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## Perceptions of Campus Climates for Civic Learning as Predictors of College Students' Mental Health

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### Abstract

This study explored whether three broad areas promoted students' mental health: perceptions of the climate related to civic learning, experiences on campus, and civic engagement. Campus climates for civic learning including the development of ethical and moral reasoning and the importance of contributing to community were the strongest predictors of students' mental health scores. Additional predictors included experiences that develop skills to change society for the better, and a well-developed ability to consider ethical and moral consequences of actions. Civic engagement through participation in community service was a significant, although weak, predictor.

It seems obvious that society benefits from college students' civic engagement (Harper & Yeung, 2013), especially if civic engagement is understood as "working to make a difference in the civic life of our communities" (Ehrlich, 2000, p. vi). Scholars have linked civic engagement behaviors (e.g., service-learning, volunteerism, community-based programs) to such civic outcomes as more informed, responsible, and action-oriented citizenship (Einfeld & Collins, 2008; Steinberg, Hatcher, & Bringle, 2011); pluralistic orientation (Hurtado & DeAngelo, 2012); and openness to diversity (Bowman, 2011).

The connection between college students' civic engagement and their health seems less apparent. Although scholars have posited that civic engagement promotes mental health (Keyes, 2012; Low, 2011; Piliavin, 2003), this link is understudied. This is a salient topic given the call for a renewed emphasis on civic outcomes of higher education (Adelman, Ewell, Gaston, & Schneider, 2014; National Task Force on

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Civic Learning and Democratic Engagement, 2012) and the increased attention mental health has received in current events.

Across the nation, mental health concerns are prompting action from college campuses, national organizations (American College Health Association, 2009; Clay, 2013; Keyes, 2012), and the White House (2013). To aid in this discourse, we examined the influence of students' behaviors and perceptions of campus climates for civic learning on students' mental health as measured by the Personal and Social Responsibility Inventory (PSRI) and Mental Health Continuum-Short Form (MHC-SF; Keyes, 2009), respectively. The framework for this study takes a more complete look at mental health, which includes life satisfaction, affect (Bradburn, 1969), personal functioning (Ryff & Keyes, 1995), and social well-being (Keyes, 1998). Together, these form the basis for the MHC-SF (Keyes, 2009).

Scholars (Keyes, 2012; Low, 2011; Piliavin, 2003) argued that one of the pathways to doing well is by doing good, which informed the connection we made between civic engagement and mental health. Pascarella and Terenzini's (2005) synthesis of environmental influences as well as other ecological scholarship (Renn & Arnold, 2003) framed our understanding of the influences of campus climate and the peer environment on student learning. Two research questions guided this study:

1. To what extent are student ratings on the Personal and Social Responsibility Inventory dimensions associated with mental health, as measured by the Mental Health Continuum-Short Form?
2. Which climate measures related to civic learning are the strongest predictors of mental health?

## **Civic Engagement and Mental Health**

Given the increased attention to college students' mental health and its important role in student learning, we provide a brief overview of the link among mental health, development, and education, as well as campus climate and civic learning. Then, we shift our attention to college student mental health and the factors that affect it.

### **Mental Health, Development, and Education**

Keyes's (2009) definition of mental health includes positive assessments of emotional, social, and psychological dimensions, not merely the absence of mental illness. Mental health, as defined, has long been a focus of educational, psychological, and human development research. When mental health is broadly conceptualized as happiness, optimal functioning, and the maximization of potential—including the ability to adapt to change, act on personal beliefs, manage emotions, develop meaningful relationships, and find a purpose in life—the connections to learning and development become more apparent (Chickering & Reisser, 1993; Sanford, 1966). This nuanced conceptualization of mental health allows us to begin to understand its connection to civic learning.

Educational and psychosocial scholars (Chickering & Reisser, 1993; Sanford, 1966) described the factors affecting education and mental health. Chickering's (1969) well-known vectors of psychosocial development, which were later modified by Chickering and Reisser (1993), included managing emotions, developing interpersonal relationships, developing purpose, and developing integrity (Chickering & Reisser)—all of which relate to current understandings of mental health (Keyes, 2009). Sanford (1966) stressed the important role social and educational institutions play in maximizing individual development

and mental health. He stated that, at times, the dissonance—uncertainty, tension, or conflict—created by situations that promote development and further education might also threaten mental health. When this dissonance occurs, learning may suffer.

### **Campus Climate and Civic Learning**

Students' civic learning improves when they engage with new experiences, intellectual diversity, and the perspectives of others (Reason, 2013). These improvements during the learning process are associated with the dissonance Sanford (1966) described. Campus environments can aid in reinforcing and encouraging learning, while minimizing the potentially negative effects of dissonance. Reason (2013) found that "the individual student's experiences account for the vast majority of learning, but these experiences are encouraged or discouraged by peers, faculty members, and institutional policies that make up the overall campus climate for learning" (p. 40).

Ryder and Mitchell (2013) defined "climate as a measure of people's attitudes about, perceptions of, and experiences within a specified environment" (p. 34). Although most commonly associated with racial climate or the climate for diversity (Hurtado, Griffin, Arellano, & Cuellar, 2008), campus climate is also associated with academic culture (Peterson & Spencer, 1990), student learning (Reason, 2013), and civic outcomes such as civic engagement (Barnhardt, Sheets, & Pasquesi, 2015; Broadhurst & Martin, 2014).

Barnhardt and colleagues (2015) found students' perceptions of campus climate were directly related to the development of a commitment to and the skills associated with contributing to the larger community. Their finding demonstrates the importance of considering students' perception of campus climate when conducting research tied to student outcomes related to making a difference in their community—a concept central to Ehrlich's (2000) conceptualization of civic engagement.

### **Mental Health in College**

Keyes (2009) operationalized mental health using three subscales of well-being (emotional, social, and psychological), which form the MHC-SF. The MHC-SF has been used extensively in the study of adolescent (12–18) and adult (25 and older) mental health. However, we only found four articles published in peer-reviewed journals using the MHC-SF to study college students in the United States.

Robitschek and Keyes (2009) published the first study supporting use of the MHC-SF with college student populations. The three remaining studies focused on substance use and engagement (Low, 2011), suicide and academic progress (Keyes et al., 2012), and environmental predictors of mental health (Fink, 2014). In the latter two studies, the authors did not report on the methodological concerns that arise from the nested nature of multi-institutional data (Neihaus, Campbell, & Inkelas, 2014; Raudenbush & Bryk, 2002). Additionally, we found no studies examining civic outcomes and the theorized connections to mental health, representing gaps in existing literature.

### **Responsibility, Engagement, and Mental Health**

Keyes and others (Keyes & Waterman, 2003; Keyes, 2012; Piliavin, 2003) proposed civic outcomes (e.g., sense of contributing to a larger community, an increased ability to assume the perspectives of others, and greater ethical and moral reasoning) promote mental health. Until now, however, these outcomes have neither been easily assessed, nor linked empirically to college student mental health. The development of

the PSRI as part of the Association of American Colleges and Universities' Core Commitments Initiative (Dey & Associates, 2009) has allowed for better assessment of civic outcomes. Further, the pairing of the MHC-SF with the PSRI allowed us to explore the relationships among civic engagement behaviors, campus climates for civic learning, and mental health.

## Methods

Data for this study came from five institutions that participated in the 2014 administration of the PSRI—a nationally administered web-based climate assessment that measures individual students' behaviors and perceptions of civic learning in higher education; we explored how students' civic engagement behaviors (e.g., community service, service learning) and their perceptions of campus climates for civic learning related to mental health. Mental health was measured using the MHC-SF (Keyes, 2009). Because of the nested nature of our data—students within institutions—we employed a multi-level analytic technique.

## Sample

We analyzed data from a weighted sample of 2,596 undergraduate students (60% White, 55% female, and 48% college senior) at five colleges and universities (see Table 1). Prior to analysis, we imputed missing data using an expectation-maximization algorithm to account for bias related to item nonresponse (Cox, McIntosh, Reason, & Terenzini, 2014) and weighted the data by students' sex, class year, race (White/non-White), and institutional representation to account for survey nonresponse (Pike, 2007).

## Outcome Variable

Our outcome variable was students' self-reported mental health, as measured by the MHC-SF (Keyes, 2009). Keyes proposed a model of mental health that included one general factor (mental health score)

Table 1

### *Demographic characteristics of respondents*

|                                  | <i>n</i> | %    |                 | <i>n</i> | %    |
|----------------------------------|----------|------|-----------------|----------|------|
| First Year                       | 224      | 8.7  | Non-resident    | 28       | 1.1  |
| Sophomore                        | 373      | 14.4 | Hispanic        | 380      | 14.7 |
| Junior                           | 751      | 29.0 | American Indian | 8        | 0.3  |
| Senior                           | 1,241    | 47.9 | Asian           | 140      | 5.4  |
| Total                            | 2,589    |      | Black           | 211      | 8.1  |
|                                  |          |      | Hawaiian        | 8        | 0.3  |
| Male                             | 1,119    | 43.6 | White           | 1,562    | 60.3 |
| Female                           | 1,407    | 54.9 | Multiracial     | 253      | 9.8  |
| Transgender/Gender Nonconforming | 38       | 1.5  | Total           | 2,590    |      |
| Total                            | 2,564    |      |                 |          |      |

comprised of three sub-factors. The three-factor structure has been used with multiple groups, but research also suggests the single, general factor is appropriate (Jovanovic, 2015; Keyes, 2009).

The results of our exploratory and confirmatory factor analyses (Kline, 2013) supported that the single, general mental health factor was appropriate for our data. We proceeded with the general factor structure because it was supported by previous research (Jovanovic, 2015; Keyes, 2009) and aligned with our interest in students' mental health (not specific factors of well-being). DeVellis (2011) suggested that researchers consider three forms of validity: content, criterion, and construct. The single factor structure is rooted in literature and theory (content/face validity), has been used in some other manuscripts and studies (criterion/expert validity), and hangs together in the current data, which suggests it measures a single construct of mental health (construct validity).

For this study, therefore, we used students' self-reported mental health as our outcome variable. Students' mental health ( $\alpha = 0.94$ ,  $M = 3.18$ ,  $SD = 1.11$ ) was measured as a continuous variable representing the mean response to all 14 items of the MHC-SF—three items related to emotional well-being (e.g., happiness), five items related to social well-being (e.g., having something important to contribute to society), and six items related to psychological well-being (e.g., sense of direction and meaning in life). Item responses range from 0 (*never*) to 5 (*everyday*).

## Predictor Variables

The individual (Level 1) predictor variables included input variables such as student demographic items (i.e. gender, race, class year), students' self-assessed commitment and development related to personal and social responsibility at college entry, and activities (e.g., socializing, prayer, fitness). In addition, we included perceptions of the campus climate along with self-reported experiences and civic engagement (i.e. service learning courses and community service). The predictor variables were group-mean centered at Level 1 (Enders & Tofighi, 2007), which allows us to have a meaningful zero point (the average student rating on a given campus) when interpreting the results. This study did not include Level 2 predictor variables.

Composite items and scales for climate factors from the PSRI are presented in Table 2. Exploratory factor analysis provided support for the existing factor structures for the climate scales, while Ryder and Mitchell (2013) support the factors' validity. A complete list of predictors along with descriptive statistics are in Table 3. Results are presented in Table 4. It is important to note that gender is not a dichotomous sex variable; it includes a transgender option. Because gender was a control variable, we did not recode it for further analysis on sex or gender differences.

## Analysis

Multilevel Modeling (MLM), a regression-based approach for analyzing nested data, was the primary analytic tool (Neihaus et al., 2014; Raudenbush & Bryk, 2002). We began with an unconditional model, which did not contain any predictor variables, to parse the variance accounted for by the individual (i.e. Level 1 variable) and institution (i.e. Level 2 variable) on the outcome variable.

We calculated the intraclass correlation ( $ICC = 0.0035$ ;  $p = 0.511$ ) using the results of the unconditional model (Raudenbush & Bryk, 2002) and found that 99.6% of the variance in students' self-reported mental health occurred at the individual level. The ICC illustrated that even in a perfect model, we could account for less than 0.5% of the variance in a students' mental health at the institution level. This level of variance was neither practically, nor statistically, significant.

Table 2

**PSRI factor component items, descriptive statistics, and reliability summary (n = 2,596)**

|  | <i>a</i> | <i>M</i> | <i>SD</i> |
|--|----------|----------|-----------|
| <b>Importance of Contributing to a Larger Community</b>  | 0.85     | 4.05     | 0.82      |
| The importance of contributing to a larger community <i>is</i> a major focus of this campus  |          |          |           |
| The importance of contributing to a larger community <i>should be</i> a major focus of this campus   |          |          |           |
| Contributing to a larger community is a responsibility that this campus values and promotes  |          |          |           |
| My experiences at this campus have helped expand my awareness of the importance of being involved in the community and contributing to the greater good                      |          |          |           |
| <b>Advocating for Contributing to a Larger Community</b>   | 0.87     | 3.40     | 0.99      |
| How often do <i>senior administrators</i> publicly advocate the need for students to become active and involved students?  |          |          |           |
| ... <i>faculty members</i> publicly advocate the need for students to become active and involved students?   |          |          |           |
| ... <i>student affairs professionals</i> publicly advocate the need for students to become active and involved students?   |          |          |           |
| ... <i>students</i> publicly advocate the need for students to become active and involved students?  |          |          |           |
| <b>Developing a Commitment to Contributing to a Larger Community</b>   | 0.77     | 2.58     | 1.04      |
| I participate in community-based projects that <i>are</i> officially connected to a course   |          |          |           |
| I participate in community-based projects that <i>are not</i> officially connected to a course   |          |          |           |
| I have meaningful discussions with other students about the need to contribute to the greater good   |          |          |           |
| <b>Developing Perspective Taking</b>   | 0.93     | 4.15     | 0.90      |
| My experiences at this campus have increased my ability to <i>learn from diverse perspectives</i>  |          |          |           |
| ...increased my ability to <i>gather and thoughtfully use evidence to support my ideas</i>   |          |          |           |
| ...increased my ability to <i>understand the evidence, analysis, and perspectives of others, even when I disagree with them</i>  |          |          |           |
| <b>Developing Ethical and Moral Reasoning</b>  | 0.93     | 3.72     | 0.95      |
| Helping students to develop their ethical and moral reasoning <i>is</i> a major focus of this campus   |          |          |           |
| This campus helps students to develop their ethical and moral reasoning, including the ability to express and act upon personal values responsibly                           |          |          |           |
| The importance of developing a personal sense of ethical and moral reasoning is frequently communicated to students  |          |          |           |
| This campus provides opportunities for students to develop their ethical and moral reasoning in their <i>personal life</i>   |          |          |           |
| This campus provides opportunities for students to develop their ethical and moral reasoning in their <i>academic work</i>   |          |          |           |
| <b>Sources of Support for Ethical and Moral Reasoning</b>  | 0.83     | 3.62     | 0.95      |
| Students feel they can go to <i>senior administrators</i> to discuss questions or concerns they have about their own ethical and moral thinking and the challenges they face |          |          |           |
| ... <i>faculty members</i> to discuss questions or concerns they have about their own ethical and moral thinking and the challenges they face                                |          |          |           |
| ... <i>student affairs professionals</i> to discuss questions or concerns they have about their own ethical and moral thinking and the challenges they face                  |          |          |           |
| ... <i>students</i> to discuss questions or concerns they have about their own ethical and moral thinking and the challenges they face                                       |          |          |           |

Note: Factor scores are calculated as the average of the items that compose each subscale. Item means are based on a scaled response ranging from 1 (*Strongly Disagree or Almost Never*) to 5 (*Strongly Agree or Almost Always*).



Table 3

**Mean and standard deviation of model items (n = 2,596)**

|   | M    | SD   |
|---|------|------|
| I came to college with a strong commitment to contribute to the greater good  | 4.06 | 0.99 |
| I came to college with a well-developed ability to consider the moral or ethical dimensions of issues                           | 4.43 | 0.76 |
| I came to college with a well-developed ability to consider the moral or ethical consequences of my own actions                 | 4.56 | 0.69 |
| Socializing with friends in person <sup>††</sup>  | 2.54 | 1.67 |
| Socializing with friends online <sup>††</sup>   | 1.62 | 0.71 |
| Prayer <sup>††</sup>  | 0.71 | 1.02 |
| Fitness <sup>††</sup>   | 1.65 | 1.35 |
| Meditation <sup>††</sup>  | 0.45 | 0.88 |
| Learning Community <sup>††</sup>  | 0.65 | 1.49 |
| Students at this campus are encouraged to take actions to promote a more moral and ethical world                                | 3.89 | 1.05 |
| My experiences at this campus have helped me learn the skills necessary to effectively change society for the better            | 3.71 | 1.14 |
| My experiences at this campus have helped me deepen my commitment to contribute to the greater good                             | 3.75 | 1.17 |
| My experiences at this campus have further developed my ability to consider the moral or ethical dimensions of issues           | 3.91 | 1.10 |
| My experiences at this campus have further developed my ability to consider the moral or ethical consequences of my own actions | 3.93 | 1.10 |
| Volunteering <sup>††</sup>  | 0.88 | 1.28 |
| Service Learning <sup>††</sup>  | 0.92 | 1.16 |

<sup>††</sup>Scale ranges from 0 (*never*) to 3 (*three or more times*). All other items scale ranges from 1 (*strongly disagree/almost never*) to 5 (*strongly agree to almost always*).

Although not required, we proceeded in what we believe to be the most conservative approach: We conducted MLM using only Level 1 predictor variables (Niehaus et al., 2014) and entered the predictors in blocks as described below. MLM is more parsimonious, accounts for the nested nature of the data, and decreases the risk of committing Type I errors (Niehaus et al., 2014; Raudenbush & Bryk, 2002). In order to increase our own confidence in our decision to use MLM, we compared the results of our analysis with results using Ordinary Least Squares regression. No substantive differences were found.

We modeled our outcome variable—students' self-reported mental health—on input variables relating to students' precollege characteristics such as demographics and self-assessed commitment to community and development of ethical and moral reasoning at college entry (Model 1) and frequency out of class activities (Model 2). Students' precollege characteristics (Model 1) accounted for 17% of the variance in their mental health score. Separate analysis showed most of that variance was related to students' self-reported commitment to community and development of ethical and moral reasoning at college entry. The frequency of out of class activities (Model 2) increased the variance accounted for in mental health to 23%.

Next, we added variables related to perceptions of campus climates (Model 3), self-reported experiences (Model 4), and self-reported participation in civic engagement (Model 5). Variables related to perceptions of campus climates (Model 3) increased the variance explained to 35%. Individual student experiences (Model 4) increased the variance to 37%. Participation in civic engagement (Model 5) and the



Table 4

**Parameter estimates: Perceptions of campus experiences predicting mental health (n = 2,596)**

| Model  | Unconditional | 1        | 2        | 3        | 4         | 5         | 6         |
|--|---------------|----------|----------|----------|-----------|-----------|-----------|
| Intercept  | 3.12***       | 3.12***  | 3.13***  | 3.16**   | 3.15***   | 3.15***   | 3.15***   |
| <b>Input Variables</b>   |               |          |          |          |           |           |           |
| Gender   |               | -0.056   | -0.028   | -0.043   | -0.042    | -0.044    |           |
| Class year   |               | 0.028    | 0.040    | 0.038    | 0.027     | 0.028     |           |
| Race (White/Non-White)   |               | -0.004   | 0.022    | 0.122**  | 0.109**   | 0.112**   | 0.128***  |
| I came to college with a strong commitment to contribute to the greater good   |               | 0.344*** | 0.320*** | 0.129*** | 0.098***  | 0.093***  | 0.098***  |
| ...well-developed ability to consider the moral or ethical dimensions of issues                                      |               | 0.145*** | 0.109**  | 0.111*** | 0.134***  | 0.133***  | 0.124***  |
| ...well-developed ability to consider the moral or ethical consequences of my own actions                            |               | 0.181*** | 0.204*** | 0.146*** | 0.141***  | 0.136***  | 0.151***  |
| Socializing with friends in person   |               |          | 0.109*** | 0.075*** | 0.086***  | 0.084***  | 0.090***  |
| Socializing with friends online  |               |          | 0.008    | 0.015    | 0.015     | 0.014     |           |
| Prayer   |               |          | 0.176*** | 0.151*** | 0.148***  | 0.139***  | 0.133***  |
| Fitness  |               |          | 0.094*** | 0.082*** | 0.078***  | 0.073***  | 0.068***  |
| Meditation   |               |          | 0.001    | -0.019   | -0.026    | -0.029    |           |
| Learning Community   |               |          |          | 0.032**  | 0.032**   | 0.033**   | 0.031**   |
| <b>Perceptions of Campus Climate</b>   |               |          |          |          |           |           |           |
| Students at this campus are encouraged to take actions to promote a more moral and ethical world                     |               |          |          | -0.040   | -0.023    | -0.025    |           |
| Importance of contributing to a larger community (factor)  |               |          |          | 0.217*** | 0.163***  | 0.164***  | 0.151***  |
| Developing commitment to contributing to a larger community (factor)   |               |          |          | .111***  | .095***   | .075**    | .053*     |
| Advocating for contributing to a larger community (factor)   |               |          |          | -0.011   | -0.060*   | -0.054    |           |
| Developing perspective taking (factor)   |               |          |          | 0.041    | 0.044     | 0.042     |           |
| Developing ethical and moral reasoning (factor)  |               |          |          | 0.301*** | 0.316***  | 0.318***  | 0.270***  |
| Sources of support for ethical and moral reasoning (factor)  |               |          |          | -0.062*  | -0.028    | -0.020    |           |
| <b>Self-Reported Experiences</b>   |               |          |          |          |           |           |           |
| My experiences at this campus have helped me learn the skills necessary to effectively change society for the better |               |          |          |          | 0.154***  | 0.150***  | 0.183***  |
| ...helped me deepen my commitment to contribute to the greater good  |               |          |          |          | 0.046     | 0.049     |           |
| ...further developed my ability to consider the moral or ethical dimensions of issues                                |               |          |          |          | -0.015    | -0.019    |           |
| ...further developed my ability to consider the moral or ethical consequences of my own actions                      |               |          |          |          | -0.148*** | -0.141*** | -0.135*** |
| <b>Self-reported Participation in Civic Engagement</b>   |               |          |          |          |           |           |           |
| Volunteering   |               |          |          |          |           | 0.055**   | 0.055***  |
| Service Learning   |               |          |          |          |           | -0.024    |           |

(continued)

Table 4

*(Continued)*

| Model                                 | Unconditional | 1        | 2        | 3        | 4        | 5        | 6        |
|---------------------------------------|---------------|----------|----------|----------|----------|----------|----------|
| <b>Model Summary</b>                  |               |          |          |          |          |          |          |
| $\sigma^2$ (Sigma squared)            | 1.271***      | 1.062*** | 0.976*** | 0.824*** | 0.803*** | 0.800*** | 0.801*** |
| T (Tau)                               | 0.004         | 0.003    | 0.003    | 0.001    | 0.002    | 0.002    | 0.001    |
| Intraclass Correlation                | 0.003         |          |          |          |          |          |          |
| Percent of Level 1 Variance Explained |               | 16.46%   | 23.20%   | 35.17%   | 36.84%   | 37.06%   | 36.94%   |
| Change in Variance Explained          |               |          | 6.74%    | 11.97%   | 1.67%    | 0.23%    | -0.13%   |

\* $p < 0.05$ . \*\* $p < 0.01$ . \*\*\* $p \leq 0.001$ .

parsimonious model (Model 6), which only included significant predictors from Model 5, resulted in negligible changes to the variance in mental health.

## Results

In the parsimonious model, self-reported ratings of mental health were significantly ( $p \leq 0.001$ ) and positively predicted by (a) climates students perceived as developing their ethical and moral reasoning ( $\beta = 0.270$ ;  $p \leq 0.001$ ), (b) students' self-reported development of the skills necessary to change society for the better ( $\beta = 0.183$ ;  $p \leq 0.001$ ), and (c) climates that further developed students' perception of the importance of contributing to a larger community ( $\beta = 0.151$ ;  $p \leq 0.001$ ), as well as a stronger perception that the student entered college with a well-developed ability to consider the moral and ethical consequences of his or her own actions ( $\beta = 0.151$ ;  $p \leq 0.001$ ). In contrast, experiences that contributed to the development of the ability to consider the moral or ethical consequences of one's actions while at college ( $\beta = -0.135$ ;  $p \leq 0.001$ ) significantly and negatively predicted mental health. See Table 4 for complete parameter estimates and model summaries.

Of the civic engagement variables included within the study, volunteering ( $\beta = 0.055$ ;  $p \leq 0.001$ ) was a weak, but statistically significant, positive predictor. Participation in service-learning courses ( $\beta = -0.024$ ) was not a significant predictor, despite being referenced in previous literature (Low, 2011).

## Limitations

This study has limitations that should be considered when interpreting, generalizing, or using the results—primarily with regard to the sample and measurement. The undergraduate students who were invited and responded to the survey used in this study were predominantly from small (< 5,000), private, liberal arts colleges. Although a weight was applied to adjust for differing institutional response rates, caution in interpreting the findings is warranted.

This study relied on students' self-reported mental health as the outcome measure. Although self-reported measures are open to challenges to their criterion and construct validity, a body of evidence

suggests they can be reasonable proxies for more objective or direct measures (Anaya, 1999; Kuh, 2005; Pike, 1996). Kuh (2005) identified five conditions to guide the appropriate use of self-reported measures:

- (1) the information requested is known to the respondents;
- (2) the questions are phrased clearly and unambiguously;
- (3) the questions refer to recent activities;
- (4) the respondents think the questions merit a serious and thoughtful response; and
- (5) answering the questions does not threaten, embarrass, or violate the privacy of the respondent or encourage the respondent to answer in socially desirable ways. (p. 158)

We believe the self-reported measures used in this study meet these five conditions. Moreover, while self-reports have their limitations, more objective measures come with their own limitations (e.g., length, cost, administration requirements, and relevance to the question at hand). Further, the availability of objective measures of mental health, as defined in our study, is limited.

## Discussion

Previous research highlighted the benefits of students' engagement with community (e.g., active citizenship, social responsibility, and mental health). Our findings lend strength to the belief that there is an important link between students' perceptions of climates for civic learning and students' mental health. We found that students' perceptions of climates for civic learning were among the strongest predictors of self-reported mental health. Individual experiences mattered less than perceptions of campus climate related to civic learning when considering the positive influences on students' mental health. Although college and university educators can encourage positive outcomes by providing experiences, the intentional development of a campus ethos has the greatest effect on the student.

Colleges and university educators concerned about student mental health should be mindful of student experiences and, importantly, perceptions of climates that can influence mental health. By understanding these factors and their influence, we can intentionally and thoughtfully aid in the creation of climates and experiences that benefit students' mental health as well as promote civic learning for the betterment of society.

Students' perceptions of climates that support developing moral reasoning and deepening students' commitment to contributing to a larger community were both positively related to students' mental health. However, when students are faced with confronting the consequences of their actions, tension can occur and hinder mental health. It is during these times that Sanford's (1966) notion of support comes into play for student affairs professionals and educators engaging with students throughout the process. Providing the necessary support while the student is confronted with challenge can ease the struggles—assuming the student is ready to face such challenge and is willing to accept and use the support.

Experiences that further developed the ability to consider ethical and moral consequences of one's actions was a significant ( $p \leq 0.001$ ) negative predictor of mental health. However, in line with Sanford (1966), it is important to remember that not all experiences that aid in learning and development will promote mental health—at least in the short term. The tension that is created in the learning and development processes can challenge students—be it through classroom and campus experiences that have them consider the consequences of their action or through encounters with student conduct offices. Although challenge can decrease mental health in the short term, managed correctly challenge can support learning (Sanford, 1966). Our results allow us to build on that foundation and make the case that civic learning can, in turn, have a positive influence on mental health. We can see that those students who came

to college with a greater ability to consider the consequences of their actions reported greater mental health; this scenario lends strength to the claim that just because it may create tension now does not mean it will not result in positive outcomes later. Student experiences that prompt moral discernment and consideration of the consequences of one's actions were related to lower ratings of mental health. In contrast, students' perceptions of climates that support ethical and moral reasoning were related to higher ratings of mental health.

Our findings support the importance of an integrated set of civic experiences and curricula, which offer a pathway to a larger sense of purpose within the institution and students' lives as well as greater community awareness. Administrators, educators, and scholars can seek to develop their campuses' civic climates through articulating civic outcomes for students within and across programs, including within the co-curricula and general education. Campuses can also encourage students' reflection across civic experiences and the applicability of those experiences to other types of learning.

## Conclusion

Previous research highlights the benefits of students' engagement with community: active citizenship, social responsibility, and mental health. Our findings lend strength to the belief that there is an important link between campus climates that promote civic engagement and students' mental health. Although perceptions of campus climates for civic learning were strong predictors of mental health, civic engagement behaviors (i.e. community service, service learning) were not. Creating experiences and climates that support students as they think about, discern, and act upon their values and beliefs responsibly will help encourage civic learning and mental health.

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