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Interventions to promote or improve mental health and well-being in students enrolled in a college or university: A scoping review protocol

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We use this protocol and it's working

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Abstract

This is a protocol for a scoping review of interventions to promote or improve mental health and well-being in students enrolled in a college or university

Introduction

1 The notion of higher education dates to the 11th century.¹ Institutes of higher learning were initially located primarily in Europe, but universities and colleges now exist throughout the world.¹ In fact, in the past four decades or so, the world has witnessed a marked rise in the number of students who leave school and enroll in higher education, with roughly 10% of students having sought higher education in 1971 versus 33% in 2013.² With these evolving trends, higher education is becoming more diverse and students represent various racial, ethnic, socioeconomic, and other populations.²⁻⁴ For example, in the United States (US), the percentage of students enrolled in a degree-granting program who identified as Hispanic/Latino was 21% in 2021.⁵ Conversely, in 1976, the percentage of college students who identified as Hispanic was only 16%.⁶ Ultimately, college and universities are tasked with cultivating robust, healthy learning environments that can successfully meet the needs of students who seek a range of educational experiences and have various needs and expectations for their educational journey.¹

Mental illness and related concerns such as psychological distress have emerged as pressing and serious public health problem in higher education settings.⁷⁻¹⁰ In a cross-sectional study of young adults (aged 18–22 years old) across 21 countries, Auerbach et al. found that 20.3% of college students met criteria for a 12-month mental health disorder as defined by the Diagnostic and Statistical Manual-IV (DSM-IV) or Composite International Diagnostic Interview (CIDI).⁷ In a survey of over 2,500 students living in North America, the Wiley Company also observed that more than 80% of respondents endorsed psychological distress with anxiety, burnout, and depression being among the top symptoms (prevalence of 59%, 58%, and 43%, respectively).¹¹

Students cited factors such as work-life balance, tuition costs, and living expenses as key drivers of distress.¹¹ In addition, students perceived that poor mental health had a deleterious effect on their educational journey.¹¹ Globally, death by suicide is also the fourth leading cause of death among young adults aged 15–29 years.¹² Because of observations such as these, colleges and university administrators are in high need of effective and scalable solutions to improve the mental health and well-being of their diverse student populations.^{13–15}

Not surprisingly, there has been a rapid surge in review studies of interventions to address mental health or well-being in college or university settings in the last decade. Between 2019 and 2023, there have been more than 40 published systematic reviews, meta-analysis, or scoping reviews on this topic of interest (see Table 1). Available reviews have reported primarily on the efficacy of certain types of complementary therapies (e.g., mindfulness, acupuncture)^{16–20} and focused on specific populations (e.g., college students;^{17–18,21–23} nursing students²⁴) or time periods (e.g., Sars-2-Covid pandemic).²⁵ In general, these reviews have found that some interventions can be effective in improving mental health or well-being, but the effect sizes may be small^{16,22} or moderate.¹⁶ A consistent theme across reviews includes concerns that the quality of included studies is generally low or moderate.^{17,19,20,21} Authors emphasize the need for higher quality evidence including the use of randomized designs (RCTs). Finally, no review has examined the full breadth of individual- and population-level interventions that have been studied in college and university settings or the applicability and scalability of these interventions in these settings.

We will conduct a scoping review of published RCTs of primary, secondary, or tertiary interventions to promote or improve mental-health and well-being in college or university students. Because literature stresses the need for high quality evidence, there is precedent to

limit our comprehensive scoping review exclusively to published RCTs. We will report on the characteristics of the interventions studied and examine their scalability and generalizability. We will consider implications for future research directions.

Research Question

- 2 Among students who are enrolled in a college or university, what primary, secondary, or tertiary interventions have been tested to promote or improve mental-health and well-being?

Study Inclusion Criteria

- 3 Inclusion Criteria & Outcomes of Interest:

Publication Type: Peer-reviewed publication

Language: English We will limit our review to articles written in English

Study Design: Randomized controlled trial design

Population: Students enrolled in a college or university. We anticipate the that the populations may either be healthy populations OR populations with an underlying condition (e.g., depression, anxiety) that puts them at higher risk for experiencing negative outcomes.

Intervention: Primary, secondary, or tertiary interventions to promote or improve mental health and/or well-being. We will exclude any studies that report solely on the impact of the intervention on educational outcomes (e.g., GPA, ability to learn or complete a new task or skill) or outcomes that relate to performance in a course or class (e.g., anxiety during a procedural task such as practicing surgical skills). We will exclude studies that focus satisfaction with a course (e.g., how course was delivered or the related course materials). We will exclude interventions (or studies) whose focus is limited to the treatment of Feeding and Eating Disorders, Sleep-Wake Disorders, Premenstrual Dysmorphic Disorder or PMS, Neurodevelopmental Disorders, Schizophrenia Spectrum and Other Psychotic Disorders, Bipolar and Related Disorders, Obsessive-Compulsive and Related Disorders, Trauma- Related Disorders, Specific Phobias, or interventions focused exclusively on treating anxiety symptoms related to exams or test-taking, dating, public speaking, appearance, choosing career or vocation, statistics, computers, foreign language, writing or others. We will also exclude situations where the researcher

artificially induced mental health symptoms in a health group of students in a laboratory setting and then tested the impact of an intervention on symptoms. Finally, we will exclude studies that reported solely on physiologic measures of stress.

Outcomes: We will require that the study assesses any of the following: 1) anxiety, 2) depression, 3) psychological distress/stress, 4) quality of life, 5) happiness, 6) wellbeing, 7) life satisfaction, 8) resilience, 9) measures of substance use/addiction, and/or 10) suicide-related outcomes. Note: We accepted studies that reported any one of these outcomes as a primary or secondary outcome if a goal of the intervention was to address mental health and/or well-being. We anticipate that studies will report on outcomes using self-report or standardized scales or diagnostic/structured clinical interviews in some cases. Studies may also use a variety of terms to refer to certain outcomes such as resilience (e.g., growth mindset, self-efficacy).

Search Strategy

4 Databases:

We will search the following databases for our review including Medline (via Ovid), PsycINFO, Cochrane Library (all sections) and Education Resources Information Center (ERIC). We will run our search from inception of each of these databases through November 2023. We will use Rayyan to facilitate the screening process.²⁶

Search terms:

We will use exploded MeSH terms and key words to generate the following themes: college students, mental health and well-being, and randomized trials. We will then use apply this approach during our search of the Medline database and then modify our approach as necessary to search the other databases. Note the search strategy was developed in collaboration with a Dartmouth College Librarian.

Limits:

None

Special Strategies:

We will apply a highly sensitive search strategy for locating randomized controlled trials in electronic databases. We made this decision because otherwise the number of references to search by hand in the databases yielded an unwieldy amount (i.e., >20,000).

Results of Search Strategy:

Details of the structure and findings of our various search strategies are provided in the Appendix..

Additional Search methods:
None.

Analysis Methods

- 5 We plan to use a descriptive approach to report on our findings. We anticipate that we will report on variables such as population type, region/location of trials, and intervention types.
The results of this current review will provide important insights on current research as well as
future directions for research.

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- 6
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Appendix

- 7 Ovid MEDLINE(R) ALL <1946 to November 14, 2023>
1 randomized controlled trial.pt. 603276
2 controlled clinical trial.pt. 95456
3 randomized.ab. 624630
4 placebo.ab. 243177
5 drug therapy.fs. 2639974



6 randomly.ab. 420921
7 trial.ab. 672656
8 groups.ab. 2596644
9 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 5804906
10 exp animals/ not humans.sh. 5170652
11 9 not 10 5071505
12 exp Personal Satisfaction/ 25005
13 exp Happiness/ 5619
14 exp Resilience, Psychological/ 8508
15 exp "Quality of Life"/ 276591
16 "quality of life".ti,ab. 382228
17 QoL.ti,ab. 53512
18 "well-being".ti,ab. 115067
19 resilience.ti,ab. 46578
20 happiness.ti,ab. 9670
21 wellbeing.ti,ab. 30258
22 "life satisfaction".ti,ab. 11239
23 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 635120
24 (college adj3 student*).ti,ab. 30222
25 (college adj3 fresh*).ti,ab. 755
26 (college adj3 senior).ti,ab. 122
27 (college adj3 sophomore).ti,ab. 36
28 (college adj3 junior).ti,ab. 502
29 (college adj3 athlete*).ti,ab. 1188
30 (college adj3 women).ti,ab. 3107
31 (college adj3 men).ti,ab. 1226
32 collegiate.ti,ab. 6243
33 (Universit* adj3 student*).ti,ab. 31169
34 Undergrad*.ti,ab. 54173
35 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 115835
36 exp Stress, Psychological/ 154160
37 exp Psychological Distress/ 7021
38 exp Anxiety/ 114011
39 exp Anxiety Disorders/ 91503
40 exp Depression/ 153374
41 exp Mental Health/ 63729
42 "mental health".ti,ab. 217801
43 depress*.ti,ab. 569074
44 anx*.ti,ab. 290330
45 "psychological distress".ti,ab. 28306
46 stress.ti,ab. 971187
47 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 1884198
48 23 or 47 2357819

49 11 and 35 and 48 5467

Records identified: 5,467

PsycINFO <1946 to November 15, 2023>

S1 - ((((((((((((((((((DE "Academic Stress") OR (DE "Perceived Stress")) OR (DE "Chronic Stress")) OR (DE "Anxiety Sensitivity")) OR (DE "Health Anxiety")) OR (DE "Mathematics Anxiety")) OR (DE "Performance Anxiety")) OR (DE "Social Anxiety")) OR (DE "Speech Anxiety")) OR (DE "Test Anxiety")) OR (DE "Computer Anxiety")) OR (DE "Generalized Anxiety Disorder")) OR (DE "Panic Attack")) OR (DE "Panic Disorder")) OR (DE "Phobias"))

OR (DE "Depression (Emotion)") OR (DE "Major Depression")) OR (DE "Sadness")) OR (DE "Emotional Adjustment")) OR (DE "Emotional Health")) OR TI depress* OR AB depress*

OR
TI anx* OR AB anx*

535,402

S2 - (((((((DE "Happiness") OR (DE "Quality of Life")) OR (DE "Subjective Well Being")) OR (DE "Life Satisfaction")) OR (DE "Self-Perception")) OR (DE "Academic Self Concept")) OR (DE "Resilience (Psychological)")) OR TI happiness OR AB happiness OR TI resilience OR AB resilience OR TI well-being OR AB well-being OR TI "life satisfaction" OR AB "life satisfaction"

248,720

S3- (((((DE "College Athletes") OR (DE "College Environment")) OR (DE "College Students")) OR (DE "Colleges")) OR (DE "Higher Education")

129,680

S4 (SU.EXACT(Treatment Effectiveness Evaluation) OR SU.EXACT.EXPLODE(Treatment Outcomes) OR SU.EXACT(Placebo) OR SU.EXACT(Followup Studies) OR placebo* OR random* OR comparative stud* OR clinical NEAR/3 trial* OR research NEAR/3 design OR evaluat* NEAR/3 stud* OR prospective* NEAR/3 stud* OR (singl* OR doubl* OR trebl* OR tripl*) NEAR/3 (blind* OR mask*)) NOT ((Animals NOT Humans))

283,108

S5 - S1 OR S2

733,421

S6 S3 AND S4 AND S5

1,233

Records identified: 1,233

ERIC <<1946 to November 15, 2023>

S1 - (MAINSUBJECT.EXACT.EXPLODE("Test Anxiety") OR
MAINSUBJECT.EXACT("Anxiety") OR MAINSUBJECT.EXACT.EXPLODE("Anxiety
Disorders") OR MAINSUBJECT.EXACT.EXPLODE("Mathematics Anxiety")) OR
(MAINSUBJECT.EXACT.EXPLODE("Depression (Psychology)") OR
MAINSUBJECT.EXACT.EXPLODE("Mental Health")) OR abstract(stress) OR title(distress)
OR abstract(distress) OR title(anx*) OR abstract(anx*) OR title(depress*) OR
abstract(depress*)
OR title(stress) OR MAINSUBJECT.EXACT.EXPLODE("Writing Apprehension")
74,770

S2 (MAINSUBJECT.EXACT.EXPLODE("Wellness") OR
MAINSUBJECT.EXACT.EXPLODE("Student Welfare") OR
MAINSUBJECT.EXACT.EXPLODE("Sense of Community") OR
MAINSUBJECT.EXACT.EXPLODE("Resilience (Psychology)") OR
MAINSUBJECT.EXACT("Quality of Life") OR MAINSUBJECT.EXACT.EXPLODE("Life
Satisfaction")) OR abstract(resilience) OR title(resilience) OR abstract(life satisfaction) OR
title(life satisfaction) OR MAINSUBJECT.EXACT.EXPLODE("Student Satisfaction") OR
title(happiness) OR abstract(happiness) OR abstract(well-being) OR title(well-being)
39,042

S3 - S1 OR S2
106,063

S4 - (MAINSUBJECT.EXACT.EXPLODE("Colleges") OR
MAINSUBJECT.EXACT.EXPLODE("College Students") OR
MAINSUBJECT.EXACT.EXPLODE("Single Sex Colleges") OR
MAINSUBJECT.EXACT.EXPLODE("First Generation College Students") OR
MAINSUBJECT.EXACT.EXPLODE("College Athletics") OR
MAINSUBJECT.EXACT.EXPLODE("College Seniors") OR
MAINSUBJECT.EXACT.EXPLODE("College Curriculum") OR
MAINSUBJECT.EXACT.EXPLODE("State Colleges") OR
MAINSUBJECT.EXACT.EXPLODE("Multicampus Colleges") OR
MAINSUBJECT.EXACT.EXPLODE("College Freshmen") OR
MAINSUBJECT.EXACT.EXPLODE("College Environment") OR
MAINSUBJECT.EXACT.EXPLODE("Student College Relationship") OR
MAINSUBJECT.EXACT.EXPLODE("Small Colleges") OR
MAINSUBJECT.EXACT.EXPLODE("Religious Colleges") OR
MAINSUBJECT.EXACT.EXPLODE("Private Colleges") OR

MAINSUBJECT.EXACT.EXPLODE("Public Colleges") OR
MAINSUBJECT.EXACT.EXPLODE("Noncampus Colleges")) OR
MAINSUBJECT.EXACT.EXPLODE("Higher Education")
544,429

S5 - ("randomized controlled trial" OR "controlled clinical trial" OR "randomized" OR
"placebo" OR "drug therapy" OR "randomly" OR "trial" OR "groups")
396,206

S6 - S3 AND S4 AND S5
7,632

S7 - Limit S6 to peer reviewed & scholarly journals
5,145

Records identified: 5,145

Cochrane Library

Date Run: 15/11/2023 21:42:15

ID Search Hits

#1 MeSH descriptor: [Stress, Psychological] explode all trees 8039

#2 MeSH descriptor: [Psychological Distress] explode all trees 431

#3 MeSH descriptor: [Anxiety] explode all trees 13324

#4 MeSH descriptor: [Anxiety Disorders] explode all trees 9234

#5 MeSH descriptor: [Depression] explode all trees 18751

#6 MeSH descriptor: [Mental Health] explode all trees 3635

#7 ("mental health"):ti 4850

#8 ("mental health"):ab 23560

#9 (depress*):ti 36546

#10 (depress*):ab 91948

#11 (anx*):ab 63239

#12 (anx*):ti 19083

#13 ("psychological distress"):ti 710

#14 ("psychological distress"):ab 4438

#15 (stress):ti 21852

#16 (stress):ab 60591

#17 #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR
#13 OR #14 OR #15 OR #16 199693

#18 MeSH descriptor: [Personal Satisfaction] explode all trees 1614

#19 MeSH descriptor: [Happiness] explode all trees 320

#20 MeSH descriptor: [Resilience, Psychological] explode all trees 389

#21 MeSH descriptor: [Quality of Life] explode all trees 44343



#22 ("quality of life"):ti 23602
#23 ("quality of life"):ab 129428
#24 ("QoL"):ti 991
#25 ("QoL"):ab 26392
#26 ("well-being"):ti 2779
#27 ("well-being"):ab 16776
#28 (resilience):ti 1179
#29 (resilience):ab 2986
#30 (happiness):ti 275
#31 (happiness):ab 1166
#32 (wellbeing):ti 3527
#33 (wellbeing):ab 19998
#34 ("life satisfaction"):ti 165
#35 ("life satisfaction"):ab 1464
#36 #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28
OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 165506
#37 (college NEAR/3 student):ti 148
#38 (college NEAR/3 student):ab 347
#39 (college NEAR/3 freshman):ti 7
#40 (college NEAR/3 freshman):ab 25
#41 (college NEAR/3 senior):ti 1
#42 (college NEAR/3 senior):ab 4
#43 (college NEAR/3 sophomore):ti 1
#44 (college NEAR/3 sophomore):ab 4
#45 (college NEAR/3 junior):ti 6
#46 (college NEAR/3 junior):ab 41
#47 (college NEAR/3 athlete):ti 1
#48 (college NEAR/3 athlete):ab 2
#49 (college NEAR/3 women):ti 138
#50 (college NEAR/3 women):ab 349
#51 (college NEAR/3 men):ti 45
#52 (college NEAR/3 men):ab 176
#53 (collegiate):ti 242
#54 (collegiate):ab 477
#55 (University NEAR/3 student):ti 30
#56 (University NEAR/3 student):ab 283
#57 (Undergrad*):ti 765
#58 (Undergrad*):ab 3731
#59 (college NEAR/3 freshmen):ti 27
#60 (college NEAR/3 freshmen):ab 50
#61 (college NEAR/3 athletes):ti 59
#62 (college NEAR/3 athletes):ab 97
#63 (University NEAR/3 students):ti 1027



#64 (University NEAR/3 students):ab 2791
#65 (Universities NEAR/3 student):ti 0
#66 (Universities NEAR/3 student):ab 10
#67 (Universities NEAR/3 students):ti 10
#68 (Universities NEAR/3 students):ab 136
#69 #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR
#47
OR #48 OR #49 OR #50 OR #51 OR #52 OR #53 OR #54 OR #55 OR #56 OR #57 OR #58
OR
#59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66 OR #67 OR #68 8795
#70 #17 OR #36 322159
#71 #69 AND #70 2471
Cochrane Reviews 3 (note: none were relevant to topic)
Protocols 0
Trials 2,468
Editorials 0
Special Collections 0
Clinical Answers - 0

Protocol references

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