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Achieving Status and Reducing Loneliness during the Transition to College: The Role of Entitlement, Intrasexual Competitiveness, and Dominance

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Abstract

Although many emerging adults struggle to gain status and develop social relationships, particularly during the college transition, it remains unclear whether certain personality traits facilitate this transition. Using a longitudinal design, we investigated whether status-related traits—namely, entitlement, intrasexual competitiveness, and dominance—related to the development of status in 91 first-year college students ($M_{\text{age}}=18.15$, $SD=0.44$) transitioning to a novel college environment. We also examined whether personality traits moderated the degree to which status related to loneliness. As hypothesized, only students high in intrasexual competitiveness experienced increases in subjective dorm status across the year. In addition, students exhibiting average or low entitlement experienced decreases in loneliness over time, whereas high entitlement was related to consistently low loneliness. Finally, higher subjective dorm status was related to lower loneliness only for less dominant students, as assessed by both self-ratings of trait dominance and raters' judgments of facial dominance from photographs. Using a real-world context of status development, these results suggest that personality traits may influence students' ability to experience higher status and modulate the relation between subjective status and loneliness.

Keywords

subjective social status; competitiveness; loneliness; entitlement; dominance

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Emerging adulthood is a period between adolescence and adulthood when youth transition to newfound independence and exploration beyond their home communities, continue to develop their social identity, and establish new social relationships (Arnett, 2004; Galambos, Barker, & Krahn, 2006). Whereas many emerging adults thrive with this independence, others struggle to cope with social status concerns and experience loneliness, or the subjective experience of having fewer relationships than desired (Dahl, 2008; Woodhouse, Dykas, & Cassidy, 2012). Moreover, both low social status and high loneliness have been consistently related to poorer health (Moeller & Seehuus, 2019; Quon & McGrath, 2015). These problems may be amplified during the college transition, when students experience shifting social contexts and develop relationships in novel peer networks (Conley, Kirsch, Dickson, & Bryant, 2014). Yet, limited research has examined which emerging adults are at highest risk for experiencing difficulties with social status and loneliness. We addressed this issue in the present study by investigating how personality traits influence development of status and loneliness during the college transition. Specifically, we examined how the status-related personality traits of entitlement, intrasexual competitiveness, and dominance predicted changes in status and loneliness—an important psychological consequence of low status—over the first year of college.

Social Status and Status-Related Personality Traits

Although social status often refers to access to material resources (i.e., income, education), individuals also have social status with respect to peers. Hierarchies naturally develop among social groups, with individuals of higher status receiving more respect, exerting more influence, and having more social value relative to peers (e.g., Anderson & Kilduff, 2009). Higher status confers greater personal benefits including higher autonomy and greater responsiveness from other people, as well as better health (e.g., Lammers, Stoker, Rink, & Galinsky, 2016; Parkinson, Kleinbaum, & Wheatley, 2017; Quon & McGrath, 2015).

As adolescents and emerging adults develop their social identities, they may be particularly sensitive to concerns regarding social status (Yang et al., 2018). During the transition to college, most youth live with peers for the first time. Dorm status is unique in that emerging adults are immersed in dorm life and therefore more consistently, and potentially more strongly, impacted by dorm status than high school status. Although social status has been related to various mental health and adjustment outcomes (e.g., Quon & McGrath, 2014; Rahal et al., 2020), experiencing high dorm status may be particularly consequential for the development of social relationships and loneliness across the college transition, especially for individuals who moved far away for college and are in truly new social and environmental circumstances, and cannot easily go home. People actively adjust their behavior to appeal to other people to achieve status, although many people struggle to do so (Anderson & Kilduff, 2009). Yet, limited research has examined how people develop status in naturalistic settings and who is best positioned for gaining status during the transition to college.

Individuals' ability to gain status in a novel environment may differ based on status-related personality traits such as entitlement (e.g., Grosz, Leckelt, & Back, 2020). Entitlement refers to a heightened sense of self-importance and deservingness, particularly for deferential

treatment (e.g., Lange, Redford, & Crusius, 2019). Some college students may develop a sense of entitlement related to the college and job application processes (Chowning & Campbell, 2009; Krahn & Galambos, 2014). Although students were formally accepted to the same college, some students likely had other competitive options whereas other students aspired for that college specifically, which can influence the degree to which students feel that they deserve to be on campus. Regarding social status, more entitled people feel that they deserve higher status than others and tend to feel envious of high-status peers (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004; Lange et al., 2019). For example, when participants were induced to feel entitled by considering why they deserve more than others, they had higher motivation for status (Lange et al., 2019). People who are more entitled tend to also be more narcissistic, and more narcissistic individuals have higher status-seeking motives and perceptions of higher status (Miller et al., 2011; Zeigler-Hill et al., 2019). Moreover, more narcissistic individuals more actively attempt to gain status among peers (Grapsas, Brummelman, Back, & Denissen, 2020; Sheldon & Bryant, 2016). Although people who are more entitled tend to be immediately more well-liked at first impression (Back, Schmukle, & Egloff, 2010), it remains unclear how entitlement relates to gaining status across the college transition.

Likewise, people who are more competitive, especially with others of the same sex, may also achieve status during the college transition. Colleges are inherently competitive. Students must complete a competitive application process and are often graded relative to peers in classes (Lipson & Tobias, 1991), which can heighten competitiveness for many students and potentially decrease competitiveness for students who feel unprepared relative to their peers. Incoming college students are particularly sensitive to status concerns and social comparisons, especially with others of the same sex (Yang, Holden, Carter, & Webb, 2018). Concerns regarding social comparisons promote competition among people with more competitive dispositions (Garcia, Tor, & Schiff, 2013), and these individuals may more actively adjust their behavior to gain status during the college transition. Importantly, people who are more sensitive to social comparisons—and consequently may be most inclined to vie for social status—engage in more competitive behavior when presented with opportunities to gain high status relative to peers (van den Bos, Golka, Effelsberg, & McClure, 2013) and specifically report higher intrasexual competitiveness, or competitiveness with others of the same sex (Buunk & Fisher, 2009). Intrasexual competitiveness may influence students' ability to gain status, as people use specific strategies when competing with same-sex peers for status (Benenson & Abadzi, 2020). Furthermore, intrasexual competitiveness may be important for gaining status among first-year college students because these students often live in dormitory suites or halls with same-sex peers and tend to be invested in romantic relationships which can specifically promote competition with same-sex peers (e.g., Kuperberg & Padgett, 2016).

Trait dominance can also facilitate status development (Grosz et al., 2020). People who are dominant tend to be aggressive, disagreeable, and motivated to control other people through both subtle and overt assertive behaviors (e.g., Anderson & Kilduff, 2009; Buss & Craik, 1980; Cheng, Tracy, & Henrich, 2010). College students are coming together from different high schools, which often have their own social norms. Dominance may have been effective and rewarded in some schools but not others. Therefore, students likely differ

in trait dominance at the initial transition to college. More dominant individuals may be better positioned for gaining status because they can exert social influence among novel peers (Henrich & Gil-White, 2001). When individuals were assigned to groups, those who were rated by peers as being more dominant had more influence in group decision-making (Cheng, Tracy, Foulsham, Kingstone, & Henrich, 2013). These skills in social influence may carryover to students' ability to gain status during the college transition.

In addition to dominant personalities, appearing dominant can also promote social status. Indeed, people who were judged as more dominant at first glance spoke more in subsequent group interactions (Kalma, 1991). Faces continue to develop into young adulthood (e.g., Love, Murray, & Mamandras, 1990), such that many individuals are likely higher in facial dominance than they were in high school. Facial dominance, often characterized by masculine features, can signal one's threat potential to competitors (e.g., Puts, Jones, & DeBruine, 2012). For instance, people with more dominant faces tend to have greater physical strength and threat potential and rate themselves as more dominant, albeit more consistently for male than for female individuals (e.g., Kordsmeyer, Freund, Vugt, & Penke, 2019; Quist et al., 2011; Toscano, Schubert, & Sell, 2014). Facial dominance is also related to greater social influence (Berinsky, Chatfield, & Lenz, 2019; Jones et al., 2010). Thus, people who appear dominant may be viewed differently by others and may more successfully engage in assertive behaviors to gain status. Emerging adults show better facial recognition and processing relative to adolescents, such that appearances may uniquely inform first impressions during emerging adulthood (O'Hearn, Schroer, Minschew, & Luna, 2010). Therefore, we examined facial dominance in addition to trait dominance in the present study.

Loneliness and Social Status

Loneliness is common for emerging adults, as they have fewer structured social obligations and roles that promote social development than adolescents (Arnett, 2004). Some emerging adults struggle with loneliness and are at increased risk of poorer mental health (Arnett, 2004; Moeller & Seehuus, 2019). They may feel particularly lonely during the transition to college, especially if they move far from their family and high school friends (e.g., Mattanah, Brooks, Brand, Quimby, & Ayers, 2012). Research is needed to identify which emerging adults are at higher risk for poor outcomes during this transition.

Higher social status may reduce feelings of loneliness during the college transition. People with higher status often have more social influence and therefore have more positive social interactions and relationships with their peers (e.g., Woodhouse et al., 2012). College students with higher societal status—a distinct form of social status which is generally moderately, positively correlated with status relative to college peers—have more contact with university peers, which promotes better well-being (Rahal et al., 2020; Rubin, Evans, & Wilkinson, 2016). In turn, people with low status tend to be befriended less and tend to feel lonelier (e.g., Betts & Stiller, 2014). However, it is unknown whether higher status similarly relates to lower loneliness among emerging adults, especially during the college transition when social dynamics are continually shifting.

Implications of status for loneliness may vary by dominance. Dominant people often gain social influence by engaging in behaviors which are more assertive or aggressive (e.g., Cheng et al., 2010). As a result, these individuals may gain status but without developing meaningful peer relationships (Cheng et al., 2013). Therefore, status may not affect loneliness for more dominant individuals, and monthly gains in status may relate to lower loneliness only among less dominant individuals.

Present Study

The present study examined the degree to which status-related personality traits are related to the development of status in university dorms and loneliness across incoming college students' first academic year. Although students are actively developing status during this period, it remains unclear whether their personality traits may impact status development. Therefore, we investigated how status-related traits—entitlement, intrasexual competitiveness, and dominance—relate to status, loneliness, and the degree to which changes in experienced status impact loneliness over time.

First, we hypothesized that individuals higher in entitlement, intrasexual competitiveness, and dominance would experience higher social status and feel less lonely across the academic year relative to other individuals. Second, we hypothesized that experiencing higher status would relate to lower loneliness among individuals who were relatively less dominant. Individuals who report being more dominant and who appear more dominant may experience higher status without the support of their peers, such that experiencing relatively higher status may not relate to loneliness for individuals higher in trait dominance and facial dominance.

Method

Participants and Procedures

At the start of the 2015-2016 academic year, 91 first-year college students at a large public university enrolled in the study. Most participants were female ($n = 62$, 69.66%), self-identified as either Asian ($n = 37$, 40.66%), White ($n = 35$, 38.43%), or other ethnic backgrounds ($n = 19$, 20.88%), and were 18-years-old ($n = 74$, 83.15%; $M_{\text{age}} = 18.15$, $SD = 0.44$). Participants reported their family's annual income using an 8-point scale (4.40% reported earning under \$15,000; 2.20% earning \$15,001-\$25,000; 7.69% earning \$25,001-\$35,000; 6.59% \$35,001-\$50,000; 23.08% earning \$50,001-\$75,000; 13.19% earning \$75,001-\$100,000; 16.48% earning \$100,001-\$150,000, 26.37% earning over \$150,001). They also rated the highest level of education that their mother and father earned using a 6-point scale (1= High school diploma or GED, 2 = Vocational certificate, 3 = Associate's degree (junior college), 4 = Bachelor's degree, 5 = Master's degree, 6 = Doctorate). Both parents' education was averaged when possible. Most participants reported that their parents had earned a bachelor's degree (41.11%) or master's degree (22.22%; $M = 3.95$, $SD = 1.77$; see Table S1 for full breakdown).

Many students could have peers from high school attending the same university or could return to see their peers from high school over the weekend, which could contribute to

higher dorm status and attenuate the importance of dorm status for loneliness. Therefore, we imposed eligibility criteria such that all participants had to have limited pre-existing social ties to the university. Specifically, they had to be living in a residence hall with randomly assigned roommates, be over 100 miles from their high school, and have not participated in any university summer programs prior to college enrollment to be eligible for the study. Because of other aspects of the study, participants were ineligible if they were taking corticosteroid medication; anti-depressant medication; anti-anxiety medication; or any medication designed to suppress the immune system.

Participants completed the first survey online, including demographic information and psychological assessments of entitlement, trait dominance, intrasexual competitiveness, subjective dorm status, and loneliness. Participants then completed a lab visit, at which they were given one minute to take a “selfie” photo which they sent to the experimenter. Eleven participants did not provide a photograph, and these participants did not differ from the remaining participants by entitlement, intrasexual competitiveness, dominance, and baseline subjective dorm status and loneliness, all $ps > .30$.

Participants reported their status in the dorms and loneliness in monthly surveys over the academic year. They received class credit for completing the first survey and \$10 per monthly follow-up survey for up to eight surveys. On average, participants completed a baseline survey and six monthly surveys ($M = 6.82$ total assessments, $SD = 2.40$, range 1-9; 6.45% completed one assessment, 2.15% completed two, 1.08% completed three, 2.15% four, 22.58% completed five, 2.15% completed six, 7.53% completed seven, 22.58% completed eight, 33.33% completed nine). There were 633 total observations across 91 participants in unadjusted models, and 574 observations across 85 participants in adjusted models because six participants were missing parental education data and were therefore excluded from adjusted analyses. The number of surveys participants completed was not related to entitlement, intrasexual competitiveness, dominance, mean subjective dorm status, mean loneliness, and baseline subjective dorm status and loneliness, $|d|'s < .2$, $ps > .1$. Study procedures and measures are available at: https://osf.io/xrkma/?view_only=5213b2d6986743369ae0d98b882d2cd7.

Measures

Subjective Dorm Status—The MacArthur Scale of Subjective Social Status—Youth Version was administered each month (Goodman et al., 2001). Participants viewed a 10-rung ladder with the following prompt: “At the top of the ladder are people on your dorm floor who are most respected, esteemed, and admired. At the bottom of the ladder are those who are least respected, esteemed, and admired.” They marked the rung that best represented their standing relative to peers. Higher scores represented higher status. Prior studies have used similar prompts to measure college students’ dorm status (Gruenewald et al., 2006), and lower scores on this scale are consistently related to poorer health (e.g., Quon & McGrath, 2015; Rahal et al., 2020). Participants also reported their subjective status relative to peers at the university more broadly using a similar item. Subjective dorm status was highly correlated with subjective university status at study entry, $r(89) = .67$, $p < .001$. We examined subjective dorm status as the primary variable because the dorm floor is the more

local referent than the university broadly. All reported associations remained significant when controlling for subjective university status.

Loneliness—Each month, participants rated how lonely they felt using four items from the UCLA Loneliness Scale on a scale from 1 (*Never*) to 4 (*Often*; Russell, 1996). The 20-item scale was shortened in line with previous longitudinal studies to ease participant burden. A three-item scale (i.e., I feel isolated, I feel left out, I lack companionship) has been developed which is highly correlated with the full scale, shows low to moderate associations with depressive symptoms and stress in line with the full survey, and is widely used (Hughes, Waite, Hawkley, & Cacioppo, 2004; Matthews-Ewald & Zullig, 2013). We included a fourth item (i.e., I feel alone) which has been used with the other three items in the Health and Retirement Study to increase the number of items and thereby ensure high inter-item reliability (Chen & Feeley, 2014). Items showed high reliability across all surveys ($\alpha = .77$); items were averaged with higher scores indicating that individuals felt lonelier during that month.

Entitlement—At study entry, participants rated 15 items regarding whether they deserve more than others using a scale from 1 (*strongly disagree*) to 7 (*strongly agree*; e.g., “I am better than most people”; Sell, Tooby, & Cosmides, 2009). Higher entitlement as measured by this scale has been moderately related to high anger proneness, social dominance, and competitiveness (MacDonell, Geniole, & McCormick, 2018; Price, Kang, Dunn, & Hopkins, 2011). Items showed good reliability ($\alpha = .73$), and an average was calculated with higher scores indicating more entitlement.

Intrasexual Competitiveness—At study entry, participants rated 12 items regarding how they felt when others of the same sex were successful or given attention using a scale from 1 (*strongly disagree*) to 7 (*strongly agree*; e.g., “I tend to look for negative characteristics in attractive men/women”; “I just don’t like very ambitious women”; Buunk & Fisher, 2009). The intrasexual competitiveness scale was developed to be gender-neutral, shows comparable means between men and women (Buunk & Fisher, 2009), and has been used with diverse populations (e.g., Buunk, Bucksath, & Cordero, 2017). Higher scores were related to greater social comparison orientation and neuroticism among men and women, and greater jealousy in response to socially dominant rivals for men and in response to physically attractive rivals for women (Buunk, aan't Goor, & Solano, 2010; Buunk & Fisher, 2009). Items showed good reliability ($\alpha = .82$), and an average was calculated, with higher scores indicating that individuals were more competitive with others of the same sex.

Trait Dominance—Participants completed the Success in Conflict scale at study entry (Sell et al., 2009). They rated seven items regarding their abilities to get what they want from others using a scale from 1 (*strongly disagree*) to 7 (*strongly agree*; e.g., “People generally do what I ask them to do”; “If I want something, I can usually get it even if others don’t want me to have it”). Items are thought to tap into coercive approaches to resolving interpersonal conflict (Holbrook, Piazza, & Fessler, 2014). Higher scores on this scale were associated with greater pride and greater inclination to attribute success to internal causes and were moderately related to higher psychological and physical threat potential (Holbrook

et al., 2014; MacDonell et al., 2018). Items showed good reliability ($\alpha = .84$), and an average was calculated with higher scores indicating higher dominance.

Facial Dominance—Online raters recruited through Amazon Mechanical Turk (520 men, 475 women, five genderqueer; $M_{\text{age}} = 34.85$, $SD = 11.32$; 77.9% White, 6.8% Black or African American, 6.5% Asian, 5.4% Hispanic or Latino, 3.4% mixed or other ethnic backgrounds) rated participants' selfie photographs using the following prompt: "How much does this person appear as though s/he could get what s/he wanted (i.e., dominant)?" Raters used a scale from 1 (*extremely not dominant*) to 9 (*extremely dominant*). Stimuli were sorted into blocks to reduce fatigue, such that each rater on average rated 28 photographs and each photograph was rated by 70 raters.

Big Five Personality Traits—Participants reported the Big Five personality traits (i.e., Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness) using the Ten-Item Personality Inventory (Gosling, Rentfrow, & Swann, 2003). This scale exhibits good test-retest reliability, convergent validity with longer personality scales, and convergence between self- and other-ratings, and has been extensively used among diverse populations (Gosling et al., 2003). These items were included to rule out the possibility that associations between status-related traits and subjective dorm status and loneliness were driven by other personality traits.

Subjective High School Status—Participants also rated their subjective status in high school. Consistent with how participants rated subjective dorm status, participants viewed a 10-rung ladder and rated their standing in high school relative to their peers.

Analytic Plan

Data were analyzed using Stata 14.1. Analyses examined whether individual differences in entitlement, intrasexual competitiveness, trait dominance, and facial dominance related to loneliness and the development of subjective dorm status during the college transition. Multilevel models with months nested within participants were used to model subjective dorm status and loneliness across the academic year. Multilevel models allowed for missing data at the level of monthly reports (Level 1), and listwise deletion was used at the level of participants (Level 2). This resulted in exclusion of six participants who were missing parental education data from adjusted analyses. These participants did not differ from other participants by entitlement, intrasexual competitiveness, trait dominance, facial dominance, baseline social status, or baseline loneliness, all p s > .48. Interactions between time (i.e., month of the academic year) and entitlement, intrasexual competitiveness, trait dominance, and facial dominance were included as predictors to test the degree to which development of subjective dorm status and loneliness varied across the academic year.

Finally, models tested whether personality traits moderated the degree to which relative changes in subjective dorm status predicted loneliness, irrespective of a person's overall average subjective dorm status. Monthly subjective dorm status was centered at each person's mean. Relative, within-person changes in subjective dorm status was tested as the primary predictor of loneliness, over and above participants' mean subjective dorm

status across all assessments. With this analytic technique, we simultaneously modeled how loneliness varies by participants' average levels of subjective dorm status across the academic year (i.e., between-person differences) as well as by monthly changes in loneliness subjective dorm status (i.e., within-person differences). Then, we examined whether personality traits moderate the degree to which changes in status relate to loneliness by including cross-level interactions between relative changes in subjective dorm status (within-person differences) and personality traits.

Entitlement, competitiveness, trait dominance, and facial dominance were grand-mean centered, and time was centered at the start of the academic year (0 = September, 1 = October, ...9 = June). All models were repeated after adjusting for gender (effect-coded), ethnicity (dummy coded with White as the reference group), age, income, parental education, and subjective high school status (all grand-mean centered). Subjective high school status was included as a covariate for two reasons. First, because this scale parallels the one that is used for assessment of subjective dorm status, a primary variable in this study, we were able to control for systematic variance related to this instrument. Second, reports of status were inherently subjective, such that some participants may be positively biased regarding their own status and consistently report high status. We controlled for this potential bias in reports of subjective dorm status by covarying participants' subjective status in high school (i.e., subjective status in their most recent previous academic setting). Finally, it is possible that status-related traits (i.e., entitlement, intrasexual competitiveness, dominance) are related to broader personality traits which may be more related to status and loneliness. Therefore, models were tested again adjusting for Big Five personality traits (all grand-mean centered).

Results

Descriptive Statistics

Participants reported experiencing high status in high school and average status in their dormitory at study entry (Table 1). They also endorsed moderate levels of dominance and entitlement and low competitiveness with others of the same sex. People who were more entitled also reported higher intrasexual competitiveness and dominance. Participants who were more entitled and dominant tended to have higher status in their dorm and felt less lonely at study entry (Table 1). Of note, facial dominance was not significantly related to trait dominance (Table 1).

To examine how demographic factors related to subjective dorm status and loneliness over time, multilevel models were tested predicting subjective dorm status and loneliness as a function of time, income, parental education, age, gender, and ethnicity (Table 2). On average, subjective dorm status increased and loneliness decreased over time. Male and White participants experienced higher subjective dorm status than female and Asian American participants, respectively. Higher parental education was associated with higher subjective dorm status.

Changes in Subjective Dorm Status

First, multilevel models examined whether status-related personality traits—competitiveness, entitlement, and dominance—modified the degree to which status in the dorms changed across the academic year by including Personality Trait \times Time interactions. The rate of change in subjective dorm status did not differ by either entitlement, trait dominance, or facial dominance, $ps > .4$ (Tables S2-S5). However, changes in subjective dorm status varied with intrasexual competitiveness, $B = 0.06$, $SE = 0.02$, $p = .021$, 95% Confidence Interval (CI) [0.008, 0.10], $f^2 = .036$ (Fig. 1; Table S5).

As hypothesized, participants with average and high intrasexual competitiveness showed increases in subjective dorm status with each month, $B = 0.05$, $SE = 0.02$, $p = .025$ for average intrasexual competitiveness, $B = 0.11$, $SE = 0.03$, $p = .001$ for high intrasexual competitiveness. In turn, participants with low intrasexual competitiveness were stable in subjective dorm status, $B = -0.01$, $SE = 0.03$, $p = .80$.

Changes in Loneliness

Next, multilevel models examined associations between personality traits and loneliness. Interestingly, personality traits were unrelated to loneliness, $ps > .1$ (Tables S3-S5). When Personality Trait \times Time interactions were tested, results suggested that intrasexual competitiveness, trait dominance, and facial dominance did not moderate changes in loneliness over time, $ps > .1$ (Tables S3-S5). However, the Entitlement \times Time interaction was significant, $B = 0.04$, $SE = 0.01$, $p = .002$, 95% CI [0.02, 0.07], $f^2 = .015$ (Fig. 2; Table S2). More entitled participants felt less lonely at the start of the academic year and showed no changes in loneliness across the year, $B = -0.01$, $SE = 0.02$, $p = .73$. In contrast, participants with average and low levels of entitlement reported becoming less lonely across the academic year; $B = -0.04$, $SE = 0.01$, $p = .001$ for average entitlement; $B = -0.08$, $SE = 0.02$, $p < .001$ for low entitlement.

Concurrent Associations between Subjective Dorm Status and Loneliness

Finally, models tested whether participants' loneliness varied with monthly changes in subjective dorm status and whether personality traits moderated this association. Individuals who on average experienced lower subjective dorm status felt lonelier, $B = -0.09$, $SE = 0.03$, $p = .003$, 95% CI [-0.14, -0.03], $f^2 = .009$, although loneliness did not vary with monthly changes in subjective dorm status, $B = 0.00$, $SE = 0.03$, $p = .9$. When testing whether the association between monthly subjective dorm status (i.e., within-person changes in subjective dorm status) and loneliness varied by status-related personality traits, neither intrasexual competitiveness nor entitlement moderated associations, $ps > .4$ (Table S6). However, the Dominance \times Subjective Dorm Status interaction was significant, $B = 0.08$, $SE = 0.04$, $p = .047$, 95% CI [0.001, 0.15], $f^2 = .007$, and maintained while adjusting for covariates, $B = 0.11$, $SE = 0.04$, $p = .008$, 95% CI [0.03, 0.18], $f^2 = .015$ (Fig. 3a, Table S6). As hypothesized, monthly changes in subjective dorm status did not relate to loneliness for participants who were average or high in dominance; $B = -0.02$, $SE = 0.03$, $p = .56$ for average trait dominance; $B = 0.08$, $SE = 0.05$, $p = .10$ for high trait dominance. In contrast, individuals who were less dominant felt lonelier in months when they experienced lower subjective dorm status, $B = -0.12$, $SE = 0.05$, $p = .024$ for low trait dominance.

We also found that the Facial Dominance \times Subjective Dorm Status interaction was significant in both unadjusted models, $B = 0.09$, $SE = 0.04$, $p = .021$, 95% CI [0.01, 0.17], $\beta^2 = .009$, and adjusted models, $B = 0.12$, $SE = 0.04$, $p = .008$, 95% CI [0.03, 0.22], $\beta^2 = .029$ (Fig. 3b, Table S6). Consistent with results for self-reported trait dominance, higher subjective dorm status was related to lower loneliness for individuals who appeared less dominant, $B = -0.11$, $SE = 0.05$, $p = .017$, but not for those with average or high facial dominance; $B = -0.02$, $SE = 0.03$, $p = .54$ for average trait dominance; $B = 0.07$, $SE = 0.05$, $p = .14$ for high trait dominance.

Across all models, results remained significant when adjusting for age, gender, ethnicity, income, parental education, and high school social status. Additionally, all results remained significant over and above the Big Five personality traits. This finding suggests that status-related traits are related to temporal changes in social status and loneliness across the college transition uniquely from the Big Five personality traits (full results in Tables S7-S10). We also explored moderation of all findings by gender, although results should be interpreted with caution given the low number of male participants (full results in Tables S11-S14). There were no differences in strength of associations by gender with one exception: the degree to which entitlement was related to changes in loneliness across the academic year differed by gender, $B = 0.07$, $SE = 0.03$, $p = .021$. Associations between lower levels of entitlement and higher loneliness at study entry and declines in loneliness across the academic year were driven by female participants; $B = 0.07$, $SE = 0.02$, $p < .001$ for female participants; $B = 0.00$, $SE = 0.02$, $p = .97$ for non-female participants (Fig. S1).

Discussion

Many emerging adults struggle with feeling lonely and experiencing low social status during the college transition, especially those who move far away from friends and family. The present study examined how differences in status-related personality traits—namely, entitlement, intrasexual competitiveness, and dominance—related to changes in subjective dorm status and loneliness, as well how subjective dorm status related to loneliness, among emerging adults during the college transition. Students generally experienced increases in subjective dorm status and declines in loneliness across the academic year, although the magnitude of these changes differed by status-related traits. As hypothesized, individuals who were more competitive with peers of the same sex reported greater increases in subjective dorm status across the academic year. In addition, more entitled individuals were less lonely at the start of the year and showed no change in loneliness across the year, whereas less entitled individuals showed higher levels of loneliness at the beginning of the year and decreases in loneliness over time. Finally, experiencing higher subjective dorm status was related to lower loneliness, but only for participants who were low in trait dominance and facial dominance.

Participants high in intrasexual competitiveness reported experiencing higher subjective dorm status each month. Participants in this study reported the lowest subjective dorm status at the start of the academic year, consistent with prior research showing that college students exhibit a decline in subjective status at their university after entering college (Rahal et al., 2020). The college transition can lead to concerns regarding social comparison and

status (Yang et al., 2018). People who are more competitive with others of the same sex may be particularly sensitive to these concerns and adjust their behavior to actively gain status (Garcia et al., 2013). For instance, research has shown that adolescents who were more motivated for status during the transition to high school were more willing to use aggressive behavior to maintain status (Lee & Yeager, 2020). Participants low in intrasexual competitiveness did not show changes in status across the academic year, potentially because they were either less concerned with their dorm status, or were motivated for high status but unsuccessful in doing so. Because only subjective reports of status were reported in this study, it is also possible that individuals who are more competitive with others of the same sex tend to experience higher status because they more carefully consider their status relative to other people, despite having objectively comparable status.

We also found that entitlement moderated changes in loneliness across the year, but not changes in subjective dorm status. Entitlement involves feelings of high self-worth and expectations for achievement (Campbell et al., 2004). Prior research has suggested students are often homesick and lonely when they start college (English, Davis, Wei, & Gross, 2017), and that many students have poorer social well-being and feel lonelier across the first year of college (e.g., Conley et al., 2014). However, our findings suggest that students with more limited social ties to the university felt less lonely each month, and that entitlement is protective against feelings of loneliness at the start of the academic year specifically. Because loneliness refers to the discrepancy between one's preferred and actual social relationships (Hawkley & Cacioppo, 2010), entitlement may relate to lower loneliness at the start of the college transition because more entitled individuals are better able to quickly develop social relationships in a novel environment. Indeed, young adults who are more narcissistic tend to invest more time following friends on social media (Sheldon & Bryant, 2016). However, it is possible that more entitled individuals may have the same amount or quality of actual social relationship relative to less entitled individuals but feel less lonely because they prefer to have fewer closer relationships. Similar to narcissistic individuals, more entitled individuals may feel that they have more power (Vrabel, Zeigler-Hill, Lehtman, & Hernandez, 2020), and more powerful individuals tend to have a lower need to belong to a social group and, consequently, lower feelings of loneliness (Waytz, Chou, Magee, & Galinsky, 2015). It is possible that more entitled students feel less of a need to belong and therefore have a smaller discrepancy between their preferred and actual social relationships during transitory periods.

Contrary to hypotheses, entitlement was related to higher subjective dorm status including at study entry, but not to changes in subjective dorm status over time. Prior research has suggested that more entitled individuals are motivated to attain high status and may adjust their behavior to gain status (Campbell et al., 2004; Lange et al., 2019). In this study, more entitled individuals reported experiencing higher status across the academic year relative to less entitled individuals. They quickly experienced high status, consistent with research showing that more entitled and exploitative individuals tend to be more liked at first impression (Back et al., 2010).

Finally, we found that both facial and trait dominance moderated the association between subjective dorm status and loneliness. As hypothesized, only less dominant individuals felt

less lonely in months when they experienced higher subjective dorm status, and subjective dorm status was unrelated to loneliness for people who were more dominant or who appeared more dominant to others. Appearances greatly impact impressions (e.g., Berinsky et al., 2019; Kalma, 1991), so participants who appear dominant might engage in dominant behaviors with greater success relative to people who appear less dominant. Therefore, people with higher facial dominance may behave differently, similar to people high in trait dominance. Prior studies have found that status does not always relate to having positive peer relationships, as people tend to listen to both peers whom they respect and peers whom they are intimidated by (Cheng et al., 2010). More dominant people may be especially inclined to gain status through more forceful means, and they consequently may gain social influence without establishing meaningful relationships with peers that reduce loneliness (Cheng et al., 2013).

Analyses were tested among emerging adults during a particularly challenging transition period. College students who live on campus are immersed in the dorm environment, such that their subjective dorm status may have been more important than during other periods. However, status comparison becomes increasingly prominent during adolescence, as youth develop neurobiologically to better consider the perspectives of their peers (Dahl, 2008). It is possible that social status may be similarly important for adolescents at a boarding school or summer camp, where they are consistently surrounded by peers. Status-related traits may similarly influence development of subjective peer status and loneliness among adolescents during the transition to high school; for instance, a prior study has found that status-motivated high school students engaged in aggressive behavior to maintain status (Lee & Yeager, 2020). However, individual differences in entitlement and intrasexual competitiveness may be larger during emerging adulthood, as the college application process and the college environment can cause many youth struggle to question the degree to which they deserve to be at their college and to which they are competitive with their peers (Chowning & Campbell, 2009; Krahn & Galambos, 2014; Lipson & Tobias, 1991). Although we believe these associations may be unique to emerging adults, further research should test whether similar associations emerge across childhood (e.g., middle and high school transition) as well as later in development (e.g., occupational transition).

Limitations and Future Directions

The study is limited by aspects of the eligibility criteria, participant characteristics, and measures. First, although participants attended high school at least 100 miles away from the university and did not attend summer programs, participants may have still known high school peers at the university. Eligibility criteria were imposed to examine the development of status and loneliness in a novel environment and to estimate associations between relative changes in subjective dorm status and loneliness. Participants were at heightened risk for loneliness, such that associations may be particularly strong between loneliness and social status in this sample. However, these criteria limit the generalizability of findings because students who attend universities closer to their hometown experience the college transition differently from students in the sample, and results should be replicated among these students. The criteria regarding medication may have also excluded participants who experience psychopathology including depression. Our findings may not generalize to

students taking medication, particularly in light of how depression and loneliness are highly related (e.g., Richardson, Elliott, Roberts, & Jansen, 2017). Importantly, findings are also limited to students living in the university dorms. Although there was a normal distribution of family income and parental education in this sample, students of lower socioeconomic status may be more likely to attend a local institution or to live with their families and commute to college. The present findings should be replicated among students who lived closer to the university and may have a more proximal peer network, with relaxed exclusion criteria, in order to broaden the generalizability of findings.

Regarding limitations to generalizability, although the ethnic distribution of the sample was similar to that of the university student population, results may not generalize to other campuses, which have unique social norms and student compositions, or other settings, such as workplace transitions. The sample is limited by a high percentage of female participants, as research has suggested that female college students often feel lonelier than male students (e.g., Hysing, Petrie, Bøe, Lønning, & Sivertsen, 2020). Given the low number of male participants, the study lacked power to identify differences in associations by gender, and future research should include gender-diverse samples.

Another limitation was the assessment of dorm status. Prior research has highlighted how one's own perceptions of standing are often only weakly related, if at all, to peers' judgments of their standing (e.g., Mayeux & Cillessen, 2008). Therefore, our results highlight how status-related personality traits relate to one's own perception of status. Nevertheless, these findings may be meaningful because positive self-perceptions—as opposed to perceptions that more strongly align with peers' perceptions—may be particularly related to positive well-being (Humberg et al., 2019). We are also unable to disentangle whether students who report low subjective dorm status were not motivated to gain status, were unsuccessful in gaining status, or felt that they experienced low status despite having objectively high status. Future studies should examine status motivation and objective versus subjective dorm status.

Finally, traits were measured using self-reported surveys that could be influenced by biases, including social desirability bias that prevents participants from endorsing undesirable characteristics (e.g., entitlement). Nonetheless, prior studies suggest self-reports of dominance align with peer-ratings and objective measures of social influence in a group setting (Cheng et al., 2013). Assessment of dominance was also limited by the scale, as it is disputed whether items in the Success in Conflict scale assess solely dominance or a combination of dominance and prestige (Holbrook et al., 2014). Dominance is a multi-faceted construct, which can be cued by facial or physical features as well as behaviors. Although similar results were found for self-reported dominance and ratings of facial dominance, additional research with more fine-grained measures of dominance is needed to better identify what aspects of dominance moderate the association between subjective dorm status and loneliness, and to better understand how facial dominance relates to trait dominance. Future studies would benefit from including more rigorous measures of all traits, including separate measures of dominance and prestige, as well as behavioral sampling or intensive measures in which participants can report their behaviors and their time with other people.

Applications

Colleges may be well-positioned to promote students' well-being during the college transition by organizing dorm social events where students can experience or potentially gain higher status. These events should be designed with the students who are positioned to best benefit from these activities—those who are less entitled and less dominant—in mind. Colleges can also offer resources to promote students' verbal and social skills, as deficits in these skills can promote loneliness and promote poorer mental health in college students (Moeller & Seehuus, 2019).

Given that less entitled participants showed higher loneliness at the start of the academic year, these students may need most support during the first months of the transition. Less entitled students may feel that they do not belong or do not deserve campus resources, and may consequently be less inclined to utilize resources and integrate into campus (Lefever, 2012). Given that social status relates to loneliness for less dominant students, it may be possible to shift students' viewpoints of their subjective status relative to other students and thereby change their mentality, as done in previous research (Johnson, Richeson, & Finkel, 2011). Additionally, future studies can test whether social support and belonging interventions that reduce loneliness by normalizing challenges associated with the college experience, such as imposter syndrome (e.g., Mattanah et al., 2012), are effective for less entitled or less dominant students.

Conclusions

In conclusion, these findings suggest that status-related personality traits (i.e., intrasexual competitiveness, entitlement, dominance) are related to attainment of social status and loneliness during the college transition. More intrasexually competitive people experience higher status over time, and more entitled individuals are less lonely than other students at the start of the academic year. Importantly, less dominant individuals felt less lonely in months when they experienced higher subjective dorm status. These results suggest that status-related personality traits influence individuals' experience and well-being across the college transition, and potentially other social transitions. Understanding who best navigates this transition could help universities and clinicians identify at-risk students and enable researchers to enrich models of status development and well-being.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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No materials are taken from other sources.

Data Availability Statement:

Data can be found at <https://osf.io/xrkma/>. Note that one genderqueer participant is removed from the public dataset to protect anonymity. Full data that support the findings of this study are available on request from the corresponding author.

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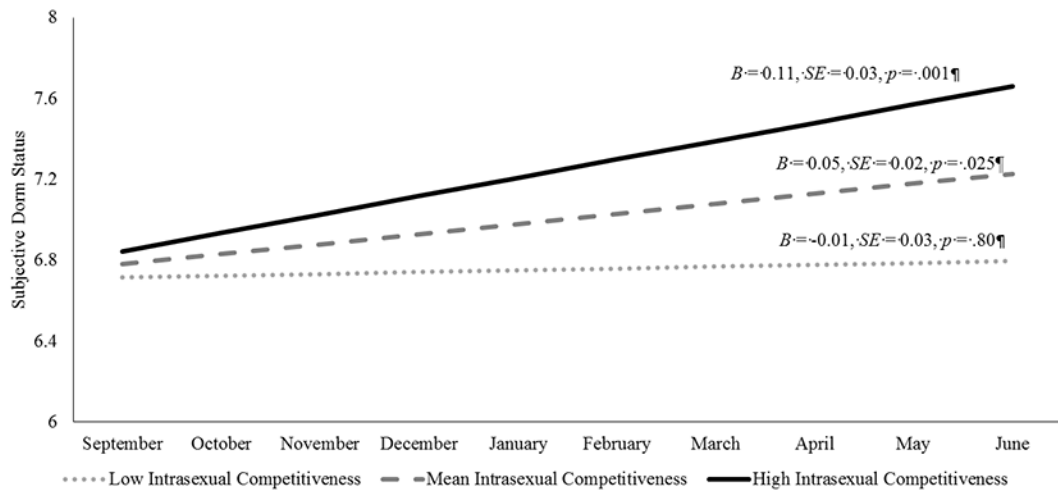


Figure 1. Subjective dorm social status as a function of intraseual competitiveness and time. Participants who were low in intraseual competitiveness had stable, low subjective dorm status, and participants who were high in intraseual competitiveness showed the greatest increase in subjective dorm status across the academic year.

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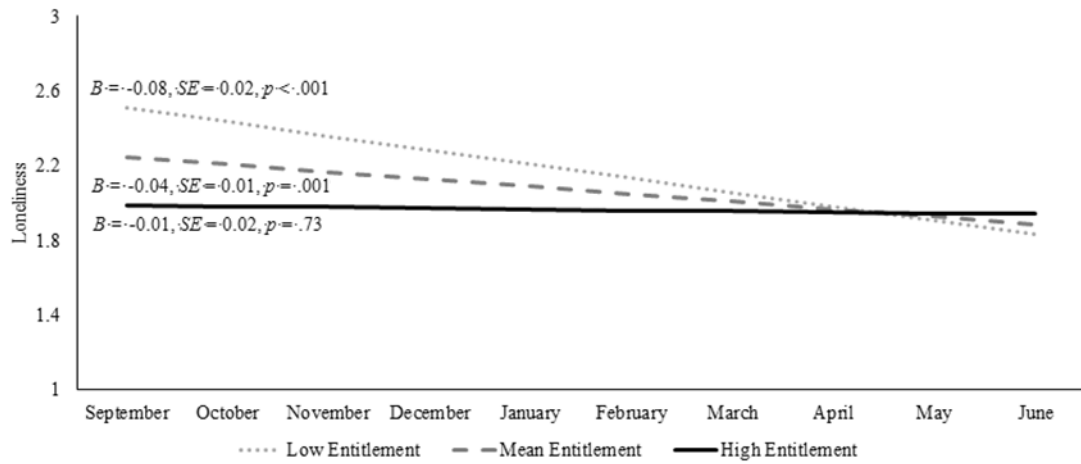


Figure 2.

Loneliness as a function of entitlement and time. Participants who were low and average in entitlement reported feeling significantly lonelier at the start of the academic year and showed declines in loneliness across the academic year. Participants who were high in entitlement showed no change in loneliness across the academic year.

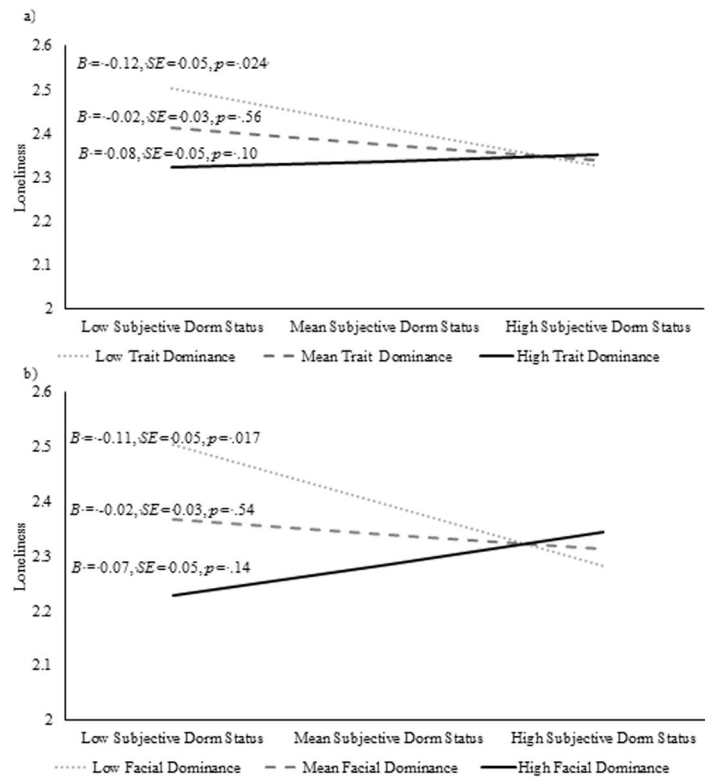


Figure 3.

Loneliness as a function of dorm social status and (a) self-reported trait dominance and (b) facial dominance ratings based on appearance. Participants felt lonelier in months that they had lower subjective dorm status if they were less dominant, as assessed by self-report and judgments of appearance from photographs. Loneliness was not significantly related to monthly changes in subjective dorm status for individuals with mean or high dominance.

Table 1.

Descriptive statistics and correlations for study variables at study entry.

	<i>M</i>	<i>SD</i>	Range	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. Dorm Status	6.33	1.83	2-10	—														
2. Loneliness	2.28	0.71	1.00-3.75	-.45 ^{***}	—													
3. Intrasexual Competitiveness	2.94	0.93	1.25-4.83	.11	.01	—												
4. Entitlement	4.06	0.76	2.33-5.87	.33 ^{**}	-.32 ^{**}	.30 ^{**}	—											
5. Trait Dominance	4.11	1.00	2-7	.38 ^{***}	-.31 ^{**}	.23 [*]	.43 ^{***}	—										
6. Facial Dominance	4.88	0.75	3.10-6.46	.22 [*]	-.24 [*]	.10	.07	.19	—									
7. Parent Education	4.82	1.47	2-7	.46 ^{***}	-.35 ^{***}	.03	.15	.26 [*]	.13	—								
8. Family Income	5.81	1.98	1-8	.38 ^{**}	-.26 [*]	.10	.18	.31 ^{**}	.19	.50	—							
9. Gender	0.69	0.46	0-1	-.28	.16	-.09 ^{**}	-.33	-.01	.19	-.18	-.12	—						
10. High School Status	8.16	1.81	3-10	.17	-.14	.10	.22 [*]	.24 [*]	.02	.18	.11	-.01	—					
11. Extraversion	4.25	1.59	1-7	.41 ^{***}	-.54 ^{***}	.03	.24 [*]	.23 [*]	.15	.07	.18	-.13	.18	—				
12. Agreeableness	4.80	1.09	1.5-1.7	.08	-.12	-.12	-.00	-.21 [*]	.06	.08	-.03	-.06	.11	.23 [*]	—			
13. Conscientiousness	5.26	1.17	2-7	.13	-.22 [*]	.04	.32 ^{**}	.33 ^{**}	.12	.02	.23 [*]	.00	.10	.11	.23 [*]	—		
14. Emotion Stability	4.44	1.41	1.5-7	.47 ^{***}	-.50 ^{***}	.11	.26 [*]	.19	.03	.23 [*]	.35 ^{***}	-.28 ^{**}	.53 ^{***}	.12	.24 [*]	.16	—	
15. Openness to Experience	5.15	1.09	2-7	.36 ^{***}	-.28 ^{**}	-.07	.32 ^{**}	.32 ^{**}	.15	.20	.25 [*]	-.12	.35 ^{***}	.17	.27 [*]	.32 ^{**}	.25 [*]	—

Note:

* $p < .05$

** $p < .01$

*** $p < .001$.

Table 2.

Subjective dorm status and loneliness as a function of demographic factors.

	Subjective Dorm Status		Loneliness	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Intercept	6.90***	0.25	2.24***	0.11
Time	0.05*	0.02	-0.04**	0.01
Gender	-0.42**	0.16	0.01	0.05
Asian American	-0.83*	0.35	-0.01	0.12
Other Ethnicity	0.08	0.41	0.10	0.14
Parental Education	0.31**	0.12	-0.01	0.04
Income	0.17	0.1	-0.05	0.04
Age	0.54	0.31	0.15	0.10
High School Social Status	0.09	0.08	0.01	0.03

Note:

* $p < .05$

** $p < .01$

*** $p < .001$.

Time was centered at the start of the academic year (0 = September, 1 = October, ... 9 = June). Gender was effect-coded (-1 = non-female, 1 = female), and Asian American and Other Ethnicity were dummy-coded with White as the reference group. Parental Education, Income, Age, and High School Social Status were centered at the grand-mean.