that they are satisfying needs or related goals, such as direction, purpose, and meaning in life (Haslam et al., 2009) or belongingness and self-esteem (Greenaway et al., 2015). Despite numerous and overlapping explanations, there is nevertheless evidence that social identification elicits numerous psychosocial benefits that are conceptually related to well-being.

TRAJECTORIES OF SOCIAL IDENTIFICATION OVER TIME

Social identification is a dynamic process that is thought to strengthen as individuals become socialised into groups (Moreland & Levine, 2014). However, a critique of group dynamics research argued that few studies have captured the importance of temporal aspects of group processes such as the development of social identification across a period of time (Cronin, Weingart, & Todorova, 2011). Although few studies have focused on how identities form or strengthen over time, tenets of the social identity approach hold that connections to groups are fluid and dynamic (Oakes, Turner, & Haslam, 1991). Empirical findings have indeed revealed that identification is an emergent process that evolves over time (Jans, Leach, Garcia, & Postmes, 2015; Postmes, Haslam, & Swaab, 2005). We therefore argue that exploring whether one possesses a generally strong identity differs from examining whether they have embraced, maintained, or disconnected from small group identities over time. Given the salience of identities formed around small face-to-face peer groups (Hogg et al., 2004), there is a need to examine longitudinal patterns of identity development in proximal student groups such as sport clubs, and whether differences in trajectories of identification strength relate to well-being.

Despite strong support for the link between social identification and well-being, researchers have not yet examined social identification trajectories. However, there is evidence that students' identity gain (i.e. change in identification strength with school cohort) from the beginning to the end of a school year was positively related to basic needs satisfaction and negatively related to depression (Greenaway et al., 2016). Especially when considering that emerging adults experience many transitions in social contexts, it becomes critical to examine whether they are able to maintain existing social identities over time or strengthen relatively new identities and how these trajectories of identification strength may relate to well-being. As such, there is a clear rationale for studying how social groups—and students' evaluations of the meaning of these group memberships over time—may relate to college students' well-being.

CURRENT STUDY

The current study was designed to address gaps in the literature pertaining to the benefits of social identity. We built upon an existing understanding that social identification is linked to perceived well-being by examining college students' social identification trajectories with club sport teams longitudinally mapped over the course of a school year. We anticipated that students would generally demonstrate upward trajectories in identification strength over the course of the year, but that there would be significant variability in these trajectories between individuals such that students would increase or decrease to varying degrees (i.e. steepness). Central to the aims of this research, we anticipated that the between-person differences in the steepness of students' identification trajectories across the school year would relate to subjective well-being. In the context of longitudinal trajectories, upward slopes indicate that identification has strengthened over time, meaning the individual is placing greater personal significance upon their group membership (Postmes et al., 2013). Based on previous research showing psychosocial benefits of social identity gain (Greenaway et al., 2016), we expected that steeper upward trajectories featuring increasing sport team social identification strength would positively predict students' well-being at the end of the school year. However, given the novelty of this research question and limited previous empirical examination of identification trajectories, we note that this study should be accordingly considered as hypothesis-generating.

College student club sport teams are naturally occurring groups that are valuable for studying members' social identification trajectories across the lifespan of a group. For example, most sport clubs form at the beginning of the school year and adjourn at the end of the school year, providing a span of time to study identity development. However, naturally occurring groups like sport clubs also involve heterogeneous collections of members who enter the group with differing experiences. As an exploratory aim, we also set out to explore the intuitive expectation that newcomers would start relatively low in identification strength at baseline and would show steeper upward trajectories of identification strength across the year—relative to more veteran members who had previously been socialised into the group. As a result, team tenure was included in analytic models as a theoretically important control variable.

METHOD

Participants

Nested within 35 intact same sex club-level sport teams (e.g. soccer, ice hockey, lacrosse), the sample comprised 697 sport-playing college students from a large public university in the United States (64% female). Average team size was 19.91 members ($SD = 9.16$). Club sport teams were predominately student-led and participated in intercollegiate competition including regional and national championships. It is important to note that clubs remain intact throughout the entire school year with practices and competitions taking place in both fall and spring semesters. The sample comprised 28 per cent freshmen, 23 per cent sophomores, 26 per cent juniors, 22 per cent seniors, and 1 per cent graduate students ($M_{age} = 19.56$, $SD = 1.21$).

Procedures

To generate interest, researchers were invited to present an overview of the study at an annual meeting for club sport student leaders (e.g. club presidents). Club leaders who were interested scheduled a time for researchers to meet with the teams before or after a practice or meeting, where researchers provided an overview and invited participation from individual team members. Students who opted out of participation were not counted, but we note that nearly every student who was present when researchers met with teams opted to participate in the study.

Using electronic tablets or smart phones, data were collected at three timepoints across a single school year: mid-fall semester after teams had commenced training (T1), early spring semester (T2), and late spring semester near the end of the school year (T3). Three-month intervals separated timepoints, and participation was incentivised at each data collection by the choice of either: (a) a \$5 gift card or (b) credit towards the community service hours required of each club sport participant by the university's department of campus recreation. Whereas social identification was assessed at all three timepoints to track dynamic trajectories, the distal outcome variables of interest, well-being indices, were assessed at the final timepoint (i.e. end of the school year). All study procedures were approved by the authors' institutional review board, and the data were collected as part of a larger project (i.e. Graupensperger, Turrisi, Jones, & Evans, 2020).

Measures

In addition to standard demographic variables (e.g. sex, age, year in school), participants reported the number of seasons they had participated in their club sport teams (i.e. tenure). Social identification strength with one's club sport team was assessed using the nine-item Social Identity Questionnaire for Sport (SIQS; Bruner & Benson, 2018). Items reflected perceptions of ingroup ties (e.g. "I feel strong ties to other members of this team"), ingroup affect (e.g. "Generally, I feel good when I think about myself as a team member"), and cognitive centrality (e.g. "In general, being a member of this team is an important part of my self-image"). Bruner and Benson demonstrated that this scale is appropriate for measuring social identification as a global construct comprising these subdimensions. Likert-type response options ranged from 1 (*strongly disagree*) to 7 (*strongly agree*).

Multilevel α estimates, accounting for the nested data structure, indicated that this scale had high reliability within our sample across all timepoints (i.e. between .95 and .97 at the between-group level and .90–.92 at the within-group level).

In line with Greenaway et al. (2015), well-being was operationalised as a latent variable comprising indices of life satisfaction, happiness, and subjective health. Life satisfaction (“All things considered, how satisfied are you with your life these days?”) was scored on a Likert-type scale ranging from 1 (*completely dissatisfied*) to 10 (*completely satisfied*). The happiness scale (“Taking all things together would you say you are...”) ranged from 1 (*very happy*) to 4 (*not at all happy*), and the subjective health scale (“All in all, how would you describe your state of health these days?”) ranged from 1 (*very good*) to 4 (*poor*). Happiness and subjective health items were reverse scored (Greenaway et al., 2015).

Analyses

Missing data were first explored in terms of both item nonresponse (i.e. missingness on a single item within a wave) and nonresponse to a complete wave (Jeličić, Phelps, & Lerner, 2009; Little, 1988). Whereas 1,054 students participated in at least one wave, the final sample for the current study excluded 357 students who did not participate at T3, as the primary outcome items were reported at T3 (i.e. well-being). Nonresponses for social identity items were confirmed to be missing completely at random at each timepoint (χ^2 values ranging from 13.01 to 21.92, p values ranging from .672 to .991). As a result, missing item responses were imputed using multiple imputation procedures (Little, 1988). As it pertains to complete wave nonresponse (i.e. not participating in one survey wave), men were more likely to have missed complete waves compared to women ($\chi^2 = 11.42, p < .001$), but Welch’s two-sample t -tests revealed no differences in wave missingness by age ($t = -0.01, p = .99$) or social identity at T3 ($t = -1.11, p = .27$). Complete wave missingness was deemed to be at random and social identification scores for participants with missing responses at T1 ($n = 148$) and T2 ($n = 151$) were imputed using full information maximum likelihood estimation (Enders, 2001; Jeličić et al., 2009).

Descriptive statistics and bivariate correlations were calculated. Due to participants being nested within teams, preliminary analyses also entailed computing intraclass correlation coefficients (ICC) to estimate the extent that variance in study variables was attributed to the clustered data structure (i.e. between-group variance). ICCs showed that between-group differences accounted for approximately 1 per cent to 5 per cent of the variance in well-being indices, and approximately 5 per cent to 9 per cent of the variance in social identification strength. Despite relatively modest ICCs, these values indicate the need to account for nesting using a multilevel approach.

A series of multilevel latent growth models were fit using the “lavaan” package in R whereby clustering within team was accounted for (Rosseel, 2012). Specifically, participants’ team was specified as a clustering variable, which appropriately adjusts the standard errors to prevent inflation of type-1 error rate. Latent growth models estimated an intercept value for each person, which is interpreted as baseline social identification strength, and a slope value that estimated one’s growth trajectory of social identification strength across the three timepoints. Although we explored the extent that growth

trajectories approximated a quadratic shape, models that specified non-linear curves did not converge, which is common in latent growth models with only three timepoints (Grimm, Ram, & Hamagami, 2011). As such, we retained the parsimonious approach of treating latent growth curves as linear.

An unconditional growth model was initially fit in Model 1, which only included social identification at the three timepoints. Sex and tenure were subsequently added as time-invariant covariates in Model 2, whereby tenure was considered at both the group level (i.e. team mean tenure) and individual level (i.e. group-mean-centered). Model 3 included the addition of well-being as a latent outcome variable (see final model in Figure 1). In Model 1, we estimated whether there was significant variance in participants' social identification intercepts and slopes (i.e. between participants), and in Model 2 we estimated the extent that this individual-level variance was explained by sex and tenure (i.e. at the individual and team level) as control variables. Thus, we accounted for any differences in social identification intercepts and slopes between men and women or based on how many years an individual had belonged to the team. In Model 3, we estimated the extent that the variance in participants' social identification intercepts and slopes predicted well-being assessed at the end of the school year. Intercepts and slopes were allowed to covary in all models (Duncan & Duncan, 2009).

RESULTS

Descriptive statistics are displayed in Table 1. Bivariate correlation estimates indicated that life satisfaction, happiness, and subjective health were positively associated with social identification strength at T2 and T3. In contrast, T1 social identification strength was associated with happiness only. Tenure with one's team was also positively associated with social identification strength, whereby those with increased duration of membership reported stronger identification at each of the three waves. However, the strength of this association decreased across the school year.

Model fit indices for each of the latent growth models are displayed in Table 2. Although the RMSEA for Model 1 was above the common threshold of .08, all other indices for the three models indicated satisfactory model fit. Estimates from all three models are reported in Table 3. The unconditional growth model (Model 1) revealed that the mean intercept for social identification was 5.71 ($p < .001$), and the mean slope was $-.08$ ($p = .003$). Across all individuals on average, social identification was relatively strong at baseline and decreased slightly across the school year. Slopes ranged from -1.57 to 0.81 , and 56.67 per cent of participants had a negative slope. A plot showing individual growth trajectories is available in the online supplement. Model 1 also shows that there was significant variance between participants in both the intercept and slope for social identification trajectories ($ps < .001$).

Model 2 revealed that individual-level tenure with one's sport team (i.e. group-mean-centered) was positively associated with one's social identification intercept ($p < .001$) and inversely associated with one's social identification slope ($p = .004$). Those students who had been members for a longer period of time began the season with stronger social identification, while having lower tenure predicted steeper trajectories in social identification

across the season. Team-level tenure (i.e. group mean) was also positively related to social identification intercepts, indicating that students belonging to groups that had been together longer generally identified more strongly. Sex was not significantly associated with either intercept or slope.

Model 3 examined the extent that well-being was predicted by social identification intercept and slope values. The three indices of well-being loaded strongly onto the latent variable: $\lambda = .66$ for life satisfaction, $\lambda = .65$ for happiness, and $\lambda = .69$ for subjective health (all $ps < .001$). Model 3 revealed that both social identification intercept and slope were positively associated with well-being at the end of the school year ($ps = .010$ and $< .001$, respectively). The estimates found in Model 3 indicated that, while students' initial level of social identification strength significantly predicted well-being, students' growth trajectories of social identification were a relatively stronger predictor of well-being. Steeper upward trajectories of social identification across the school year predicted greater well-being at the end of the year.

Models Adjusting for Ceiling Effects

As previously demonstrated by Khan et al. (2016), it is important that sample statistics be considered alongside potential ceiling effects from high scores on social identification at baseline. We accordingly conducted sensitivity analyses to account for the potential role of ceiling effects in social identification. When we excluded the 43 participants (6% of sample) who scored at the ceiling for social identification strength at T1 (i.e. answered "7" to all nine items on the SIQS), the average identification slope became more balanced whereby 50.6 per cent of the sample had a *positive* slope compared to 43.33 per cent in the original model.

We re-ran the unconditional growth model (Model 1) excluding these 43 participants at ceiling, and it was revealed that the mean intercept for social identification was 5.65 ($p < .001$), and the mean slope was $-.04$ ($p = .124$), which is no longer statistically significant. Although we replicated Models 2 and 3 to probe the effect of retaining/excluding participants who scored at ceiling for T1 social identification, interpretation of the results did not differ as the change in estimated effects was trivial.

DISCUSSION

The primary aim of the current study was to examine whether patterns of social identification with one's club sport team across a single school year were associated with indices of well-being among college students. Recall that identity theorists posit that students' social identification will emerge as a dynamic process as members are socialised within proximal peer groups (Postmes et al., 2005). In support of study hypotheses, identification intercepts and slope trajectories (i.e. steepness) were significantly associated with well-being. Whereas students with stronger baseline identification reported greater well-being, a notable effect emerged even after accounting for baseline identification: The extent to which students increased in social identification strength (i.e. identity development) with respective sport teams was positively related to well-being at the end of the year. In other words, those with steeper upward slope trajectories reported greater subjective well-

being. This finding can also be interpreted as showing that steeper downward trajectories in social identification predicted lower reports of well-being.

These findings advance a growing literature pertaining to how identifying with social groups may relate to well-being. Researchers have previously reported that continuous group membership and *maintaining* one's social identity is predictive of well-being (e.g. Iyer & Jetten, 2011), but our findings show that *increasing* one's social identification strength over the course of group membership may be particularly linked to well-being. It follows that the positive and fulfilling aspects of social identification may be especially reinforced when the psychological significance of one's group membership continues to strengthen over time. These findings add novel support for group identification as a "social cure" that enhances well-being and hold practical implications for how groups can benefit college students, although additional evidence of causality would further strengthen these implications.

If there is unique value in enhancing social identification over time, then strategies to strengthen these identities are not only important for socialising new members into a group but remain critical even for existing members. In comparison to team-building strategies focused on group performance, for instance, interventions targeting social identification may be valuable across the life of a group to support members' socialisation and experiences within groups as a context to support well-being (Steffens et al., 2019). Such interventions are particularly relevant for student groups considering the apparent trend of decreasing mental health and well-being among college students (Baik et al., 2019; Larcombe et al., 2016). However, the current results raise a new question that researchers should consider when developing such interventions: Should translational strategies aim to *increase* individuals' social identification or instead focus on preventing individuals from *decreasing* social identification strength?

This study was, to our knowledge, the first to characterise patterns of small group social identification over time. Interpreting the summary statistics (i.e. mean intercepts and slopes), the findings revealed that students typically reported relatively strong social identification with club sport teams, but that identification strength slightly decreased over the school year. Across this sample, it seems that social identification may not inherently increase as one retains group membership. Accordingly, there was significant variability in growth trajectories, with 56.67 per cent of athletes reporting downward trajectories, although it is critical to consider that baseline social identification scores were often quite high, meaning that there was relatively more room for downward movement (Khan et al., 2016). This finding nevertheless provides key support for Haslam and colleagues' social identification hypothesis, which emphasises that simply being categorised into a group does not facilitate social identification or well-being, but that one's group membership must become a salient and internalised aspect of one's sense of self to reap benefits pertaining to health and well-being (Haslam, Jetten, Cruwys, Dingle, & Haslam, 2018).

Variability in social identification trajectories is of significance for studying (a) why certain individuals unsuccessfully socialise into groups and (b) the nature of group development. Regarding the first point, individuals who decreased in social identification across the school year may represent a group of interest regarding well-being. Future research could unpack

whether downward identification trajectories are predicted by factors such as dissatisfaction, ostracism, or task-related processes such as team performance or being sidelined due to injury.

Although we included participants' length of tenure as a necessary control variable, findings shed light on how tenure may relate to social identification. At the group level, social identification intercepts were stronger for those students who belonged to teams with longer average tenure among members. We also found that those with less tenure—relative to teammates—reported lower baseline identification strength but demonstrated steeper upward slopes in identification strength across the school year. Especially pertaining to the transition into college—when students leave old groups and identities behind—joining new groups can have profound effects on well-being (Iyer et al., 2009). The current findings further support the importance of joining new groups and developing an initial sense of identity with a new set of peers (i.e. identity gain; Greenaway et al., 2016). This finding also holds theoretical implications for our understanding of newcomer integration and prompts future longitudinal research into how group socialisation relates to identity development.

It is also prudent to consider potential underlying reasons for why length of tenure may facilitate stronger identification. Sport researchers have found that as athletes' tenure with their team increases, they experience changes in formal and informal roles both in terms of sport-specific roles (e.g. increased playing time/formal team captaincy) as well as social roles (Benson, Surya, & Eys, 2014; Kim, Coleman, Godfrey, Vierimaa, & Eys, 2020). How one's role develops over time may indeed shape the trajectory of social identification strength. Notably, athletes who develop leadership roles report stronger identification with their team relative to those athletes who do not develop leadership roles (Martin, Balderson, Hawkins, Wilson, & Bruner, 2017). A critical next step within this line of research is examining how identity development maps alongside other group processes, such as role transitions, over the course of several years. Qualitative designs may also provide deeper insight into identity development over time, and how these trajectories may relate to well-being.

Regarding implications for group development, one plausible explanation for the unanticipated high percentage of downward identification trajectories is that reports of identification strength may be particularly strong near the beginning of the school year during the formation stage of club sport teams (i.e. identity gain; Greenaway et al., 2016), and may decrease slightly as students join other groups and face additional time commitments (e.g. exams). These patterns of identification align with propositions made by group development theorists, noting the potential value of integrating tenets of the theory of group development in conjunction with social identity theory. Although there are competing theories about how group environments develop, there is general recognition of the positive affective climate early in a group's life (i.e. honeymoon phase), and the tendency for members to follow dynamic trajectories toward integration or disintegration (e.g. Tuckman & Jensen, 1977).

As we continue to strive towards an understanding of how and why social identification facilitates health and well-being, a critical next step is exploring underlying mechanisms.

Social identity researchers and theorists are gaining a clear sense of the pathways through which social identification relates to well-being (e.g. self-esteem, social support, psychosocial resources; Greenaway et al., 2015, 2016; Jetten et al., 2009, 2014). In contrast, there are few conceptual or empirical efforts to explain mediators on the association between social identification *trajectories* and well-being. That is, the underlying mechanism for identification trajectories may indeed differ from the mechanism for simply identifying with a group. Such efforts will enable deeper understanding of why identification development over time (slope) may predict well-being above and beyond baseline levels (intercept).

An additional prudent future direction to build upon this work entails considering individuals' underlying motives for identifying with the group. Drawing upon motivated identity construction theory—which posits that identification is motivated by meaning, distinction, continuity, self-esteem, belonging, and efficacy—distinct motives may be met to varying degrees at different points across one's identity development (Easterbrook & Vignoles, 2012). The current pattern of findings might signal that the salience of each identity motive may differ with time. As a potential example, we anticipate that meaning may emerge as a motive as individuals increasingly identify with their group, whereas motives relative to belonging or efficacy may emerge shortly after group formation. It would then be pertinent to examine whether certain motives are more closely linked to well-being, and at which point across one's identity development these met motives influence indices of well-being.

LIMITATIONS

Several limitations pertaining to the design of the current study should be highlighted. Although sport is a popular extracurricular activity for college students, the sample comprised students who chose to continue playing their respective sport at a relatively competitive level during college and, as such, participants may have had strong identities as an athlete that preceded current team memberships. This limitation may explain why most participants identified strongly even near the beginning of the season and may have limited the amount that identification strength could increase over a single school year. To understand the extent to which findings generalise, researchers should study a range of different types of student groups. A related limitation is that the sport teams we sampled all included some degree of task and/or outcome interdependence. This precluded us from examining whether associations between social identification and well-being may have been strongest in highly interdependent team sport contexts with those that are primarily independent (Evans, Eys, & Bruner, 2012).

Additional limitations emerged from our focus on naturalistic groups. One limitation is that all groups presumably experienced temporal patterns that were shared (e.g. academic stress) and unshared (e.g. timing of competitions in winter or spring terms). Although club sport teams train and compete throughout the school year, certain periods may have required greater engagement that could increase the salience of athletes' social identities. Seasonal confounding factors shared among all teams may also explain some fluctuation in social identification strength. For example, during times of increased stress, students may deprioritise their sport clubs and face decreased well-being. A related limitation is that

well-being was only assessed at the end of the school year, which precluded the examination of time-varying associations between social identification and well-being. Although beyond the current scope, future studies employing methods to assess the directionality of this association are warranted.

These naturalistic groups also resulted in plausible selection effects based on the characteristics of members who belonged to the current groups. We only sampled students once they became active members of club sport teams. One step forward would be to capture members' well-being before and throughout the transition into the college setting, especially considering the identity challenge experienced by emerging adults. Tracking a broader span of well-being and identification could provide a sense for the unique contribution of small group identities. Another step forward would be to consider comparison or control samples of students from other group environments (e.g. fraternities/sororities), or who do not report any small group memberships. We particularly see comparison groups as critical to identifying the magnitude of health outcomes linked with social identities.

It is also important to consider that we only captured identification with individuals' sport teams, while students also derive meaning from several sources of group membership. This may partially explain why the latent growth model only accounted for 9 per cent of the variance in well-being (i.e. $R^2 = .09$). Future research may benefit from methodologies that capture students' complex networks of group memberships, such as social identity mapping (Cruwys et al., 2016).

CONCLUSION

In the current study, we employed a longitudinal design to capture trajectories in college students' social identification strength with club sport teams (i.e. the extent and rate that students increased or decreased in identification strength over the course of a complete school year). This study is among the first to explore the link between social identification and well-being specifically in sport groups. Additionally, findings provide new insights to the broader group dynamics literature by demonstrating that dynamic patterns of social identification may predict well-being beyond the effect of one's initial social identification strength. Steeper upward trajectories in social identification related to enhanced well-being, while steeper downward trajectories were associated with lower well-being. In other words, students who identified strongly with their sport group scored higher on self-reported indices of well-being. In addition to this straightforward association, we found that well-being was predicted by the extent to which students increased or decreased in identification strength over time. Taken together, the current study fills a critical gap in the literature regarding the benefits of continuing to strengthen one's social identification over time.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

ACKNOWLEDGEMENTS

This research was funded by the National Institute on Alcohol Abuse and Alcoholism (PI: Graupensperger; F31AA027685) and the North American Society for the Psychology of Sport and Physical Activity (NASPSA). The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH or NASPSA.

REFERENCES

- Avanzi L, Schuh SC, Fraccaroli F, & van Dick R (2015). Why does organizational identification relate to reduced employee burnout? The mediating influence of social support and collective efficacy. *Work and Stress*, 29, 1–10.
- Baik C, Larcombe W, & Brooker A (2019). How universities can enhance student mental wellbeing: The student perspective. *Higher Education Research and Development*, 38, 674–687.
- Benson AJ, Surya M, & Eys MA (2014). The nature and transmission of roles in sport teams. *Sport, Exercise, and Performance Psychology*, 3, 228–240.
- Biglan A, Flay BR, Embry DD, & Sandler IN (2012). The critical role of nurturing environments for promoting human well-being. *American Psychologist*, 67, 257–271. [PubMed: 22583340]
- Bruner MW, & Benson AJ (2018). Evaluating the psychometric properties of the Social Identity Questionnaire for Sport (SIQS). *Psychology of Sport and Exercise*, 35, 181–188.
- Cameron JE (1999). Social identity and the pursuit of possible selves: Implications for the psychological well-being of university students. *Group Dynamics*, 3, 179–189.
- Cameron JE (2004). A three-factor model of social identity. *Self and Identity*, 3, 239–262.
- Cronin MA, Weingart LR, & Todorova G (2011). Dynamics in groups: Are we there yet? *Academy of Management Annals*, 5, 571–612.
- Cruwys T, Haslam SA, Dingle GA, Jetten J, Hornsey MJ, Desdemona Chong EM, & Oei TPS (2014). Feeling connected again: Interventions that increase social identification reduce depression symptoms in community and clinical settings. *Journal of Affective Disorders*, 159, 139–146. [PubMed: 24679402]
- Cruwys T, Steffens NK, Haslam SA, Haslam C, Hornsey MJ, McGarty C, & Skorich DP (2020). Predictors of social identification in group therapy. *Psychotherapy Research*, 30, 348–361. 10.1080/10503307.2019.1587193. [PubMed: 30821622]
- Cruwys T, Steffens NK, Haslam SA, Haslam C, Jetten J, & Dingle GA (2016). Social identity mapping: A procedure for visual representation and assessment of subjective multiple group memberships. *British Journal of Social Psychology*, 55, 613–642. [PubMed: 27578549]
- Disabato DJ, Goodman FR, Kashdan TB, Short JL, & Jarden A (2016). Different types of well-being? A cross-cultural examination of hedonic and eudaimonic well-being. *Psychological Assessment*, 27, 471–482.
- Doerksen SE, Elavsky S, Rebar AL, & Conroy DE (2014). Weekly fluctuations in college student leisure activities and well-being. *Leisure Sciences*, 36, 14–34.
- Duncan TE, & Duncan SC (2009). The ABC's of LGM: An introductory guide to latent variable growth curve modeling. *Social and Personality Psychology Compass*, 3, 979–991. [PubMed: 20577582]
- Easterbrook M, & Vignoles VL (2012). Different groups, different motives: Identity motives underlying changes in identification with novel groups. *Personality and Social Psychology Bulletin*, 38, 1066–1080. [PubMed: 22569221]
- Enders CK (2001). The performance of the full information maximum likelihood estimator in multiple regression models with missing data. *Educational and Psychological Measurement*, 61, 713–740.
- Evans MB, Eys MA, & Bruner MW (2012). Seeing the “we” in “me” sports: The need to consider individual sport team environments. *Canadian Psychology/Psychologie Canadienne*, 53, 301–308.
- Eys MA, Bruner MW, & Martin LJ (2019). The dynamic group environment in sport and exercise. *Psychology of Sport and Exercise*, 42, 40–47. 10.1016/j.psychsport.2018.11.0.

- Eys MA, & Evans MB (2018). Group dynamics in sport, exercise, and physical activity contexts. In Horn T & Smith AL (Eds.), *Advances in sport and exercise psychology* (4th edn.). Champaign, IL: Human Kinetics.
- Graupensperger S, Panza M, & Evans MB (2019). Network centrality, group density, and strength of social identification in college club sport teams. *Group Dynamics: Theory, Research, and Practice*, 24, 59–73. 10.1037/gdn0000106.
- Graupensperger S, Turrisi RJ, Jones DE, & Evans MB (2020). Longitudinal associations between perceptions of peer group drinking norms and students' alcohol use frequency within college sport teams. *Alcoholism: Clinical and Experimental Research*, 44, 541–552. 10.1111/acer.14270. [PubMed: 31943243]
- Greenaway KH, Cruwys T, Haslam SA, & Jetten J (2016). Social identities promote well-being because they satisfy global psychological needs. *European Journal of Social Psychology*, 46, 294–307.
- Greenaway KH, Haslam SA, Cruwys T, Branscombe NR, Heldreth C, Greenaway KH, ... Heldreth C. (2015). From “we” to “me”: Group identification enhances perceived personal control with consequences for health and well-being. *Journal of Personality & Social Psychology*, 109, 53–74. [PubMed: 25938701]
- Grimm KJ, Ram N, & Hamagami F (2011). Nonlinear growth curves in developmental research. *Child Development*, 82, 1357–1371. [PubMed: 21824131]
- Haslam C, Best D, Dingle GA, Staiger PK, Savic M, Bathish R, ... Lubman DI, (2019). Social group membership before treatment for substance dependence predicts early identification and engagement with treatment communities. *Addiction Research and Theory*, 27, 363–372.
- Haslam C, Holme A, Haslam SA, Iyer A, Jetten J, & Williams WH (2008). Maintaining group memberships: Social identity continuity predicts well-being after stroke. *Neuropsychological Rehabilitation*, 18, 671–691. [PubMed: 18924001]
- Haslam C, Jetten J, Cruwys T, Dingle G, & Haslam SA (2018). *The new psychology of health: Unlocking the social cure*. London: Routledge.
- Haslam SA, Jetten J, Postmes T, & Haslam C (2009). Social identity, health and well-being: An emerging agenda for applied psychology. *Applied Psychology: An International Review*, 58, 1–23.
- Hogg MA, Abrams D, Otten S, & Hinkle S (2004). The social identity perspective: Intergroup relations, self-conception, and small groups. *Small Group Research*, 35, 246–276.
- Iyer A, & Jetten J (2011). What's left behind: Identity continuity moderates the effect of nostalgia on well-being and life choices. *Journal of Personality and Social Psychology*, 101, 94–108. [PubMed: 21355658]
- Iyer A, Jetten J, Tsivrikos D, Postmes T, & Haslam SA (2009). The more (and the more compatible) the merrier: Multiple group memberships and identity compatibility as predictors of adjustment after life transitions. *British Journal of Social Psychology*, 48, 707–733. [PubMed: 19200408]
- Jans L, Leach CW, Garcia RL, & Postmes T (2015). The development of group influence on in-group identification: A multilevel approach. *Group Processes and Intergroup Relations*, 18, 190–209.
- Jeliëi H, Phelps E, & Lerner RM (2009). Use of missing data methods in longitudinal studies: The persistence of bad practices in developmental psychology. *Developmental Psychology*, 45, 1195–1199. [PubMed: 19586189]
- Jetten J, Haslam C, & Haslam SA (2012). *The social cure: Identity, health and well-being*. New York: Psychology Press.
- Jetten J, Haslam C, Haslam SA, & Branscombe NR (2009). The social cure: How and why groups make us healthier. *Scientific American Mind*, 20, 26–33.
- Jetten J, Haslam C, Haslam SA, Dingle G, & Jones JM (2014). How groups affect our health and well-being: The path from theory to policy. *Social Issues and Policy Review*, 8, 103–130.
- Khan SS, Hopkins N, Reicher S, Tewari S, Srinivasan N, & Stevenson C (2016). How collective participation impacts social identity: A longitudinal study from India. *Political Psychology*, 37, 309–325.
- Kim J, Coleman T, Godfrey M, Vierimaa M, & Eys M (2020). The dynamics of informal role development within sport teams: A case study approach. *Psychology of Sport & Exercise*, 48, Ahead of Print. 10.1016/j.psychsport.2020.101.

- Lambert NM, Stillman TF, Hicks JA, Kamble S, Baumeister RF, & Fincham FD (2013). To belong is to matter: Sense of belonging enhances meaning in life. *Personality and Social Psychology Bulletin*, 39, 1418–1427. [PubMed: 23950557]
- Larcombe W, Finch S, Sore R, Murray CM, Kentish S, Mulder RA, ... Williams DA. (2016). Prevalence and socio-demographic correlates of psychological distress among students at an Australian university. *Studies in Higher Education*, 41, 1074–1091.
- Little RJA (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, 83, 1198–1202.
- Martin LJ, Balderson D, Hawkins M, Wilson K, & Bruner MW (2017). Groupness and leadership perceptions in relation to social identity in youth sport. *Journal of Applied Sport Psychology*, 29, 367–374.
- Moreland RL, & Levine JM (2014). Socialization in organizations and work groups. In Turner M (Ed.), *Groups at work: Theory and research* (pp. 83–126). New York: Routledge.
- Oakes PJ, Turner JC, & Haslam SA (1991). Perceiving people as group members: The role of fit in the salience of social categorizations. *British Journal of Social Psychology*, 30, 125–144.
- Postmes T, Haslam SA, & Jans L (2013). A single-item measure of social identification: Reliability, validity, and utility. *British Journal of Social Psychology*, 52, 597–617. [PubMed: 23121468]
- Postmes T, Haslam SA, & Swaab RI (2005). Social influence in small groups: An interactive model of social identity formation. *European Review of Social Psychology*, 16, 1–42.
- Rees T, Haslam SA, Coffee P, & Lavalley D (2015). A social identity approach to sport psychology: Principles, practice, and prospects. *Sports Medicine*, 45, 1083–1096. [PubMed: 26092187]
- Rodrigues AIC, Evans MB, & Galatti LR (2019). Social identity and personal connections on the mat: Social network analysis within Brazilian Jiu-Jitsu. *Psychology of Sport and Exercise*, 40, 127–134.
- Rosseel Y (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, 48, 1–36.
- Ryan RM, & Deci EL (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141–166.
- Sani F, Herrera M, Wakefield JRH, Boroch O, & Gulyas C (2012). Comparing social contact and group identification as predictors of mental health. *British Journal of Social Psychology*, 51, 781–790. [PubMed: 22550954]
- Steffens NK, La Rue CJ, Haslam C, Walter ZC, Munt KA, Haslam SA, ... Tarrant M. (2019). Social identification-building interventions to improve health: A systematic review and meta-analysis. *Health Psychology Review*, Ahead of Print.
- Tajfel H (1981). *Human groups and social categories: Studies in social psychology*. Cambridge: Cambridge University Press.
- Tuckman BW, & Jensen MC (1977). Stages of small-group development revisited. *Group & Organization Studies*, 2, 419–427.

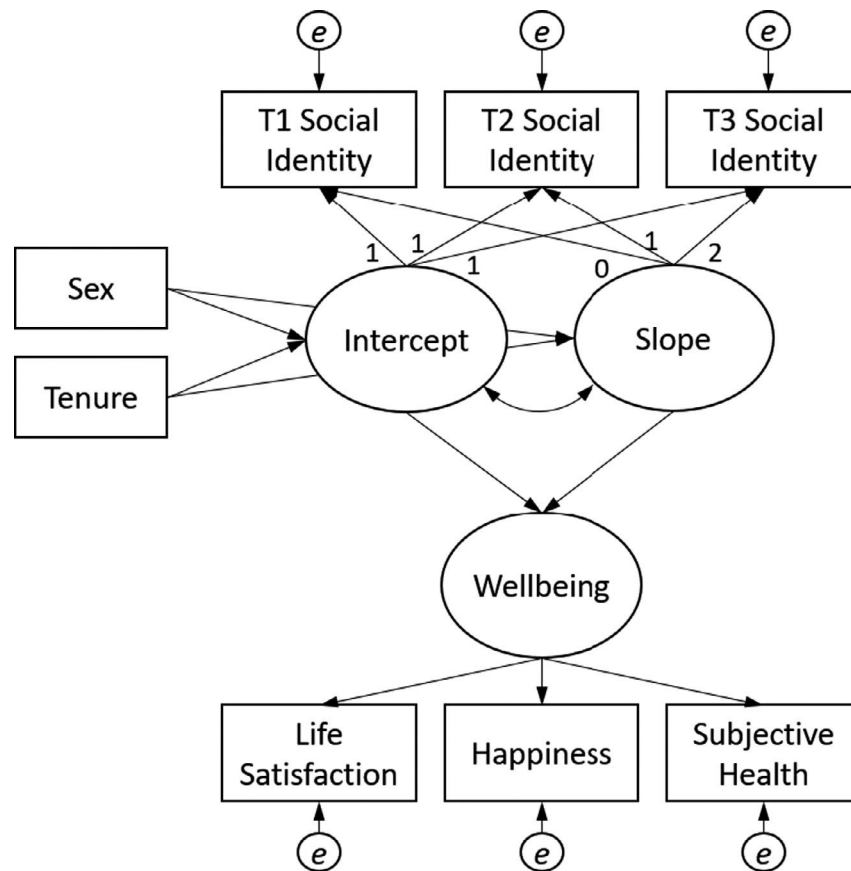


FIGURE 1.

Latent growth model to estimate the extent that social identification intercepts and slope trajectories predict well-being at the end of the school year. T1 = Time 1, T2 = Time 2, T3 = Time 3.

TABLE 1

Means, Standard Deviations, Bivariate Correlations, and Intraclass Correlation Coefficients

	1	2	3	4	5	6	7	8
1. Life Satisfaction	–0.05							
2. Happiness	.51**	–0.01						
3. Subjective Health	.48**	.36**	–0.01					
4. T1 Social Identification	0.08	.09*	0.06	–0.09				
5. T2 Social Identification	.15**	.13**	.13**	.61**	–0.05			
6. T3 Social Identification	.20**	.21**	.13**	.54**	.67**	–0.09		
7. Sex (M = 0, F = 1)	0	0.06	–.09*	0.04	0.01	.08*		
8. Tenure (Years)	0.07	0.05	0	.26**	.14**	.10**	0.02	
Range	1–10	1–4	1–4	1–7	1–7	1–7	–	1–5
Mean	7.22	3.19	3.27	5.77	5.6	5.57	–	2.21
<i>SD</i>	1.83	0.78	0.71	0.89	1.05	1.15	–	1.11

Note: Intraclass correlation coefficients are displayed along the diagonal in parentheses, which estimate the amount of variance due to between-group differences.

* $p < .05$

** $p < .01$.

TABLE 2

Model Fit Indices of Latent Growth Models

Model	# of free parameters	RMSEA	CFI	SRMR
Model 1 (Unconditional growth model)	8	0.09	0.98	0.03
Model 2 (Time-invariant covariates added)	14	0.06	0.98	0.02
Model 3 (Outcome variable added)	23	0.05	0.95	0.04

Note: RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; SRMR = Standardised Root Mean Square Residual.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

TABLE 3

Estimates Derived from Latent Growth Models

Parameters	Model 1		Model 2		Model 3	
	Estimate	p	Estimate	p	Estimate	p
<i>Means</i>						
SI Intercept	5.71	<.001	4.65	<.001	4.65	<.001
SI Slope	-0.08	0.003	-0.14	0.575	-0.14	0.58
<i>Variances</i>						
SI Intercept	0.63	<.001	0.6	<.001	0.6	<.001
SI Slope	0.16	<.001	0.16	<.001	0.17	<.001
<i>Covariance</i>						
Intercept ↔ Slope	-0.03	0.537	-0.04	0.342	-0.04	0.267
<i>Team-level covariates</i>						
Sex → SI Intercept			0.13	0.263	0.13	0.261
Sex → SI Slope			0.04	0.395	0.04	0.416
Tenure (GM) → SI Intercept			0.39	0.035	0.39	0.038
Tenure (GM) → SI Slope			-0.01	0.945	-0.01	0.961
<i>Individual-level covariates</i>						
Tenure (GMC) → SI Intercept			0.18	<.001	0.18	<.001
Tenure (GMC) → SI Slope			-0.04	0.004	-0.04	0.005
<i>Outcomes</i>						
SI Intercept → Well-being					0.24	0.01
SI Slope → Well-being					0.75	<.001

Note: SI = Social Identification; GM = Group-Mean (Level-2); GMC = Group-Mean-Centered (Level-1). The R^2 value for well-being in Model 3 is 0.09 (i.e. approximately 9% of the variance in well-being was explained by social identification intercepts and slopes).