Social Cure in the Time of COVID-19: Social Identity and Belongingness Predict Greater

Well-Being and Academic Motivation in University Students

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Abstract

Social isolation during the COVID-19 pandemic increased negative affect and feelings of loneliness among university students. **Objective:** Given that identifying as a member of a social group, like a university student, serves as a protective factor against diminished well-being, we examined whether students' social identity might offer a "social cure" during COVID-related remote learning. **Participants:** 356 students from a large, public university that was fully remote in 2021. **Results:** Students with a stronger social identity as a member of their university reported lower loneliness and greater positive affect balance during remote learning. Social identification was also associated with greater academic motivation, whereas two well-established predictors of positive student outcomes – perceived social support and academic performance – were not. Nonetheless, academic performance, but not social identification, predicted lower general stress and COVID-related worry. **Conclusions:** social identity may be a potential social cure for university students who are learning remotely.

Keywords: social identity, social cure, COVID-19, remote learning, well-being

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The COVID-19 pandemic has changed the lives of many individuals, including university students. When stay-at-home orders were put into effect in many countries in March 2020, university students often had no other choice but to pursue online learning, trading bustling lecture halls for Zoom classes in their own bedrooms. While research is still emerging on the effects of COVID-19 and social isolation on student mental health, there is evidence that post-secondary students have experienced heightened anxiety, depression, and post-traumatic stress disorder symptoms since the onset of the pandemic.[1,2]

The COVID-19 pandemic has also increased feelings of loneliness among university students.[3] Loneliness may be experienced when people are motivated to pursue social connections but feel that their social needs are not being satisfied.[4] Young adults tend to experience more loneliness than any other age group, which is often intensified by the transition to post-secondary education and the pressure to formulate new relationships.[5] Over one-third of post-secondary students report feelings of moderate or severe loneliness during a regular academic period[6] – a prevalence that has nearly doubled during the COVID-19 pandemic, with 61% of young adults in October 2020 reporting frequent feelings of loneliness.[7] With loneliness on the rise, researchers have expressed an immediate need for better understanding of university students' social connections or lack thereof.[5] Toward this end, a "social cure" perspective may advance theory on the association of students' social identity and feelings of belonging as a member of a university with loneliness and positive functioning.

Group Membership as a "Social Cure"

Humans have a fundamental need to belong with others.[8] A sense of belonging is

especially important for university students, as those who feel more connected with their peers report higher social acceptance, persistence in school, academic achievement, and mental well-being.[9,10] Group memberships and positive social identities can help to satisfy belongingness needs.[11, 12] According to Social Identity Theory and Social Categorization Theory, people can develop social identities and personal identities.[13,14] While a personal identity reflects an individual's subjective view of themselves and commonly incorporates personal interests and values, a social identity reflects an individual's perception of themselves as a group member.[13] When social identity is threatened, it can also threaten a sense of belonging.[15]

Although social psychologists have tended to focus on the ways that social identity can facilitate in-group favoritism and out-group discrimination, recent research has examined the positive impact of social identity on health and well-being.[16,17] Forming group memberships and positive social identities may help to "cure" a variety of physical and mental health conditions, including depression, anxiety, stress, and trauma,[18] because they provide individuals with the social support and coping mechanisms to appraise stressful situations as less threatening.[19] Group memberships also help to satisfy basic psychological needs, like the needs for self-esteem, belonging, control, and meaning in life.[11,12]

Accordingly, we surmised that group membership may be a "social cure" that is associated with enhanced student wellness during the COVID-19 pandemic. Group memberships can increase psychological resilience during stressful periods and aid in the transition from high school to post-secondary education.[20,21] While some types of group identification have been found to yield a social cure during the COVID-19 pandemic – e.g., identification with one's national group[22] or with family, friends, and neighbors[23] – the role of *university* group identification remains unknown. The next sections review literature on the beneficial outcomes

of social identification for university students, particularly in decreasing loneliness and stress while enhancing positive affect and academic motivation.

Association of Social Identity with University Student Outcomes

Consistent with the social cure model, stronger identification with groups and more group memberships can reduce loneliness in university students[24,25] and are both protective and curative of depression.[26,27,28] We also examined whether social identification was associated with reduced stress – an important topic given that in pre-pandemic times, university students' stress was associated with poorer mental health, reduced self-care, and decreased academic satisfaction.[29] This association might be heightened during particularly stressful times such as COVID-19 lockdowns: for example, social identification with family members was associated with lower perceived stress during the COVID-19 lockdown in spring 2020.[23] Nonetheless, it remains an open question whether social identification with one's *university* was also associated with students' lower stress during lockdown. Additionally, we examined the association of social identification with COVID-specific stress, reasoning that greater identification with one's university might buffer worries that the pandemic has a negative effect on one's education, job prospects, or health.

Strong social identification is also associated with greater well-being.[30] This is particularly true for university students: those who strongly identify as members of their school report enhanced self-esteem and psychological well-being,[31] and those who report greater belonging experience more positive emotions.[9] Social identification is also associated with students' greater academic motivation and achievement, self-efficacy, social acceptance, approaches to learning, and motivation to continue in school. [32,33,34] We sought to examine

whether social identification contributes to these positive outcomes over and above other well-established predictors.

Additional Predictors of University Student Outcomes

The evidence we have reviewed so far suggests that group membership is associated with enhanced well-being and academic motivation in university students, but other variables may also play an important role. Notably, perceiving greater social support is a well-established predictor of positive mental health and enhanced academic performance in university students.[35,36,37] Furthermore, a student's perception of their academic performance can influence positive outcomes, like high academic achievement and persistence in school, or negative outcomes, like enhanced mental distress.[38,39] Learning strategies such as effort-regulation, self-regulation, and organization also predict academic performance[40] and academic motivation,[41] but the relationship between learning strategies and student wellness has been minimally explored. Further examining the determinants of student well-being and academic motivation can inform ways to better support students, especially during stressful periods like the COVID-19 pandemic.

Social Identity and Belongingness in Remote Learning Contexts

The current study examined whether it is worthwhile for universities to instill a greater sense of social identity and belongingness among students who are learning remotely. Does it add value to well-being and motivation over and above well-established predictors like social support and academic performance? This is worthy of investigation not only because future outbreaks might necessitate further lockdowns, but also because some university programs might partially or wholly shift to remote course delivery, and some university programs have been and always will be delivered remotely. Course directors of these programs may be interested in ways to enhance identification with the university if it means happier and more motivated students.

Researchers have investigated a plethora of behavioural interventions intended to enhance remote learners' completion of online courses (e.g., plan-making and social accountability interventions),[42] including those seeking to counteract social identity threat from groups underrepresented in higher education.[43] However, less research attention has been devoted to the potential benefits of social identity and belongingness *as a member of one's university* in remote learning contexts. Some studies have examined ways to enhance remote learners' social identity and belongingness by facilitating social interactions through communication technology.[44,45] This includes the use of discussion boards in the learning management system, virtual classrooms in Zoom or MS Teams, and social media sites that students can use for group chats.[46] Online and in-person learning can produce similar educational outcomes,[47] and, in some circumstances, online learning can produce similar or better social outcomes and sense of community,[48] suggesting that social identification with one's university is not inevitably weak when learning is remote. In fact, anonymity – which often characterizes remote learning – may intensify rather than weaken group processes, such as social identification and conformity to norms.[49] According to the Social Identity Model of Deindividuation (SIDE), contexts providing little individuating information, such as remote learning contexts, are more likely to attune people to group membership cues than contexts that provide rich individuating information.[50] Insofar as the depersonalization and anonymity of computer-mediated communication enhances the salience of group identities rather than personal identities,[51] it is possible that students' social identification as a member of their university may be strong and confer psychological benefits during remote learning. Countering this possibility, however, is evidence of a decline in student engagement during Covid-related remote learning.[52] What was true of remote learning in pre-Covid times may not extend to Covid times; it remains an open

question whether students' social identification and belonging as a member of their university was strong enough to confer psychological benefits during Covid-related remote learning in 2020-2021. Thus, our research question[1] was as follows: Is social identification/belonging negatively associated with university students' loneliness, stress, and COVID-related worry, and positively associated with positive affect balance and academic motivation, over and above social support, academic performance, and learning strategies?

Method

Participants

394 students from a Canadian university participated in this study. 38 participants were removed for failing two attention check questions (e.g., "Click 'very true of me' as a response to this question to show that you are paying attention"), for completing the study in less than 5 minutes, or for duplicate responses, leaving 356 participants in the final sample. A sensitivity analysis indicated that our sample size was large enough to detect a minimal effect size of $f^2 =$ .04 ($\alpha = .05$, two-tailed, 4 predictors) at 95% power and $f^2 = .02$ at 80% power. Participants were recruited from psychology courses in exchange for course credit. The gender distribution – 80% female, 18% male, 2% non-binary, and 1% indicated a gender not listed or did not wish to answer – is a typical gender ratio for psychology courses at our university. The mean age was 19.17 ($SD = 3.07$), and they identified their ethnicity as White (40%), South Asian (25%), Chinese (15%), Black (6%), Filipino (5%), Southeast Asian (4%), West Asian (3%), Arab (3%), First Nations, Metis, or Inuit (1%), Korean (1%), Japanese (1%), Latinx (1%), an ethnicity not listed (1%), or did not wish to answer (1%). Most participants (83%) were in their first year of undergraduate study; those who started university in September 2020 had not experienced any

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[1] Please see the supplementary file for information about why we posed a research question instead of hypotheses.

in-person learning when we collected our data from January to June 2021. Due to the COVID-19

pandemic, students at our university were 100% remote from March 2020 until September 2021.

Most students belonged to STEM faculties: science (53%), health science (16%), or engineering

(6%). The rest belonged to social science (19%), humanities (2%), business (1%), or did not

wish to answer (3%). In response to the question, "Where do you believe you and your family

stand in terms of money, education and job?", 81% indicated their socioeconomic status was "in

the middle" or "well off". 31% of participants indicated that they were currently working a part-

time or full-time job alongside their studies. Exploratory analyses of the links between

demographic variables and the dependent variables are reported in the supplementary file.

Procedure

This study received ethics approval from our university's Research Ethics Board.

Participants responded to an online survey that consisted of the measures below (Cronbach's

alphas are reported in Table 1). The materials, data, analysis scripts, and supplementary file are

openly available here: https://osf.io/gyu8v/?view_only=be5900f7fad240f6a63188b4770ad360.

The authors report there are no competing interests to declare.

Measures

Social identification/belongingness. Consistent with conceptualizations of social

identity and belongingness as overlapping yet distinct constructs,[12,15] we used two measures. An

adapted version of an item used by Haslam et al.[53] assessed social identification ("In relation to

being a [name redacted] University student, being a member of this group is important to me"),

and an adapted version of the 5-item Perceived Cohesion Scale[54] measured feelings of belonging

as a university student (e.g., "In relation to being a [name redacted] University student, I feel

happy that I belong to this group"). Items from both measures were rated on a 9-point Likert

scale ranging from 1 (*strongly disagree*) to 9 (*strongly agree*). Because the social identity item

was highly correlated with the belongingness items (all rs > .54) and Cronbach's alpha for all six

items was high (.92), we combined them into a single measure of social identification and

belongingness. Confirmatory factor analysis also supported a one-factor solution (see

Supplementary File for further detail).

Social Support. The short-form of the Social Support Questionnaire (SSQ)[55] was

adapted to a rating scale instead of open-ended responses. Participants rated 6 questions about

their global support (e.g., "I can count on someone to console me when I am very upset") on a 5-

point Likert scale ranging from 1 (*never*) to 5 (*always*).

Academic Performance. Academic confidence was measured using two questions from

Richardson et al[56]: "How confident are you in your ability to perform well academically?" and

"How well do you expect to perform this term?" These items were rated on a 5-point Likert scale

ranging from 1 (*not at all*) to 5 (*extremely*). Academic effort was measured with four items. First,

an item modified from Galambos et al.[57] asked participants to indicate how many hours they

spent on schoolwork over the past week on a 5-point Likert scale (1 = *Less than 10*, 5 = *More*

than 40). Second, we added items to measure online school attitudes and attendance: "Over the

past week, to what extent have you treated your online classes like in-person classes?", "To what

extent did you attend your synchronous lectures over the past week?", and "To what extent did

you watch/complete your asynchronous lectures over the past week?" The first item was rated on

5-point Likert scale (1 = *Not at all*, 5 = *Extremely*) and the latter two items were rated on a 5-

point Likert scale (1 = *attended none*, 5 = *attended all*; N/A = *no synchronous/asynchronous*

lectures). 9% of participants chose N/A for the synchronous lectures and 3% chose N/A for the

asynchronous lectures; this data was not included in the calculation of mean scores for these

scales. These 6 items were standardized then averaged together to create a composite variable measuring academic performance.

Learning Strategies. The 13-item Motivated Strategies for Learning Questionnaire (MSLQ)[58] consists of subscales measuring organization (e.g., "I make simple charts, diagrams or tables to help me organize course material"), critical thinking (e.g., "I try to play around with ideas of my own related to what I am learning in my courses") and help-seeking (e.g., "I ask the instructor to clarify concepts that I don't understand well") on a 5-point Likert scale from 1 (*not at all true of me*) to 5 (*very true of me*). The subscale scores were combined to create a total score for learning strategies.

Loneliness. We used the 10-item UCLA Loneliness Scale[59] because it has the strongest psychometric properties of any published short-form.[60] Participants rated statements (e.g., "I feel isolated from others") on a 5-point Likert Scale ranging from 1 (*absolutely no*) to 5 (*absolutely yes*).

Positive and Negative Affect. The Scale of Positive and Negative Experience (SPANE)[61] asks participants to rate their current experience of six positive feelings (e.g., "happy"; $\alpha = .91$) and six negative feelings (e.g., "sad"; $\alpha = .89$) on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*extremely*). Positive affect balance was calculated by subtracting negative affect from positive affect; higher scores indicated that participants were experiencing more positive than negative affect.

Academic Motivation. The academic motivation scale developed by Lockwood et al[62] consists of 13 items (e.g., "I plan to study harder for tests and exams") rated on a 11-point Likert scale (1 = *not at all true*, 11 = *very true*).

General Stress. The Daily Inventory of Stressful Events (DISE)[63] is a 7-item scale which

measures the prevalence and severity of stressful experiences. The scale was adapted such that

participants were asked to respond "yes" or "no" to questions regarding the occurrence of

stressful experiences *over the past week* (e.g., "Over the past week, did you have an argument or

disagreement with anyone?"). Those who indicated "yes" were then asked to rate on a 5-point

Likert scale how stressful the experience was from 1 (*not at all stressful*) to 5 (*very stressful*).

We recoded the scale so that anyone who responded "no" received a score of 0, turning it into a

6-point scale ranging from 0 (no, I did not experience this event) and 1 (yes, I experienced this

event and it was *not at all stressful*) to 5 (yes, I experienced this event, and it was *very stressful*).[2]

COVID-Related Worry. Two items measured how worried participants felt about

COVID-19: "How much do you feel worried that you or your loved ones have or will have

COVID-19?" and "How much do you feel worried about the social, educational, or economic

impact of COVID-19 on you or your loved ones?". These items were rated on a 5-point Likert

scale (1 = *not worried at all*, 5 = *very worried*).[3]

Results

Descriptive statistics and Pearson's correlations are reported in Table 1. We tested our

research question with multiple regression analyses, one per dependent variable (see Table 2).

These analyses revealed that, over and above the other three predictors, social

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[2] We also analyzed the yes/no responses separately by dummy-coding them (1 = yes, 0 = no) and calculating the average. When stress was operationalized this way, the pattern of results for stress was the same, but because reliability of this scale was low ($\alpha = .58$), we decided to use the 6-point scale incorporating severity assessments instead.

[3] We stated in our preregistration that COVID-related stress would be measured using items adapted from Weinstein and Nguyen's[64] COVID-19 stressors checklist. Using a yes/no format, participants indicated whether they had experienced 8 circumstances since the implementation of social distancing policies in March 2020 (e.g., lost your job). We added two additional items (have a parent who lost their job, were worried that COVID-19 would impact your university education). Responses to these 10 items were dummy-coded (1 = yes, 0 = no) and averaged. However, the reliability of these items was low ($\alpha = .56$), and as such, we decided instead to use the two items measuring COVID-related worry described above.

identification/belonging was significantly associated with lower loneliness, higher positive affect

balance, and higher academic motivation. Social identification/belonging was not significantly

associated with stress or COVID-related worry. Additionally, social support significantly

predicted lower loneliness and greater positive affect balance, but it was not significantly

associated with academic motivation, general stress, or COVID-related worry. Academic

performance was significantly associated with better outcomes on all dependent variables except

academic motivation. Finally, learning strategies were significantly associated with greater

academic motivation and COVID-related worry, but they were not significantly associated with

loneliness, positive affect balance, or general stress.

Discussion

Our results revealed that social identification/belongingness not only uniquely

contributed to positive university student outcomes – lower loneliness and higher positive affect

balance – but it also out-performed other well-established predictors. Most notably, it

significantly predicted greater academic motivation whereas social support did not. Thus,

university-related activities that induce a sense of identification and belonging – e.g.,

extracurricular activities, collaborative and problem-based learning[44,45] – may have a positive

knock-on effect for academic motivation beyond the social support they potentially offer.

Belonging to a group, even minimally and without social reciprocity, may still enhance affective

well-being.[65] Therefore, university faculty and staff should be encouraged to promote a sense of

belonging among students, especially in remote learning contexts, to "cure" negative outcomes

like loneliness and facilitate positive outcomes like enhanced academic motivation, performance,

and well-being.[26,31,33] Technology that may facilitate this sense of belonging among remote

learners include Zoom and/or Microsoft Teams, both for classroom learning and for

extracurricular activities; the use of interactive discussion boards on a learning management system like Canvas or Blackboard; and social media sites that students can use for group chats (e.g., Discord, Messenger, WhatsApp).[46] The depersonalization and anonymity of remote learning itself may also boost the salience of one's social identity,[51] leading students to more strongly identify as a member of their university.

Nonetheless, social identity/belongingness was not associated with general stress or COVID-related worries. Usually, group membership buffers against feelings of stress and neuroendocrine reactions to stress.[66,67] However, a stronger sense of group membership and belonging may not mitigate COVID-related worries because people may associate social groups with virus transmission rather than with any kind of cure, and therefore seek to avoid them.

Social Support, Academic Performance, and Learning Strategies

Social support was associated with lower loneliness and higher positive affect balance, consistent with evidence that university students who feel supported report better mental health.[68] However, social support did not significantly predict academic motivation, stress, or COVID-related worry, against other findings.[37] It seems likely that remote learning disrupted students' usual social support networks during the academic term; students who started university before the shift to remote learning in March 2020 were no longer able to meet up in person with fellow students to attend class together or study together, simultaneously boosting their motivation to succeed academically while decreasing their stress levels. First-year students whose university experience had been entirely remote at the time of data collection may not have even had the opportunity to form a supportive social network of university friends. Still, we found that academic performance was associated with lower loneliness and higher positive affect balance, consistent with other evidence that high-performing university students report greater

well-being.[39] That academic performance was not associated with academic motivation defied

previous findings.[69] Finally, learning strategies were associated with higher academic

motivation, consistent with evidence that students higher in self-regulation and organization tend

to be more motivated to succeed.[41] Unexpectedly, students who had stronger learning strategies

were *higher* in COVID-related worries. It is plausible that students who possess effective

learning strategies for in-person instruction, such as participation in class discussions or seeking

one-on-one help from a professor, feel less-adapted to remote learning during COVID times, and

worry about its impact on their educational outcomes. Overall, our results are notable for

replicating many of these previous findings within a historical period characterized by

heightened challenges for university students.

Limitations and Directions for Future Research

Our study has several limitations that should be addressed by future research. Although

participants in our sample came from a wide range of ethnicities and academic faculties, most

participants were female and in their first year of undergraduate study, limiting the

generalizability of our results to the wider university population. Related to the latter point, at the

time of data collection, first-year undergraduates had not yet had an in-person university

experience to connect with peers and faculty and develop a strong social identity as a member of

our university. Sampling upper-year students might have allowed us to better discern whether

social identification/belonging is associated with positive outcomes among students who have

had more opportunity to develop a social identity as a university student.

Our results were also correlational in nature, so we cannot establish that social

identity/belongingness caused students to experience more positive outcomes. Future researchers

may wish to test the effect of social identity through experimental interventions. For example,

researchers might inspire feelings of belonging and identification by asking participants to think about groups they belong to and describing instances of belonging with these groups[70] or ask university students to write down ideas to improve their school and characteristics that they share with other university students.[67] Belongingness interventions are also commonly administered by post-secondary institutions in an in-person format, such as offering courses which introduce students to university life and providing students with peer groups to attend their classes.[71] For example, Haslam et al's[72] 5-part intervention titled "Groups 4 Health" aimed to help young adults conquer social isolation and affective disturbance by teaching them to identify, strengthen and build their social identities. Participants who completed this intervention reported enhanced mental health and social connectedness, but it is important to note that the study took place in person and in groups over a two-month period. Few interventions have tried to enhance a sense of belonging among university students through an online format,[10,73,74] which is the only option during periods of remote learning. As universities are seeking ways to enhance student belonging in a virtual and often isolating environment, reminding students of their membership as a part of a large institution with like-minded individuals may generate positive outcomes.

A final limitation concerns our measure of social support, which referred to global support rather than from specific others like family members or friends. Because students were unlikely to receive in-person social support from university friends during remote learning, they may have been more reliant on support from the people they lived with – usually family members. A measure that differentiated between various sources of social support may have found an association of family support, but not friend support, with higher academic motivation and lower stress.

Conclusion and Implications

Overall, we found that university student identity during COVID times may function as a social cure: it was associated with lower loneliness, higher positive affect balance, and greater academic motivation. Perhaps academic institutions can strive to make student identities more salient and positive by promoting a stronger sense of community during this era of student loneliness and mental ill-health. Emphasizing their positive shared qualities may make students proud to be a member of their university – a social identity that may help to cure widespread *anomie*.

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