Routledge
Taylor & Francis Group

Educational Review

ISSN: 0013-1911 (Print) 1465-3397 (Online) Journal homepage: www.tandfonline.com/journals/cedr20

University Students' Coping Strategies to Manage Stress: A Scoping Review

Philippa Waterhouse & Rajvinder Samra

To cite this article: Philippa Waterhouse & Rajvinder Samra (2026) University Students' Coping Strategies to Manage Stress: A Scoping Review, Educational Review, 78:2, 127-167, DOI: 10.1080/00131911.2024.2438888

To link to this article: https://doi.org/10.1080/00131911.2024.2438888

© 2025 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

View supplementary material

Published online: 08 Jan 2025.

Submit your article to this journal

Article views: 74952

View related articles

View Crossmark data

Citing articles: 30 View citing articles

Full Terms & Conditions of access and use can be found at
https://www.tandfonline.com/action/journalInformation?journalCode=cedr20

EDUCATIONAL REVIEW
2026, VOL. 78, NO. 2, 127–167
https://doi.org/10.1080/00131911.2024.2438888

Routledge
Taylor & Francis Group

OPEN ACCESS Check for updates

University Students' Coping Strategies to Manage Stress: A Scoping Review

Philippa Waterhouse and Rajvinder Samra

Faculty of Wellbeing, Education and Language Studies, The Open University, Milton Keynes, UK

ABSTRACT

The purpose of this scoping review was to explore what is known about how university students cope with stress. Understanding the coping strategies that students use during university study can improve higher education institutions' stress reduction/preventative intervention design, particularly for students who are struggling. We reviewed 165 international peer-reviewed papers published in English between 2007 and 2022 and extracted information on the country of study, design, characteristics of the sample, stressors studied and coping strategies. We found that research on students coping with stress is disproportionately focused on clinical/health-related disciplines and in particular geographical contexts (Asia and Northern America). Study authors used a multitude of conceptualisations and measurements of coping that represent important barriers to generalising findings and implementing actions based on the research evidence. We propose that the development of student-informed measures of coping and their perceptions of coping effectiveness represent possible solutions going forward.

ARTICLE HISTORY
Received 12 January 2024
Accepted 2 December 2024

KEYWORDS
University; college; students; coping strategies; stress

Introduction

High proportions of university students report experiencing stress. The World Health Organization (2023, para. 1) defines stress as "a state of worry or mental tension caused by a difficult situation". Findings from the World Mental Health International College Student Initiative (n = 20,427, from nine countries) indicated that 93% of respondents experienced stress in at least one area of their life at the time of the survey, and a positive association was found between the number of sources of stress and the severity of stress experienced (Karyotaki et al., 2020). Sources of stress cited by students in previous research include the pressure to succeed (Ersig, 2019), high workloads (Clark et al., 2014; Deasy et al., 2014) and taking part in collaborative assessments (Hilliard et al., 2020). Commonly reported stressors facing students also transcend the academic domain and include handling personal transitions, such as making new friends and moving away from home (Deasy et al., 2014; Denovan & Macaskill, 2013), managing

CONTACT Philippa Waterhouse philippa.waterhouse@open.ac.uk
Supplemental data for this article can be accessed online at https://doi.org/10.1080/00131911.2024.2438888.

© 2025 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group
This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (http://creativecommons.org/licenses/by-nc-nd/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

chronic disease (Ersig, 2019), and the experience of discrimination (Griffith et al., 2019). The COVID-19 pandemic was also a unique context of stress for some students as higher education was disrupted and many staff and students had to adapt to online tools and teaching unexpectedly, whilst also dealing with the impact of COVID-19 on daily life, for example, restrictions in movement, health concerns and possible economic losses (Stock et al., 2022). At low levels, stress may be considered beneficial if it increases motivation and excitement, but extended periods of high stress represent "chronic stress" (e.g. McGonagle & Kessler, 1990) which can be harmful to individuals' mental health (Abolghasemi & Varaniyab, 2010) and physical health (Greenman et al., 2000; Vedhara & Nott, 1996). Stress among university students has also been reported to negatively affect academic outcomes (American College Health Association, 2022; Amirkhan & Kofman, 2018). Given the wide range of consequences and implications associated with high levels of chronic student stress, it is important to better understand the strategies that students use to cope with stress whilst at university. Identifying the range of preferred coping strategies students use can promote more advanced understanding within higher education institutions about how students choose to cope and better enable institutions to design appropriate coping resources in line with students' own preferences and preferred coping behaviours.

The focus of our present literature review was on exploring what coping strategies students use. Investigating students' self-reported coping responses and behaviours might enable a greater understanding of students' lived experiences of coping with stress at university. The effectiveness of formal interventions in higher education settings to reduce students' stress has been well studied using systematic review methods (for example, Oliveira et al., 2021; Petley et al., 2022; Rith-Najarian et al., 2019) and meta-analysis (Amanvermez et al., 2020; Dawson et al., 2019; Malinauskas & Malinauskiene, 2022; Yusufov et al., 2019). Such work tends to measure and approximate changes in stress levels or coping scores as a result of a particular stress management intervention. However, focusing on quantitative changes in stress levels does not adequately allow for conceptualising the range and breadth of coping strategies used. As such the research field lacks a broader synthesis of the range of coping strategies that students tend to use or engage with, which also include data from more inductive approaches such as open-ended surveys and qualitative investigations that allow students to describe how they cope in their own way.

Previous literature reviews have been conducted on the self-reported coping strategies used by students but these have focused on nursing students (Bhurtun et al., 2019; Chaabane et al., 2021; Labrague et al., 2017a; Labrague et al., 2017b; Labrague et al., 2018; Mahrashi et al., 2021; McCarthy et al., 2018; Salinas-Harrison, 2018), medical students (Salam et al., 2013), or other students studying health or allied-health degrees (Fitzgibbon & Murphy, 2023; Henderson et al., 2021). This raises questions about the extent to which research exists around the strategies used by students studying non-health-related disciplines to manage stress. Due to the clinical focus of nursing, medical and dentistry degrees, findings from these studies might have limited generalisability for students who do not plan to work with patients. There are particular stressors specific to the clinical work environment (e.g. communicating with patients, or practicing clinical skills such as dissection in medical subjects), which are not present in non-practice-related disciplines. This article therefore examines both clinical practice and non-practice disciplines to better understand student coping across university subject disciplines towards a broader understanding of the topic.

The aim of this scoping review was to identify the key trends in peer-reviewed empirical research literature exploring the coping strategies of university students. Specifically, we attempt to answer the following research questions:

1. How has the topic of students' coping with stress been researched?
2. In which populations have research on students' coping with stress been conducted, in relation to the country studied and subject disciplines?
3. Which strategies do students report using to cope with stress?

We restrict our focus to students studying taught degrees due to the differences in both the nature and structure of the degrees and institutional support and resources available to taught versus research students.

Conceptualising stress

Research about stress has been criticised for the lack of consistency in how the term is defined and used (Koolhaas et al., 2011). Focusing on the educational literature specifically, Putwain (2007) notes that stress is sometimes used to refer to stimuli or situations that might cause stress (for example, examinations) and other times as a subjective experience of feeling stressed (the effect). In this scoping review, we draw upon a general model of stress, Lazarus and Folkman's (1984) transactional model of stress to help us conceptualise what we mean by stress. Lazarus and Folkman's (1984) transactional model of stress includes a dimension of cognitive evaluation in their definition, defining stress as when a person–environment relationship is appraised by the individual as "taxing or exceeding his or her resources and endangering their wellbeing" (p.19). The experience of stress is individual and what one person may interpret as being stressful, another may not. Therefore, in this review, we do not explore coping with specific situations (for example, examinations) as stressful unless they have been defined or investigated in the context of stress by the authors of the article. Some authors explored more general stress whereas others focused on student-specific stress (such as examinations) and our review was inclusive of general and student-specific stress in line with the scoping review methodology, which encourages taking a broad view to capture the range of material in the field (Arksey & O'Malley, 2005). We consider "stress" to be the self-reported subjective experience, whereas we consider the stimuli as the "sources of stress" or "stressors".

Putwain (2007) also identifies the interchangeable use of the terms "stress", "worry" and "anxiety" in the educational literature. For example, the term "exam anxiety" can sometimes be used in a place of stress (Trifoni & Shahini, 2011). Whilst stress and anxiety are related, they are distinct concepts. Anxiety is often defined as feelings of fear, dread, and unease (Putwain, 2007). So whilst stress is a response to a situation or stimulus, anxiety can exist or persist in the absence of a stressor (Putwain, 2007). Due to the interchangeable use of the term stress and anxiety in the literature, in our scoping review, we consider papers that explore coping with either stress or anxiety.

Conceptualising coping

Drawing on Lazarus and Folkman's (1984) transactional model of stress, we view coping as a dynamic process that is the outcome of the interaction between the individual and their

environment. Therefore, it is possible that the coping strategies adopted by an individual may vary according to the specific source of stress experienced or the resources available to them and may change over time. The literature indicates that sources of stress experienced by students may be multiple (Karyotaki et al., 2020) but it is unclear whether and how an individual's way of coping with stress may vary.

Referring to the coping literature in general, Stanislawski (2019) highlights how coping can be conceptualised at different levels and with various terminologies such as coping processes, strategies, modes and styles. In a review of different systems for classifying coping in general or in response to specific life events or at specific life stages, Skinner et al. (2003) proposed a structure of coping. At the lowest level are "instances of coping" (henceforth, referred to as "coping instances") which are specific methods that individuals may use to deal with stress (for example, wearing a lucky charm to an interview). At the second level, instances of coping can be categorised into "ways of coping" or "coping strategies" which they define as mutually exclusive and exhaustive categories (Skinner et al., 2003, p. 218) such as problem-solving (henceforth, referred to as "coping strategies"). At a third level, Skinner et al. (2003) refer to "families of coping" (p. 218), which classify ways of coping by their adaptive functions, such as emotion-focused coping. However, Skinner et al. (2003) note in the literature there is little consensus on conceptualisations of coping and inconsistency exists in the use of terminology, which results in confusion surrounding the structure and levels of coping. In our scoping review, we examine the "level" of coping that studies research and we have adopted Skinner et al.'s 2003 definition of coping (in terms of "coping instances", "coping strategies" and "families of coping"). We examine the language that original study authors adopt as part of our analysis and contrast this with Skinner et al.'s (2003) definitions. As such, the current review was inclusive of the various terminologies around coping (e.g. strategies, behaviours, instances, ways, etc.) in an attempt to provide an overview of the literature in line with scoping review methodology (Grant & Booth, 2009).

Methods

A scoping review methodology was identified in line with Grant and Booth (2009). Scoping reviews are well suited to explore the extent and nature of a broader body of literature (Peters et al., 2020). Furthermore, scoping reviews suit topics in which summaries of the existing literature and mapping evidence gaps are within remit (Peters et al., 2020), which was consistent with the objectives of this study. In line with Arksey and O'Malley's (2005) guidance, this scoping review followed the methodology of: identifying the research question; finding relevant studies; selecting studies; charting the data; and collating, summarising and reporting the results. Arksey and O'Malley (2005) acknowledge that due to the flexibility and iterative nature of scoping the research literature, researchers may not wish to place strict limitations on selection at the outset of the review process but make decisions about defining the parameters during the early stages of searching the literature. In line with this, a study review protocol was not developed *a priori* or published in advance, as it is not part of their methodological framework.

Parameters were decided through discussion by authors concerning the student groups and the time period being examined. Students studying exclusively for research

degrees were considered outside the scope of the present review and we focused on students with undergraduate and postgraduate degrees with taught instruction. Past work has identified specific stressors and distress in research-only students, which relates to the different nature of these courses, such as students' proximal relationships to faculty supervisors and greater exposure to the departmental culture (Ryan et al., 2022). Student coping in research-only courses engenders a separate examination and review and is outside the scope of the present review. In terms of the time period under examination, this review was limited to articles published from 2007 onwards. This decision was taken because there have been increasing pressures and changes within higher education internationally as a result of continual fiscal changes particularly from the global 2007–2009 financial crisis and onwards (Christopherson et al., 2014; Dorantes & Low, 2016).

Eligibility criteria

The eligibility criteria for our scoping review were as follows. Publications were included if they were:

- University student samples;
- Peer-reviewed papers which contained primary data;
- Used quantitative, qualitative or mixed methods research designs;
- Studies that reported on students' self-reported coping strategies for managing stress or anxiety;
- Published in the English language; and
- Published between 1 January 2007–24 June 2022.

Studies were excluded if they were:

- Focused on, or did not separate data, from students on research-only postgraduate degrees;
- Were interventions to reduce stress or improve coping skills;
- Were opinion, theoretical, commentary or literature reviews (not presenting original data);
- Summarised the methods and data to the extent it could not be ascertained if they met the inclusion criteria (such as conference abstracts);
- Were not peer-reviewed in a research journal (e.g. dissertation, governmental/organisational "grey" literature).

We were interested in empirical research from peer-reviewed papers and therefore we did not include grey literature. We also expected grey literature findings internationally would have been unmanageable given the already large scale of the present review. Due to budget and capacity constraints, our review was limited to studies published in the English language. The limitations related to these decisions are outlined in the discussion.

Search strategy

Four databases were searched: PubMed, PsycInfo, CINAHL Plus and ERIC from 1 January 2007 to 24 June 2022. The search strategy was developed by a postdoctoral research

Table 1. Search Strategy.

Searched on 24 June 2022. All limited to results from 2007 and English language only		
Database	Search terms	Records
PubMed	(Students OR undergraduate OR postgraduate[ti]) AND ("Stress, Psychological"[Mesh] OR burnout OR mental health OR anxiety OR distress OR stress[ti,ab]) AND ("Adaptation, Psychological"[Mesh] OR coping OR coping strateg* OR coping behavio* OR management[ti, ab])	2143
PsycInfo	(student* or undergrad* or postgrad*[ti]) AND (burnout* or anxiety or distress or mental health or stress* [ab]) AND (coping or coping strateg* or psychological adaptation* or coping behavio* or management [ab])	2047
CINAHL Plus	(student* or undergrad* or postgrad* [ti]) AND (burnout* or anxiety or distress or mental health or stress* [ab]) AND (coping or coping strateg* or psychological adaptation* or coping behavio* or management [ab])	1129
ERIC	(student* or undergrad* or postgrad*) [ti] AND (burnout* or anxiety or distress or mental health or stress* [ab]) AND (coping or coping strateg* or psychological adaptation* or coping behavio* or management [ab])	717
Total		6036

*[ti] = title, [ab] = abstract, [ti,ab] = title or abstract

assistant who had experience in conducting and publishing systematic reviews. The search was reviewed and refined by the authors (RS and PW) through test searching and examining the results before a full search was conducted. The specific search terms are included in Table 1. All article records were exported into Endnote and duplicates were then removed.

Data screening and selection

Article titles and abstracts were screened by the postdoctoral research assistant to determine eligibility. Articles were excluded at this stage if it was clear from the title and abstract that the article did not pertain to the research topic. The full texts of these articles were checked against the inclusion and exclusion criteria. Half of the articles were reviewed by PW and the other half by RS. Both reviewers noted down the reason for an article being excluded in a shared document. In the second stage of this work, the article lists were reversed and PW and RS checked that they agreed with the original exclusion decision made by the first reviewer. Any disagreements were discussed until a jointly agreed decision was made.

Data extraction and synthesis

Full copies of all 165 articles were accessed for data extraction. PW and RS extracted data from approximately half of the studies each so that the work was divided into two. PW and RS created a data extraction form jointly, and both authors conducted a test extraction of the first five articles independently. The results were compared and discussed to ensure that data extraction decisions were mutually understood and clear to both authors. Any uncertainties during the data extraction were noted in a shared document and were discussed in a follow-up meeting. Both authors agreed decisions regarding missing, incorrect or vague data after discussion.

The following information was extracted from all 165 articles: Author, year published, country of study, study design, student study level (undergraduate/postgraduate), number of participants and gender or sex breakdown, subject/department of

study, stressors studied if given, additional context if relevant (e.g. during covid, focused on ethnic minorities) (see supplementary appendix for data extraction table). For quantitative studies, the three most commonly used coping strategies were extracted (e.g. active coping, planning, acceptance) as well as the least commonly used strategy. Additionally, the three most commonly used instances of coping and the least common instance were also extracted to provide greater detail (e.g. exercise, watching tv, sleeping). For qualitative studies, the study authors' reported themes, which related to coping, were extracted (e.g. talking with others, sharing emotions, physical activities). Any additional findings related to group differences in uses of coping strategies or strategy effectiveness (for example, gender or age-related differences) were noted.

Coping instances, strategies and families of coping described in the literature were further coded by PW and RS. First, the framework of coping devised by Skinner et al. (2003) was used to code the qualitative literature into a priori categories. This exercise revealed that using Skinner et al.'s (2003) coping framework produced a very broad overview of coping such that further in-depth analysis of coping responses was still needed. Furthermore, this exercise also revealed that this categorisation resulted in an uneven representation of coping responses as some types of coping had no examples from the reviewed articles and some had many and varied examples which indicated further examination was potentially useful. As a result, we conducted a further analysis of the reported themes from across the qualitative studies through inductive coding. The original study authors' identified themes were extracted, which represented the use of themes that were determined a priori to our analysis. We then applied an inductive analysis to these identified themes from across all the qualitative studies for categorisation into a broader overview of themes for this study. RS led this inductive analysis. Our analytical approach to synthesising qualitative themes across the educational research literature was based on Shahjahan et al.'s (2022) study, which brought together themes across disciplines and in diverse global higher education contexts. We followed Shahjahan et al.'s (2022) approach which involved first reading the qualitative thematic results to look for patterns of similarities in study themes to initially organise the data. For the analysis, all the themes extracted from original studies are then examined together in one document, which includes all theme names. These were inspected for patterns of similarities and differences (as recommended by Shahjahan et al., 2022) by RS to produce higher-order thematic groupings as part of a broader overview across qualitative studies. The findings from this analysis by RS suggested that coping practices seemed to reflect practices that are fostered at the individual-level (such as managing emotions, or connecting with interests or others), and the institutional level (promoting skills building through study, educating about student support choices and support services availability). RS created a higher-order thematic overview of coping responses which are derived from students' lived experiences and descriptions of their coping that are fostered at the individual and the institutional level, which she discussed with PW. The thematic overview represents a synthesis of the qualitative research and can be represented in a figure which details the analytical themes from the analysis (for example, see Caskurlu et al., 2021). The thematic overview in the present study was refined and finalised by both authors through discussion and agreement.

Results

Search results

Database searches yielded a total of 6,036 articles across the four databases, specifically PubMed (2,143), PsycInfo (2,047), CINAHL Plus (1,129) and ERIC (717). The removal of duplicates reduced the number to 4,223 articles. 3,865 articles were excluded on the basis of title and abstract screening. Of the remaining 359 read in full, 194 were excluded based on the eligibility criteria. 165 articles were identified for inclusion. The stages of decision-making are indicated in the PRISMA flow diagram (Page et al., 2021) in Figure 1.

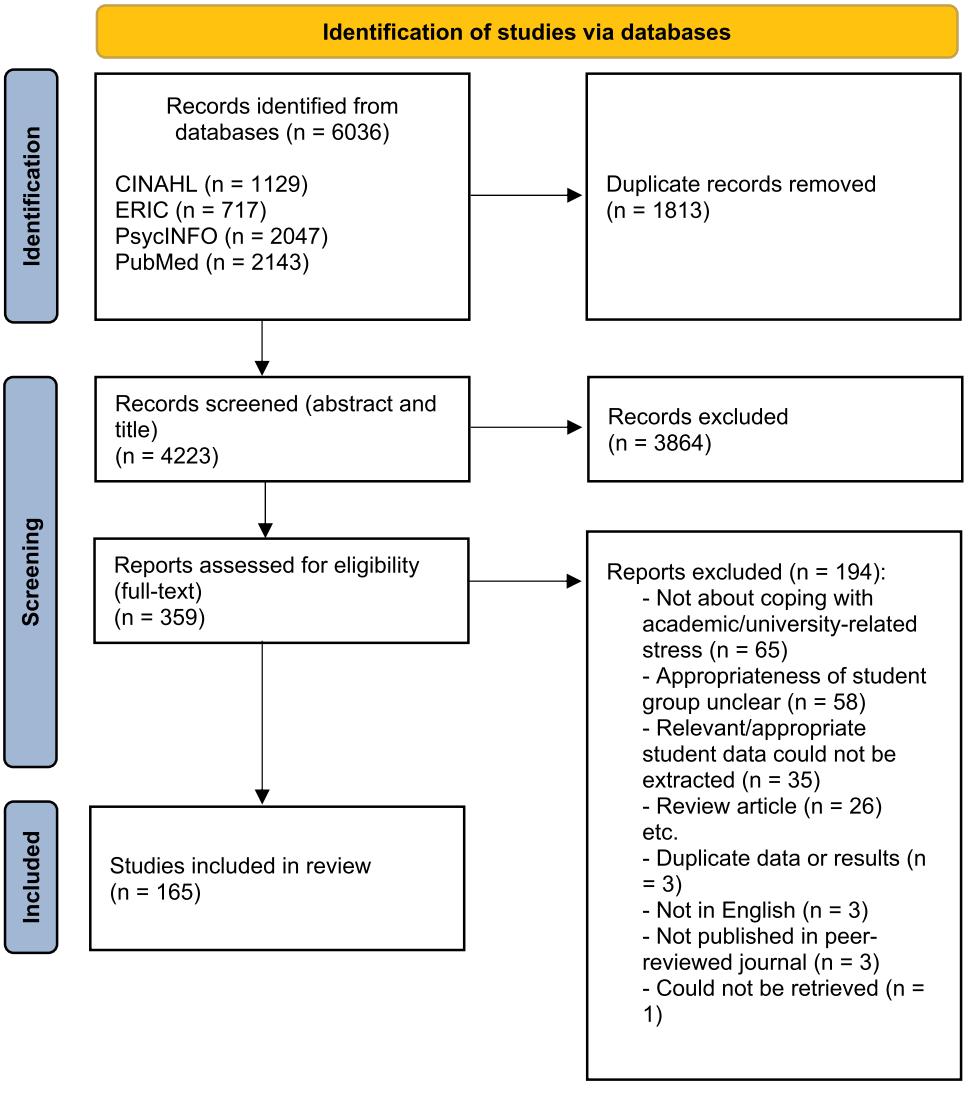


Figure 1. PRISMA Flow Diagram for Scoping Review.

Key findings

The results are divided into the following sections addressing: (a) the geographical context and student subject profiles; (b) research and methodological approaches of papers; (c) the stressors being explored; (d) how coping instances and strategies and behaviours are conceptualised and measured by quantitative instruments, (e) the coping instances and strategies students in the qualitative research described as using to cope with stress, and (f) effectiveness of self-reported coping strategies as perceived by students.

Where are studies conducted and among whom: what is the geographical context and students' subject profiles?

Table 2 displays the geographic representation of reviewed studies. Nearly one-third of studies (30.3%, n = 50) that we reviewed were conducted among students studying at higher education institutions located in Asia. Geographic representation within Asia, however, was uneven. A large proportion of studies were conducted in Southern Asia (n = 17; specifically, India, Iran, Nepal and Pakistan) or Western Asia (n = 20; specifically, Israel, Jordon, Lebanon, Palestine, Saudi Arabia, Turkey and UAE). No studies were conducted in Central Asia. Just over one-quarter of studies were conducted in Northern America. The USA represented the largest country focus of reviewed studies overall (25.5%, n = 42). Approximately, 20% of studies (n = 34) focused on students studying at institutions in Europe, with studies being conducted at institutions located in Eastern (n = 8), Northern (n = 13), Southern (n = 8) and Western (n = 5) Europe. Approximately, 13% (n = 21) of studies were conducted among students studying at African institutions. Most of these studies (n = 19) focused on institutions located in Sub-Saharan Africa, with

Table 2. Geographic Representation of Reviewed Studies.

Countries of focus in reviewed studies[a]						
Africa (21)	Asia (50)	Europe (34)	Latin America and the Caribbean (4)	Northern America (46)	Oceania (8)	Multiple regions (1)
South Africa (7) Ghana (5) Ethiopia (2) Sudan (2) Zimbabwe (2) Malawi (1) Nigeria (1) Tanzania (1)	Saudi Arabia (6) Iran (5) Turkey (5) India (4) Nepal (4) Pakistan (4) Malaysia (3) United Arab Emirates (3) China (2) Hong Kong (2) Jordon (2) Lebanon (2) Singapore (2) Brunei (1) Israel (1) Japan (1) Palestine (1) Philippines (1) Taiwan (1)	UK (7) Poland (6) Spain (5) Germany (4) Ireland (4) Finland (2) Romania (2) Greece (1) Italy (1) Netherlands (1) Slovenia (1)	Puerto Rico (2) Barbados (1) Peru (1)	USA (42) Canada (4)	Australia (6) New Zealand (2)	China & USA (1)

[a]Note: Geographic area of focus unclear in one study (Hamadi et al., 2021)

South Africa (n = 7) being a particular country of focus. Only a minority of studies were conducted among students studying at higher education institutions located in Latin America and the Caribbean (2.4%, n = 4) or Oceania (4.8%, n = 8). One study was a comparative study of student coping at institutions in the USA and China. For one study it was unclear where the research was conducted.

The majority of studies were conducted with students studying clinical health science or allied-health profession degrees (67.9%, n = 112), with many studies focused solely on nursing students (n = 57) or medical students (n = 22). Fourteen studies used a mixed sample of students from different degrees within the health sciences (for example, medicine and dental students). Only 9% of studies used a sample of students studying single disciplines outside clinical health science programmes. These included education (n = 6), social sciences (n = 3), psychology (n = 2), social work (n = 2), biology (n = 1) and communication and information technology (n = 1). Across all studies, 10.9% (n = 18) consisted of students from a mixture of disciplines, and 12.1% of all studies (n = 20) did not explicitly state the disciplinary backgrounds of students and so the subjects studied in the sample were unclear.

Summary

There was an unequal geographic representation of country contexts studied by papers included in this review. Most of the studies were conducted among students studying in higher education institutions in Asia and North America and there is limited research from Latin America, the Caribbean and Northern Africa. There was also unequal representation of disciplines of students studied, with a large proportion of studies focused on students on clinical-health or allied health degrees, particularly nursing. This points to significant gaps in the literature relating to commonly studied university courses which are not practice-related.

Which research designs are being used by papers included in the review?

Quantitative design

Forty-five per cent (n = 75) of studies were quantitative. Sixty-nine studies used a cross-sectional survey design. Only six studies of these quantitative studies were longitudinal in nature. For example, Al-Zayyat and Gamal (2014) explored coping strategies of Jordanian nurses at the beginning and end of their clinical training (survey implemented 14 weeks apart). Outside the clinical context, Hoggard et al.'s (2012) investigation of coping with racial and non-racial stressful situations among African American students in the USA asked participants to complete a daily survey over the course of 20 days.

Qualitative design

Thirty per cent (n = 50) of studies were qualitative in nature. The majority (n = 46) used a single qualitative method, with the most frequently used being synchronous interviews (n = 33). Of the other studies using a single method, one study conducted asynchronous email interviews (Aselton, 2012), six studies used focus groups (Chang, 2015; Ching et al., 2020; Han et al., 2018; Jarvis et al., 2021; Lopez et al., 2018; Weber et al., 2019), one study used recorded reflections (Bovero et al., 2018), two surveys used only open questions (Kinchen & Loerzel, 2019; Yzer & Gilasevitch, 2019) and three studies used analysis of

written text (diaries, reflections or written naïve sketches) (Mason, 2017; Mills et al., 2020; Türkles et al., 2021). Four studies used a mixture of qualitative methods, including focus group discussion (FGD) and a survey (Bledsoe et al., 2018), interviews and content analysis of practice portfolios and students' files (Crouch, 2019) and combinations of interviews with the Mmogo method (Engelbrecht et al., 2020) or the Delphi technique (Weston et al., 2017). Only one qualitative study was longitudinal in nature. Fawaz et al. (2022) conducted interviews with 20 Lebanese students at two time points; during COVID-19 lockdown and after COVID-19 lockdown, to explore changes in stressors and coping strategies.

Mixed-methods design

Twenty-five per cent (n = 41) of studies used a mixed-methods approach. A large proportion of these studies (n = 27) implemented a survey with both open and closed questions. Six studies used a combination of surveys and qualitative interviews (Asokan et al., 2021; Deasy et al., 2014; Faize & Husain, 2021; Hilliard et al., 2020; Pfeifer et al., 2008; Williams et al., 2021), four employed a combination of a survey and FGDs (Barrot et al., 2021; Louis et al., 2021; Shofler et al., 2021; Webber et al., 2021), two used a combination of a survey, interviews and FGD (Abbasi et al., 2021; Malau-Aduli et al., 2020), and one used a combination of a survey with analysis of video and written narratives (Apgar & Cadmus, 2022). One study used concept mapping which consisted of brainstorming, categorisation, and rating (Donohoe et al., 2020). Three of the mixed-methods studies took a longitudinal design. Apgar and Cadmus (2022) explored coping during the first COVID-19 lockdown among social work students by drawing on video narratives recorded over two weeks in April 2020 and written narratives and questionnaire responses collected a week after lockdown commenced in March 2020 and then six weeks later at the end of the semester in April 2020. Clark et al.'s (2014) longitudinal study explored how stages of student study influenced coping, and data was collected from nursing students at three time points in their sophomore, junior and senior years. Lastly, Okoro et al. (2021) explored stress and coping among Nigerian pharmacy students at two time points, at the beginning of the semester and eight weeks into the semester, although data on coping was aggregated so the temporal dimension data was lost.

Summary

A mix of qualitative, quantitative and mixed-methods approaches were used by papers included in this review. However, the studies were predominantly cross-sectional and there were few longitudinal explorations of students' experiences of coping, for example over their years of study. Therefore, there was a general failure to explore the potentially dynamic nature of students' coping and reactions to chronic stress during study which represents a considerable gap in the literature.

What are the stressors being explored?Papers exploring specific stressors

Among papers focused on students in clinical practice degrees (such as nursing or medicine), where specific stressors were explored this tended to be related to clinical situations such as the first clinical placement (Alshahrani et al., 2018; Sun et al., 2016), death of patients or end of life care (Bovero et al., 2018; Batley et al., 2017; Edo-Gual et al., 2014), operating room practice (Findik et al., 2015), dissecting training (Bob et al., 2014;

Russa & Miligilche, 2014), career decisions and competitive pressures for employment (Yi et al., 2022) and handling challenging and aggressive patients (Nau et al., 2007; Foster & McCloughen, 2020; McCloughen & Foster, 2018). Burnout (which is a response to chronic stress) was the focus of three studies conducted with medical students (Abbasi et al., 2021; Erschen et al., 2018; Korolkiewicz et al., 2022).

In research among nursing students, most studies focused on stress associated with clinical and academic training generally. These studies commonly used The Perceived Stress Scale relating to clinical practice which was developed by Sheu et al. (2002) specifically to explore stress in nursing students (Abdelhafez et al., 2020; Ahmed & Mohammed, 2019; Al-Gamal et al., 2018; Al-Zayyat & Al-Gamal, 2014; Ayed & Amoudi, 2020; Baluwa et al., 2021; Bhurtun et al., 2021a, 2021b; Chan et al., 2009; Crary, 2013; Hamadi et al., 2021; Hamaideh et al., 2017; Shaban et al., 2012; Zhao et al., 2015). This questionnaire examines stress in six areas focused on clinical education: patient care, relationship with teachers, assignments and academic workloads, peers and daily life, perceived lack of professional nursing knowledge and skills, and the clinical environment.

Specific stressors explored outside the clinical environment among students of other disciplines, included racism and race-related stress (Griffith et al., 2019; Han et al., 2018; Hoggart et al., 2012), learning during armed conflict (Badri et al., 2013) or flooding (Lemieux et al., 2020), transitioning to a different culture (acculturative stress) (Abu-Kaf & Khalaf, 2020; Rodriquez & Mallinckrodt, 2021), combining motherhood with study-related internships (Dickson, 2019), experiences of different classroom teaching styles (Brigati et al., 2020), working on assessed collaborative projects (Hilliard et al., 2020), and transgender students' use of alcohol for coping (Tupler et al., 2017).

Specific stressors – COVID-19

For some more recent papers, COVID-19 was a specific context of stress explored. In many clinical-focused studies, there was a focus on the stress or anxiety created due to the impact of the COVID-19 pandemic on education and training with particular attention paid to work placements. For example, Banstola et al. (2021) measured levels of anxiety among a sample of 144 nursing students in Nepal engaged in clinical placements during the pandemic using the Beck Anxiety Inventory. Banstola et al. (2021) concluded that all their sample had either mild or moderate anxiety. Simionescu et al.'s (2022) research also pointed to the stressful nature of the clinical environment during the COVID-19 lockdown, with employed nursing students being found to be more vulnerable to stress compared to nursing students not employed. Other studies from the field of nursing indicated specific causes of anxiety and stress for students in the clinical environment during the pandemic including uncertainty about COVID-19, fear of infecting family members, lack of personal protective equipment on wards, managing emotions around the isolation of patients, and shortage of staff (see Casafont et al., 2021; Jarvis et al., 2021; Kershner et al., 2021; Munn et al., 2022; Nabavian et al., 2021; Velarde-Garcia et al., 2021).

In both clinical and non-clinical focused studies, students were typically asked about the stress of studying at home or learning online due to COVID-19 (Apgar & Cadmus, 2022; Babicka-Wirkus et al. 2021; Barrot et al, 2021; Faize & Husain, 2021; Fawaz et al., 2022; Frazier et al., 2021; Hasratian et al., 2021; Guszkowska & Davrowska-Zimakowska, 2022; Khoshaim et al., 2020; Mabrouk et al., 2022; Son et al., 2020) and the impact of COVID-19 (Williams et al., 2021; Kerr et al., 2022; Louis et al., 2021; Sam et al., 2022).

Loss of structure in one's life was a stressor reported in both Kerr et al.'s (2022) and Apgar and Cadmus's (2022) studies, whilst in Son et al.'s (2020) study, disruptions in sleeping and eating habits were described as changes that needed coping with. Also connected to structure, Frazier et al. (2021) found that students reported studying at a distance resulted in an overwhelming workload compared to studying in a face-to-face setting for the same number of course credits.

The pandemic was sometimes disruptive to the quality of students' learning experiences as it could involve technical difficulties and distractions, which made online learning difficult for some (Barrot et al., 2021; Fawaz et al., 2022). Stress and anxiety associated with concerns about academic progress whilst studying online were reported by participants in several studies (Frazier et al. 2021; Son et al., 2020) and anxiety from COVID-19 was said to impact learning in Barrot et al.'s (2021) study of students shifting to online learning. Stress was also caused by disruptions to how students reported they usually coped. For example, social work students in Apgar and Cadmus's (2022) study reported exercise as a usual method of destressing but the closure of gyms and fears about exercising outside disrupted this coping or made it impossible. Similarly, in Frazier et al.'s (2021) study, social distancing was described as increasing their stress as it prevented students from engaging in meeting friends as a coping strategy.

Studies that explored different domains of stress

A large percentage of studies did not ask students about coping with a particular stressful situation or a specific stressor. Instead, they explored stress in a range of a different domains of a student's life and this was done in multiple ways, for example using validated scales, using self-developed scales or using open questions that asked what students found stressful.

In clinical-focused studies, a range of validated scales, which were designed specifically for clinical student groups, were used to explore different domains of stress. For example, Nebhinani et al. (2020) used the Student Nurse Stress Index, developed by Jones and Johnston (1999), to explore levels of perceived stress among nursing students in India in areas related to academic load, clinical sources, interface problems and personal problems. Two studies (Chang et al., 2012; Zhang & Henderson, 2022) conducted among medical students used the Perceived Medical School Stress scale, designed by Vitaliano et al. (1989), which measures stress in areas such as workload, competition, social relations and financial stress. Three studies among clinical students (Ahmad et al., 2011; Asokan et al., 2021; Ersan et al., 2017) used the Dental Environmental Stress questionnaire, developed by Garbee et al. (1980), which considers levels of stress pertaining to academic performance, clinic and patient responsibilities, faculty relations, personal issues, professional identity, and financial issues. Webber et al. (2021) used the Occupational Therapy Student Stressor Scale which measures the degree of stress in five areas: academic workload, clinical/fieldwork experience, relationships, health and financial considerations. However, some studies of clinical practice students used validated measures that did not include clinical training as an area of exploration, therefore missing this potentially stressful area of their lives. For example, Reeve et al. (2013) drew upon the Student-Life Stress Inventory, developed by Gadzella (1994), and Seyedfatemi et al. (2007) used the Student Stress Scale, developed by Insel and Roth (1985).

Outside of clinical-focused studies, validated scales to explore different domains of stress were used less frequently. Where validated scales were used, these were often adapted to try to fit the context of very different student groups to those originally intended. For example, whilst the Dental Environmental Stress questionnaire was designed to explore stress among dental students, it was adapted by a few of the reviewed studies to explore stress among teacher education students (Adasi et al., 2020; Amponsah et al., 2020) and among a sample consisting of education and business students (Kwaah & Essilfie, 2017).

Several studies, both among clinical and non-clinical students (for example, Gomathi et al., 2013; Govender et al., 2015; Mudhovozi, 2011; Nakanishi et al., 2018; Persaud & Persaud, 2016; Sreeramareddy et al., 2007; Sikander & Aziz, 2012) asked students to rate the experience of stress or rank stressors from a pre-determined list. Sources of stress often included in these lists were academic-related, psychosocial, and health-related (which included diet, sleep problems, illness, substance abuse and lack of exercise). However, it was often unclear how potential stressors and domains of stress were decided upon and whether the instruments were tested.

Lastly, some studies conducted among both clinical health and non-clinical health students (for example, Aselton, 2012; Burnard et al., 2007; Bowden, 2008; Chang, 2015; Ching et al., 2020; Clark et al., 2014; Deasy et al., 2014; Denovan & Macaskill, 2013; Kaur et al., 2020; Khademian et al., 2021; Lavoie-Tremblay et al., 2022; Lopez et al., 2018; Mason, 2017, Mills et al., 2017, 2020; Mirzaei et al., 2012; Nadeau, 2014; Negash et al., 2021; Rafati et al., 2017; Ramluggun et al., 2018; Ruth-Sahd & Schneider, 2022) used open questions to ask about sources of stress or lived experience of stress more generally. This revealed a diversity of stressors experienced by students including, but not limited to, juggling work-life balance, career prospects and decisions, finances, transitioning to university, pre-existing illness-related, social relationships, and academic-related stressors such as workload.

Papers focusing on stress in general

Several studies did not consider specific sources of stress (Gustems-Carnicer et al., 2019; Ickes et al., 2015; Jones et al., 2016; Kumar & Kadhiravan, 2021; Li et al., 2012; Masten et al., 2009; O'Brien et al., 2012; Onieva-Zafra et al., 2020; Malghani et al., 2021; Salam et al., 2015; Samson, 2019; Średniawa et al., 2017; Vally et al., 2018; Yzer & Gilasevitch, 2019; Zhang et al., 2017). This was often done using established measures such as the Perceived Stress Scale, developed by Cohen et al. (1983), or the DASS-21, developed by Lovibond and Lovibond (1995). Cohen et al.'s (1983) Perceived Stress Scale is one of the most widely used self-reported instruments for measuring perceptions of stress levels. The DASS-21 measures severity of symptoms in relation to depression, anxiety and stress. Other studies simply asked students how they coped with stress without exploring causes or level of stress beforehand (for example, Arslanturk & Öz, 2020; Bryl et al., 2020; Kaya et al., 2007).

Summary

The review focuses on how students cope with stress; however, differences exist in the aspect or specificity of stress explored and described by studies. Some studies explored how students coped with stress associated with a specific context/situation, others

asked students about levels of stress in a range of different domains of their lives, whilst other papers focused on stress in general or did not define the stress being examined in detail. Asking students about stress in different domains or asking them to list different sources of stress and following this with questions about how they cope with stress (overall or in general) could cause confusion as students might deal with stress in different domains of their lives differently. Similarly, papers that do not specify different stressors or explore stress as identified by participants, and simply ask about stress levels and ways of coping generally fail to recognise that situational variability in coping can exist. There exists a gap in the literature for exploring whether there are different coping responses for different domains of stress in university students. Where specific stressors have been explored, this has tended to be in relation to specific clinical situations among clinical-health students. Consequently for these students, there has been less exploration of how they cope with specific stressors unrelated to the clinical environment, for example financial difficulties. There has been a particular focus on stress and anxiety relating to the COVID-19 pandemic as it relates to coping with clinical placements and training. Some other studies have provided information about stress and anxiety caused by the online environment, the associated disruption and changes to the learning experience and how students coped. These findings still have practical relevance for educators as blended learning has become more frequent since the pandemic.

How are coping strategies and behaviours conceptualised and measured in studies?

Coping measurement – instruments

Where coping was explored quantitatively, a variety of instruments were used. The most common validated instrument adopted was the Brief Coping Orientation to Problems Experienced Inventory (Brief-COPE), or an adapted version of it. Developed by Carver (1997), this 28-item self-report questionnaire uses a Likert scale for frequency to measure coping across 14 subscales: self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioural disengagement, venting, positive reframing, planning, humour, acceptance, religion, and self-blame. Using Skinner et al.'s (2003) classification of coping, these subscales represent "ways of coping" or "coping strategies" and are made up of items that reflect more specific methods or "instances of coping". Most studies using the Brief-COPE reported means at the level of the 14 subscales (for example, Adasi et al., 2020; Apgar & Cadmus, 2022; Baluwa et al., 2021; Garber, 2017; Guszkowska & Dabrowska-Zimakowksa, 2022; Hasratian et al., 2021; Kerr et al. 2022; Kwaah & Essilfie, 2017; Li et al., 2012). However, some studies further classified these 14 subscales into what Skinner et al. (2003) refer to as "families of coping" based on their adaptive functions, however they did this in different ways. For example, Abu-Kaf and Khalaf (2020) and Crary (2013) differ from the other studies in that they did not report the mean scores of the subscales but instead grouped them into active and avoidant strategies. Valley et al. (2017) categorised the 28 items into problem and emotion-based coping, reporting means at these two levels. Zhang and Henderson (2022) and Jones et al. (2011) also further categorised the 14 Brief-COPE sub-scales but Zhang and Henderson used a three-category grouping (problem-focused, active emotion and avoidant emotion) and Jones et al. (2011) used a two-category

grouping (problem and emotion-focused). Consequently, different approaches to reporting results from the Brief-COPE present a barrier to bringing together research and drawing parallels across studies.

A frequently used instrument to explore coping among nursing students was the Coping Behaviour Inventory (CBI). This 19-item questionnaire, developed by Sheu et al. (2002), measures coping behaviours in four domains; problem-solving behaviour; avoidance coping behaviour, optimistic behaviour and transference behaviour. Most studies reported mean scores at the level of the four subscales (for example, Bhurtun et al., 2021b), but some studies did not (for example, Hamadi et al. 2021).

Infrequently, studies used established coping scales such as the Ways of Coping Questionnaire (Folkman & Lazarus, 1988), the Adolescent Coping Orientation for Problems Experiences Inventory (Patterson & McCubbin, 1987), the Coping Inventory for Stressful Situations (Endler & Parker, 1990), and the Coping Responses Inventory Adult Form (Moos, 1993). A considerable number of studies developed their own questionnaires/scales based on a review of the literature (for example, Reeve et al., 2013) but in some cases it was unclear whether the authors had developed their own coping questionnaire or used a validated scale (for example, Jennings et al. 2018).

A challenge with studies using different measures of coping was making meaningful comparisons of the results across them. Focusing on studies that used the Brief-COPE (or an adapted version), there was no clear coping strategy most frequently used by students across studies. Religion, self-distraction, acceptance, planning, active coping, emotional support, and positive reframing were all reported as common strategies. In terms of the least commonly used coping strategy, there was a clear trend across studies of substance abuse being the least commonly reported. It could be argued that students might be disinclined to report substance abuse on a research survey due to their legal and ethical concerns about sharing this data at their university. Denial was also a strategy that was also reported as being least frequently used by students to cope with stress.

Furthermore, across the articles reviewed, studies variously operationalised coping as a single coping instance or behaviour (e.g. reading a book), or as a broader coping strategy (e.g. acceptance). Resultingly, the finding about how students cope with stress oscillates between highly specific behaviours to very broad overall strategies. The varied conceptualisations of student coping presents an important barrier to understanding the research evidence base which would be alleviated by greater reporting clarity in the methods sections as to how coping is being defined and with some consideration of the different levels of coping.

Coping – varied terminology

The terminology used by studies included coping with stress, methods of relieving stress, stress management, patterns of coping, coping behaviours, coping methods, coping mechanisms, coping approaches, coping responses, techniques to manage stress, resilience strategies, moderators of impact, defence mechanisms, actions to manage stress, coping styles, coping reactions, coping process, and coping techniques. However, these terms were not always used consistently between studies nor were the differences between them clarified. For example, most studies using the Brief-COPE referred to the 14 subscales using the term coping strategies. However, there were exceptions, for

example, Abdelhafez et al. (2020) used the term coping styles, Garber (2017) used coping mechanisms, Brougham et al. (2009) and Lemieux et al. (2020) used coping responses and Zhang and Henderson (2022) used coping behaviours. Ahmed and Mohammed (2019), Nebhinani et al. (2020), Apgar and Cadmus (2022) and Samson (2019) used a mixture of terms interchangeably to refer to the 14 subscales of the Brief-COPE. These varied terminologies are not consistent with the original measure which is clear in its phrasing. These findings suggest that a number of the reviewed studies that used Brief-COPE demonstrated confusion about how items and subscales reflect coping strategies. There was particular inconsistency in the terminology used in studies where the authors developed their own novel coping measures. For example, Jennings et al. (2018) reported mean scores on "behaviours" such as "take a shower or nap", "clean", "go to church", "read the bible/pray", "write in a journal", whilst Kaseke and Mutsambi (2014) similarly asked participants about this lowest category of coping (e.g. look to power above self, go to sleep to avoid problems) but refer to them as coping strategies.

Summary

There was a lack of consistency in the literature around the terminology used related to coping. This can confuse the reader about the "level" of coping being considered. Comparisons between studies are also made difficult by the multitude of measures that are used to explore students' coping. Where studies draw on established measures with precise phrasing, some studies used different terms which provide an important obstacle to conceptualising the different levels of coping across studies.

How do students describe how they cope with stress?

Coping with stress associated with COVID-19

As noted previously, working or being on placement in the health sector was a main source of stress for students during the COVID-19 pandemic. Casafont et al. (2021) reported that during the pandemic, nursing students found talking to a supportive network of family and friends through videoconference was important which is an example of support seeking. In both Jarvis et al.'s (2021) and Simionescu et al.'s (2022) studies with nursing students, participants also described supporting one another and their own families as an adaptive coping strategy during the pandemic.

Informational support was highlighted as an important coping strategy in several studies. For example, Jarvis et al. (2021) found students in clinical settings experienced anxiety as to whether their training placements were going to go ahead during the pandemic and how to handle the virus if they did. Online education (informational support) from educators about how to protect oneself and patients was outlined as a key to successful coping as it allayed their fears. The importance of informational support during the pandemic for clinical students in training was mentioned elsewhere (Nabavian et al., 2021) and informational support and career guidance/information were also described as important to coping with worries about future employment after their degree (Yi et al., 2022).

Outside the clinical environment, support-seeking was also found to be an important coping strategy. For example, Apgar and Cadmus (2022) identified that students had to "implement new coping mechanisms" (p. 61) due to the unprecedented changes due

to the pandemic, such as getting in touch with long-lost friends which indicates using contact seeking as a coping strategy. The pandemic was disruptive to the quality of students' learning experiences. Barrot et al. (2021) reported that students coped by improving their technical aptitude, increasing their help-seeking and their use of resources such as the internet, Facebook and consulting with teaching staff, which are indicative of problem-solving coping. Louis et al. (2021) also found that students sought timely communication from faculty staff or university leaders about changes to course instruction (such as moving between remote and in-person attendance) to enable them to cope.

Distraction was a main strategy reported by students to deal with different aspects of the pandemic. In Casafont et al.'s (2021) study, nursing students described engaging in activities such as running, yoga or reading which helped them cope by dampening their recurrent thoughts and worries and allowed them to "disconnect from reality" (p. 6). Activities that allowed disconnection from the stress of training placements were a coping strategy described across studies (Kershner et al., 2021; Türkles et al., 2021; Velarde-Garcia et al., 2021). Sam et al. (2022) demonstrated that students adopted new or different ways to cope such as taking up new hobbies (like sewing or journaling). Similarly, Kerr et al. (2022) reported that loss of structure in one's life and disruptions and uncertainties about the academic timeline was a stressor during the pandemic. They reported that students experienced recurrent rumination but used distraction, and avoidance, and sought instrumental and emotional support to cope. Self-distraction/disconnection and reaching out to others were key themes across studies (Apgar & Cadmus, 2022; Faize & Husain, 2021; Khoshaim et al., 2020; Son et al., 2020). However, acceptance of the reality of the situation that students faced was deemed the most common coping strategy in a few studies (Guszkowska & Dabrowska-Zimakowska, 2022; Williams et al., 2021). Despite their apparent differences, the coping strategies of distraction and acceptance both fall under Skinner et al.'s "accommodation" family of coping because they represent trying to adjust to the situation. Our findings might indicate that students accommodated for Covid-19 related stressors, which arguably could be due to the unavoidable and pervasive nature of changes during the pandemic.

Qualitative themes (across qualitative and mixed methods research)

Qualitative data from qualitative research and mixed methods studies tended to report overarching themes related to student coping. There was a tendency to consider engaging with hobbies and interests as "distraction" or avoidance coping responses, such as watching television, using Youtube or social media, and online shopping (e.g. Williams et al., 2021). Similarly, going out with friends or playing sports and listening to music could be themed as "distraction" coping mechanisms (Burnard et al., 2007). Elsewhere, activities such as yoga and spending time outdoors in nature were also described (Kershner et al., 2021) as well as coping by interacting with animals (Kinchen & Loerzel, 2019; Yzer & Gilasevitch, 2019).

Across studies, students also tended to employ more personal and private strategies such as self-help and spiritual coping responses which included meditation, prayer and positive self-talk and reframing (Badri et al., 2013). A few studies described self-reflective or self-development coping responses which included learning from mistakes and developing a thick skin (Lopez et al., 2018), analysing and changing one's actions (Moczko et al., 2016) or standing up and advocating for oneself (Foster & McCloughen 2020). Less

adaptive coping responses to stress included smoking and comfort eating (Fawaz et al., 2022), taking controlled or illegal substances (Weston et al., 2017). Emotional coping responses could include crying and humour (e.g. Burnard et al., 2007), and venting and self-blame (Ching et al., 2020).

Examples of instrumental coping included asking for help from classmates, teachers, counsellors or university staff (e.g. Nadeau, 2014, Negash et al., 2021, Velarde-Garcia et al., 2021). In contrast to most studies which tended to assume asking for help was only beneficial to students' coping, international Indonesian students studying in the Netherlands specifically described avoiding help-seeking and counselling due to worries about the shame and dishonour it would bring on their families if discovered (Mukminin, 2019). This could represent an example of cultural variation in coping responses due to different cultural beliefs about mental health, which deserves further investigation. Much of the qualitative data tended to reinforce that students perceived social support as important to their coping responses and this could involve talking to family and friends but sometimes it was particularly helpful to talk to peers and classmates about course-related stressors. These suggest different coping responses for different domains of stress. In a similar view and related to students' use of active or problem-solving coping responses, some qualitative studies demonstrated that students found planning, time management, and creating checklists helped them cope with university-specific stress (Bledsoe et al., 2018; Yzer & Gilasevitch, 2019).

In contrast to the majority of qualitative findings which were conducted without an a priori framework, Doulougeri et al. (2016) applied the lens of emotional regulation theory (e.g. Gross, 2008) to their results. They outlined example situation modification strategies (e.g. inaction, or changing the situation), cognitive change strategies (e.g. denial or reappraisal), attention deployment (e.g. focusing on a particular task) or response modulation (suppression of emotions or discussion with peers).

Categorising and organising themes across qualitative data

Given the depth of treatment given to students' lived experiences of coping in the 50 qualitative studies, the Skinner et al. (2003) framework was applied to draw together findings across studies in a consistent manner. This resulted in the findings shown in Table 3 and demonstrated that some coping strategies had many exemplars, such as strategizing, instrumental action, planning, behavioural avoidance and cognitive restructuring. In contrast, some other strategies had a noticeable absence of examples from the student coping literature, including rumination, other-blame, and confusion, which suggested that the Skinner et al. (2003) may not be a good fit for the student coping literature. For example, it is unlikely that students do not ruminate in response to stress at university (it has been identified elsewhere in this review) but it is plausible that their rumination responses may also fall in to other categories if using Skinner et al.'s (2003) framework (e.g. behavioural avoidance or distraction). The coping strategies in Table 3 are very broad, and due to connections between them it was difficult in some cases to decide where an instance of coping should be placed within the framework. This was especially true for the categories of planning and strategizing.

To better represent the in-depth qualitative findings, the authors grouped the qualitative data themes from across all 50 qualitative studies to produce a thematic overview of coping responses. This represents a key novel contribution of the present study and is

Table 3. Coping Instances and Strategies Reported in the Qualitative Literature Mapped to Skinner et al.'s (2003) Categorisation of Coping.

Family of coping	Coping strategy	Example of instance of coping from qualitative literature
Problem solving	Strategizing	• Breaking complex content into manageable parts • Completing tasks in smaller increments • Reviewing new content daily • Building foundation knowledge • Making choices between personal lives and school demands • Forfeiting activities • Changing routines to balance study and family e.g. putting children to bed earlier • Studying harder by avoiding tv/movies/social & electronic media • Engaging in early communication and collaboration in group work • Taking on bigger roles in group work • Strategically selecting peers to those who have similar study style to own
	Instrumental action	• Raising concerns with clinical staff/academic lecturers • Building peer networks • Improving test-taking abilities • Changing study habits • Studying consistently and early • Using personalised feedback from academic staff • Preparing by practicing skills/practicing tasks • Joining revision/study group • Studying in unconventional environments when you can • Becoming more familiar with a new city • Learning about culture and code of conduct • Budgeting finances • Using communication skills in stressful situations e.g. telling problematic person how feeling to fix the issue • Making adaptations for learning difference e.g. audio notes, coloured pens, coloured overlays • Developing self-discipline
	Planning	• Setting time limits on tasks • Having a structured daily schedule/developing healthy living habits and schedules • Setting up timetables and schedules • Having mental checklists/to do lists • Talking with others to come up with plans • Noticing early warning signs of stress/reflecting on situation/thinking of how things can be done better/evaluating outcomes • Learning about self through reflective practice/reflect on comments from others • Mental rehearsals of stressful events • Preparing for employment in advance e.g. practical training and paying attention to employment information
Information seeking	Reading	• Preparing/increasing understanding by reading books • Searching for online resources to help alter study habits • Using curricular materials on non-technical skills e.g. wellness, stress management, emotional intelligence • Doing personalised study skill courses • Collecting information online about employment
	Observation	• Developing professional competency via observation of others
	Asking others	• Asking questions to lecturers • Seeking advice from mentors/student buddy • Seeking advice from students in higher years/more experienced students • Using social media to ask questions of peers in student-run groups • Looking for support on defending research projects
Helplessness	Confusion	[none identified]
	Cognitive interference	[none identified]

(*Continued*)

Table 3. Continued.

Family of coping	Coping strategy	Example of instance of coping from qualitative literature
	Cognitive exhaustion	• Resignation • Giving up • Staying silent about situation
Escape	Cognitive avoidance	• Mentally disconnect from situation • Continuously sleeping • Humour • Denial
	Behavioral avoidance	• Not completing assignments • Lying • Avoiding talking about death (when placement in clinical care) • Avoiding social media (so don't see conversation between peers) • Avoiding problematic person • Avoiding the stressful situation • Using marijuana • Smoking • Drinking • Comfort eating • Sleeping lots • Avoiding negative comments about field of study • Being conciliatory to problematic individuals
	Emotional expression	• Crying • Straight talking/being open about emotions
	Emotion approach	• Meditation • Deep breathing • Yoga • Self-care • Mindfulness • Taking step back to focus on feelings • Journaling • Staying calm
Support seeking	Contact seeking	• Spending time with family and friends • Using student-led networking programmes • Volunteering • Being with people from outside course of study
	Comfort seeking	• Talking about difficulties and issues with friends and family • Religious belief/belief in a higher power guiding life/trust in god • Going to religious & spiritual places • Praying/Chanting • Keeping others informed about situation • Debriefing with others • Reassuring, supporting and comforting others
	Instrumental aid	• Seeking financial support from friends • Getting training for financial/time management from university • Taking study skill courses • Seeking formal mental health treatment/counselling/talk therapy • Using campus student support office • Communication with peers about employment opportunities
	Spiritual support	• Seeking support from religious leaders
Delegation	Maladaptive help seeking	• Letting others make decisions for me
	Complaining	[none identified]
	Whining	• Venting (including on social media)
	Self-pity	• Self-blame
Isolation	Social withdrawal	• Isolating from others
	Concealment	• Suppression of emotions • Becoming more detached from patients/focusing on the clinical • Staying silent/not telling others about situation
	Avoiding others	• Distance from people on same course • Avoiding person causing stress
Accommodation	Distraction	• Exercise • Walking

(*Continued*)

Table 3. Continued.

Family of coping	Coping strategy	Example of instance of coping from qualitative literature
		• Listening to music • Watching movies • Playing video games • Cooking • Playing instruments • Shopping • Reading • Excessive cleaning • Browsing the internet • Interaction with animals
	Cognitive restructuring	• Valuing the process, not just the end result • Eye on the prize mentality • Finding meanings in experiences • Rationalising events • Seeing school as a means to an end • Focusing on learning rather than grades • Not comparing self to others on the course • Perceiving self as part of the future in their profession • Focusing on future wishes and aspirations • Recognising gradual process of adapting and building skills • Realism – knowing perfectionism is bad • Treat the situation as a learning experience • Thinking optimistically
	Minimization	• Putting disappointments into perspective • Seeing the bigger purpose as a form of motivation • Developing thick skin • Not taking it personally
	Acceptance	• Positive self-talk – repeating motivational sentences/self affirmations • Believing in values and beliefs about who they are • Trusting in one's abilities • Knowing self and capabilities • Recognising limited ability to impact situation/focusing on what perceived as being in control • Being honest about skills/lack of experience • Conforming to demands and expectations of others/situation • Accepting feedback/criticism
Negotiation	Bargaining	• Adjusting employment expectations • Having realistic expectations
	Persuasion	• Seeing things from a third-party perspective • Educating white peers/others • Cultural advocacy
	Priority-setting	• Reconsidering priorities • Setting short and long term goals and doing appraisals • Being motivated by career prospects • Prioritising wellbeing
Submission	Rumination	[none identified]
	Rigid perseveration	• Developing a thick skin
	Intrusive thoughts	• Expecting the worst
Opposition	Other-blame	[none identified]
	Projection	[none identified]
	Aggression	• Shouting • Getting into conflict with others

shown in Figure 2. Centring this analysis around the qualitative research on students' own descriptions (through interviews, focus groups, open-ended surveys, written and spoken reflections, and diary studies) better represents the lived experience of how students cope at university. The four overarching themes included "managing emotions", "connecting with interests and others", "skills building" and "seeking and offering support". There were noticeable interesting findings that deviated from traditional coping inventories



Figure 2. Thematic Overview of the Students' Lived Experiences of Coping as Reported in the Qualitative Literature.

described so far. The theme on "managing emotions" had a focus on trying to reduce negative emotions from stress as well as avoidance, distraction and trying to reframe the situation. The theme on "connecting with interests and others" demonstrated how students foster positive emotions through cultivating connection and belonging to their interests and key people in their lives. Both of these themes were individual level

and centred the student in their coping experience. Two additional themes related to coping resources or processes students use which can be promoted at an institutional-level. For example, the "skills building" theme included the way students can cope by focusing on future plans related to their employment opportunities. The second institutional-level theme "seeking and offering support" demonstrated how students' engagement with support relates to their institutional context, university and peers (as well as family and friends) and is far more complicated and contextual than was represented in the Skinner et al. (2003) framework which focuses simply on the type of support sought (e.g. comfort, instrumental, spiritual). Our thematic overview indicated that students have to determine when and whether to engage with support, and sometimes they may find not seeking support to be an appropriate response. Students make decisions around what type of support they think they need (e.g. practical, informational, financial, emotional) and whether to access mental health services or disclose their mental health status to their universities at all. Interestingly, students sometimes cope with their stress by helping and supporting others such as their peers, which does not appear to be represented in Skinner et al.'s (2003) framework.

Summary

Many qualitative studies describe particular examples of coping that students use, not all of which are typically represented in general coping measures particularly as they relate to more recent cultural and social changes (videoconference calls, social media distraction). Data from qualitative work could be put to better use by developing measures that reflect these findings which may be overlooked in traditional frameworks of coping such as Skinner et al. (2003). Bringing together the qualitative work highlights that coping can be fostered and promoted at the institutional level through supporting skills building and guidance around support-seeking options and decision-making, and that students can also be reminded and encouraged in their individual-level personal coping choices.

How is effectiveness of students' coping considered?

Across all studies in this review, only a small proportion considered the effectiveness of coping. A limited number of studies asked students themselves about the effectiveness of coping or students' perceptions of the suitability of their coping responses to help them manage stress. For example, in Cruz et al.'s (2013) study of physical activity and academic stress in Puerto Rico, 62% of participants considered physical activity as an effective coping strategy. In their study, Donohoe et al. (2020) used group concept mapping with Irish medical school students to brainstorm, categorise and rate the effectiveness of strategies used to manage stress. Donohoe et al. (2020) found that spending time with family and friends and destressing through sport were rated as highly effective ways to reduce stress and promote resilience. In contrast, self-enabled distraction was rated poorly as a way to reduce stress. Garber (2017) used an open question in their survey to ask participants what they had found to be an effective way to cope with stress. Garber (2017) also reported that students rated physical exercise and talking to others as the most effective methods for coping with stress. In Wu et al.'s (2018) survey, participants were asked to rate the effectiveness of coping responses they had used. Similar to Donohoe et al. (2020),

distraction strategies such as avoidance and wishful thinking were deemed least effective at coping with stress. Wu et al. (2018) also reported that seeking instrumental social support was rated as most effective for coping with stress. The authors noted that students indicated different preferences for coping based on the context of the stressor, for example during examination periods they preferred problem-solving by working hard and also positive reappraisal about the stress. Wu et al.'s (2018) findings offer a more nuanced way to understand that student coping choices vary in relation to their contextual situation.

Summary

This review found that the majority of the research on coping explores types of coping with little examination about what works for whom and in which particular domains of stress. The limited research on effectiveness indicates that students find some forms of coping counterproductive for stress during their study. Additionally, some coping such as exercise and talking to others may be particularly effective for students at university. As such, there is a gap in the literature for exploring what constitutes healthy and effective coping, and how students identify and manage unhealthy and ineffective coping over the course of their studies. Going forward, research studies using self-report questionnaires that explore coping strategies that individuals use which overlook the possibility of maladaptive coping (such as extended distraction) could be insensitive to determining coping effectiveness.

Discussion

Our scoping review mapped the research literature on students' coping at university, paying attention to the conceptualisation, measurement and findings related to coping with stress. We explored the international English language literature to determine the country context of study and the subject disciplines that have been investigated about student coping with stress. This broad review has allowed us to make conclusions about the development of this research field and make recommendations for research in the future.

This review identified that there was an unequal geographical representation of studies included in the current review. The majority of studies were conducted among students studying at higher education institutions located in Asia (30%) and Northern America (28%). Research with students studying at institutions located in Latin America and the Caribbean (2%) were under-represented. It is not known if this denotes a deficiency of research on this topic in this world region, or rather is a result of a limitation of our scoping review being restricted to publications in the English language. We recommend that research could be undertaken to translate research reported in other popular global languages, such as Spanish and Portuguese, to combine the international scholarship on the topic to better understand the fuller extent and scope of the research on students' coping.

A large proportion of studies included in this review were conducted with students engaged in clinical health programmes. Students studying these degrees face unique and specific stressors such as clinical placement, operating room practice, handling challenging or aggressive patients, dissection training and end-of-life care. However, stress

and its consequences for mental health is a concern across the higher education sector and is not limited to any one discipline. To inform university interventions, research on student stress and coping needs to be more representative of the student body. Institutional culture around the value of scholarship of teaching and learning (SoTL), including its unequal position to other forms of research, can create barriers to higher education practitioners' engagement in SoTL (Webb, 2019). In health-related degrees, SoTL is sometimes promoted as a route for clinical faculty members into research and a means of teaching professional development and promotion (Gubbins, 2014), and consequently how SoTL is viewed and valued may differ between disciplines. As such, it is plausible that the disproportionate research on student coping from the health domains, could represent wider university structural issues relating to faculty members' employment which need addressing at university leadership levels, to reduce the disparity in our knowledge about student coping in non-health disciplines. Potentially, there are possible structural factors, such as the availability of funding for medical and nursing scholarship and the availability of scholarship-focused research journals in the health sciences, which might underpin the subject discipline-related inequities found in the present review. This hypothesis warrants further investigation through future research to better understand the disproportionate focus on clinical students' coping strategies at university in the research literature. Higher education institutions need to foster a culture that promotes and enables staff across academic disciplines to engage in SoTL, including recognising this work in promotion criteria and university strategies, committing resources such as staff time and finance, and valuing findings through installing mechanisms that allow findings to feed into teaching practice (Webb, 2019).

Only ten studies included in our review were longitudinal in nature which means that, most commonly, stress and coping was explored at a single point in time by studies as one might explore an acute stressor (rather than chronic stress which occurs over an extended period of time). Research, however, suggests that levels of stress and anxiety vary over the student journey. For example, in Liu et al.'s (2019) study among Chinese undergraduate students, mean stress scores (as measured by the DASS-21 stress subscale) were highest in the second year and lowest in the final year. In Bewick et al.'s (2010) study among undergraduate students at a UK university, levels of anxiety were generally higher in semester 1 than semester 2 in each year of study, which could imply transitions to the next year of study are particularly stressful. Lazarus and Folkman's (1984) transactional model of stress views coping as a dynamic process that is the outcome of the interaction between the individual and their environment. Through this lens, the adoption of coping strategies can vary within an individual due to the nature of the stress and resources and the options available at a specific time. In line with this model of stress, our thematic overview demonstrated the dynamic nature of students' support seeking and offering support, for example some students found it helped them to cope better when they helped others. The mechanisms by which offering support to others helps students cope themselves should be investigated in future research as it may allow them to build stronger relationships with peers, build their sense of confidence or improve their sense of self.

This review also indicated that seeking support also included a temporal dimension. For example, our findings highlighted that students consider the timing of support, the need for informal or formal support, and whether to involve qualified mental health

services staff. These findings all indicated that support seeking is a journey which the student reflects on to make particular choices in the present and they might hold in mind options for the future. Additionally, students can choose not to seek support as a way to cope because, after reflection, they may wish not to seek formal support or disclose their mental health status to their universities due to perceived repercussions. This indicates that students' need to maintain their privacy is a factor in deciding the best ways to cope and that universities may need to build trust and ensure confidentiality to be able to more effectively support students who are struggling in private. These findings also reinforce the dynamic and interactive nature of coping in line with Lazarus and Folkman (1984). Consequently, more longitudinal research is needed to explore the evolving nature of coping in response to both an unfolding situation and stressor and to different stressors over time. Coping flexibility, which considers individuals' ability to modify coping (Cheng et al., 2014), would be beneficial to explore in order to better understand student coping in greater depth over time.

Differences exist in the studies included in this review in the specificity of stress explored or described. Some studies asked students how they cope with stress, or a range of stressors in general, whilst other studies included in the review asked students how they coped with stress associated with a specific context/situation. For example, students engaged in health-related degrees were sometimes asked about situation-specific stress related to managing challenging patients, end-of-life care or dissecting room training. Elsewhere, students studying non-health related degrees were sometimes asked about the stress of specific contexts/situations such as race-related stress during study, acculturative stress, combining motherhood with internships, or experiences of a different classroom practices. Asking how individuals cope in general fails to recognise the complexity of coping and ignores that situational variability may exist, and positions coping as a trait rather than a process (De Ridder, 1997). More research is needed into coping strategies that students use in response to particular domains of stressors, and whether this matches the findings about how students cope more generally with stress. For example, research by Waterhouse et al. (2020) among distance education students found that those who reported higher perceived levels of work-study conflict and family-study conflict were at increased risk of reporting more severe levels of stress as measured by the DASS-21. As such, this contextual stressor of study conflict had implications for their overall stress levels and these students may benefit from coping guidance and support that relates directly to this context. Despite this finding relating to the challenges of working and managing family demands whilst studying, little is known about processes of coping among these students, with much of the focus on their stress levels as opposed to coping choices. In the present review, Wu et al. (2018) reported that students made different coping choices related to the stressor, such as exam stress, which also indicates that coping differs according to the stressor context. It will be challenging for universities to support students without more understanding of how they currently cope given the complexities of their life demands and wider contextual factors such as managing work and family demands.

This review indicated that the international research on coping strategies has relied on pre-existing categorisations and taxonomies of types of coping. However, the research reviewed here shows that there is a lack of investigation into what students actually

think about their coping strategies, their own evaluations of the effectiveness of their chosen coping strategies and what helps or hinders their academic study journey. The thematic overview of the 50 qualitative studies is a key strength of this work. This overview better represents students' lived experiences of coping with stress as it draws on the descriptively rich work of studies that typically used student interviews, focus groups, open-ended surveys, reflections and diaries. There is now an immediate opportunity to develop more student-focused questionnaires about coping with stress by investigating the types of coping that are relevant to students' lived experience such as by drawing on the thematic overview presented in this study. Students described many coping responses that they engaged in which can be offered at the institutional level and through instructional design (such as action planning to manage study and life demands and changing career intentions). Students also described their individual-level personal coping choices, which can also be recognised by universities and staff as an array of students' coping choices which they may be able to promote on campus or online (such as journaling, relaxation, and improving food and sleeping habits). As identified in this review, students have study-related stressors which include concerns about their teaching experience and instructional quality, managing their work-family-life commitments alongside study, or adjusting to a new educational location and context. These stressors could be acknowledged by universities during induction and during course transitions to help students connect with peers about how to manage and cope with study-related stressors alongside others in similar situations.

This review identified that there is a lack of investigation into coping response evaluations as understood by students (rather than researchers) related to which coping responses are helpful and effective, in which circumstances, and to what extent. Some coping strategies can become unhelpful if overused, for example, despite the common use of distraction coping across many studies in this review, self-enabled distraction was considered least effective for stress reduction (Donohoe et al., 2020) and avoidance strategies were considered to predict greater perceived stress (Zhang and Henderson, 2022). It is plausible that overuse of some strategies are counterproductive to academic study as they can promote procrastination (Apgar & Cadmus, 2022). We call on future researchers to develop more understanding of the characteristics of a student's life and circumstances that contribute to stress at university over time. Additionally, we recommend that researchers also investigate what enables or disables students in making good decisions about the appropriateness and extent of supportive coping strategies for their academic journey.

There are several limitations of our scoping review that merit discussion. The limitations of the review being restricted to publications in English have already been discussed. The exclusion of "grey" literature may mean that we missed potentially relevant findings. It is possible we may have missed results based on our search strategy and that others may have made different decisions regarding inclusion/criteria and the parameters of this scoping review. However, this scoping review included and mapped 165 published studies on the topic. We did not conduct a quality appraisal of included studies as this was outside the scope of the review of identifying key trends in the research literature. Future research that aims to inform guidelines and make recommendations concerning student support needs to consider methodological evaluations.

Conclusion

This scoping review sought to explore the key trends of research exploring the coping strategies of students at university. Most studies also focused on students in clinical or health-related degrees such as nursing or medicine. Gaps exist in terms of the populations of coping research, both in relation to countries of study and subject discipline. Often papers asked students to report how they dealt with stress in general, rather than in relation to particular domains of stress, which ignores the situational variability of coping. It cannot be assumed that how students report dealing with stress (in general) reflects how they deal with study-related stressors, such as living issues, academic difficulties, financial concerns, fears and uncertainty about future careers and employment. Furthermore, the cross-sectional nature of the majority of studies has not allowed for the exploration of the dynamic nature of student coping and how coping may change in response to an evolving stressor or as a result of chronic stress. This review identified that, across studies, coping has been conceptualised at different levels, and sometimes unclearly. Reports about how students cope with stress oscillate between highly specific behaviours to very broad overall strategies with the latter lacking enough detail to be useful to practitioners. Our analysis of the qualitative data on student coping revealed limitations of using general coping frameworks to categorise the ways students cope. There exists the need to better understand students' lived experiences which is an issue our thematic overview of student coping begins to address. Our creation of a broader thematic overview drawn from the qualitative literature highlights far more nuanced and complex support seeking actions and decision-making by students than is represented in the general coping literature which tends to focus on the type of support sought. Future reviews should include examination of the processes of student support-seeking in order to best help them cope. We identify a range of coping responses students engage with that can be fostered at the individual level and the institutional level which can inform interventions by practitioners and researchers to promote student coping at university.

Acknowledgements

We would like to acknowledge and thank Dr Kirstie McClatchey for her role in contributing to the design of the search strategy and conducting the search of the literature and her assistance in screening the abstracts in line with the inclusion and exclusion criteria.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This article provided internal funding support from Research and Enterprise Services at The Open University.

ORCID

Philippa Waterhouse http://orcid.org/0000-0001-5213-0593
Rajvinder Samra http://orcid.org/0000-0002-5255-4238

References

References for articles included in the scoping review analysis are available in the online supplemented materials

Abbasi, M., Al Erasky, M., Yasmeen, R., & Ashfaq, R. (2021). The effective coping strategies against burnout: Perceptions of Pakistani medical students. *Journal of Pakistan Medical Association*, *71*(6), 1583. https://doi.org/10.47391/JPMA.1292

Abdelhafez, A. I., Elcokany, N. M., Ghaly, A. S., & Akhter, F. (2020). Learning environment stressors and coping styles among nursing students. *International Journal of Nursing Education*, *12*(4), 6–14. https://doi.org/10.37506/ijone.v12i4.11209

Abolghasemi, A., & Varaniyab, S. T. (2010). Resilience and perceived stress: Predictors of life satisfaction in the students of success and failure. *Procedia-Social and Behavioral Sciences*, *5*, 748–752. https://doi.org/10.1016/j.sbspro.2010.07.178

Abu-Kaf, S., & Khalaf, E. (2020). Acculturative stress among Arab students in Israel: The role of sense of coherence and coping strategies. *International Journal of Environmental Research and Public Health*, *17*, 5016. https://doi.org/10.3390/ijerph17145106

Adasi, G. S., Amponsah, K. D., Mohammed, S. M., Yeboah, R., & Mintah, P. C. (2020). Gender differences in stressors and coping strategies among teacher education students at University of Ghana. *Journal of Education and Learning*, *9*(2), 123–133. https://doi.org/10.55939/jel.v9n2p123

Ahmad, M. S., Yusoff, M. M. M., & Razak, I. A. (2011). Stress and its relief among undergraduate dental students in Malaysia. *Southeast Asian Journal of Tropical Medicine and Public Health*, *42*(4), 996–1004.

Ahmed, W. A. M., & Mohammed, B. M. A. (2019). Nursing students' stress and coping strategies during clinical training in KSA. *Journal of Taibah University Medical Sciences*, *14*(2), 116–122. https://doi.org/10.1016/j.jtumed.2019.02.002

Al-Gamal, E., Alhosian, A., & Alsunaye, K. (2018). Stress and coping strategies among Saudi nursing students during clinical education. *Perspectives in Psychiatric Care*, *54*(2), 198–205. https://doi.org/10.1111/ppc.12223

Alshahrani, Y., Cusack, L., & Rasmussen, P. (2018). Undergraduate nursing students' strategies for coping with their first clinical placement: A descriptive survey study. *Nurse Education Today*, *69*, 104–108. https://doi.org/10.1016/j.nedt.2018.07.005

Al-Zayyat, A. S., & Al-Gamal, E. (2014). Perceived stress and coping strategies among Jordanian nursing students during clinical practice in psychiatric/mental health courses. *International Journal of Mental Health Nursing*, *23*(4), 326–335. https://doi.org/10.1111/inm.12054

Amanvermez, Y., Rahmadiana, M., Karyotaki, E., de Wit, L., Ebert, D. D., Kessler, R. C., & Cuijpers, P. (2020). Stress management interventions for college students: A systematic review and meta-analysis. *Clinical Psychology: Science and Practice*, *30*(4), 423–444. https://doi.org/10.1111/cpsp.12342

American College Health Association. (2022). *American college health association-national college health assessment III: Undergraduate student reference group executive summary spring 2022*. https://www.acha.org/documents/ncha/NCHA-III_SPRING_2022_UNDERGRAD_REFERENCE_GROUP_EXECUTIVE_SUMMARY.pdf

Amirkhan, J. H., & Kofman, Y. B. (2018). Stress overload as a red flag for freshman failure and attrition. *Contemporary Educational Psychology*, *54*, 297–308. https://doi.org/10.1016/j.cedpsych.2018.07.004

Amponsah, K. D., Adasi, G. S., Mohammed, S. M., Ampadu, E., & Okrah, A. K. (2020). Stressors and coping strategies: The case of teacher education students at University of Ghana. *Cogent Education*, *7*(1), 1727666. https://doi.org/10.1080/2331186X.2020.1727666

Apgar, D., & Cadmus, T. (2022). Using mixed methods to assess the coping and self-regulation of undergraduate social work students impacted by COVID-19. *Clinical Social Work Journal*, *50,* 55–66. https://doi.org/10.1007/s10615-021-00790-3

Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, *8*(1), 19–32. https://doi.org/10.1080/1364557032000119616

Arslantürk, K., & Öz, F. (2020). Health sciences undergraduate students' perceived meaning of life and their coping styles. *Perspectives in Psychiatric Care*, *56*(2), 439–447. https://doi.org/10.111/ppc.12453

Aselton, P. (2012). Sources of stress and coping in American college students who have been diagnosed with depression. *Journal of Child and Adolescent Psychiatric Nursing*, *25*(3), 119–123. https://do.org/10.1111j.1744-6171.2012.00341.x

Asokan, S., Ramakrishnan, G. R., Ranganatham, K. V., Viswanath, S., & Sivasamy, S. (2021). Stress amongst paediatric dental postgraduate students in India: A mixed-method approach. *European Journal of Dental Education*, *26*(3), 629–638. https://doi.org/10.1111/eje/12740

Ayed, A., & Amoudi, M. (2020). Stress sources of physical therapy students' and behaviors of coping in clinical practice: A Palestinian perspective. *The Journal of Health Care Organization, Provision and Financing*, *57*, 1–6. https://doi.org/10.1177/0046958020944642

Babicka-Wirkus, A., Wirkus, L., Stasiak, K., & Kozlowski, P. (2021). University students' strategies of coping with stress during the coronavirus pandemic: Data from Poland. *PLoS ONE*, *16*(7), e0255041. https://doi.org/10.1371/journal.pone.0255041

Badri, A., Van den Borne, E., & Crutzen, R. (2013). Experiences and psychosocial adjustment of Darfuri female students affected by war: An exploratory study. *International Journal of Psychology*, *48*(5), 944–953. http://doi.org/10.1080/00207594.2012.696652

Baluwa, M. A., Lazaro, M., Mhango, L., & Msiska, G. (2021). Stress and coping strategies among Malawian undergraduate nursing students. *Advances in Medical Education and Practice*, *12,* 547–556. https://doi.org/10.2147/AMEP.S300457

Banstola, B., Shakya, N., & Sharma, P. (2021). Anxiety among nursing students towards clinical placement during COVID-19 in a tertiary hospital of Nepal: A descriptive cross-sectional study. *Journal of Nepal Medical Association*, *59*(238), 542–546. https://doi.org/10.3172/jnma.6132

Barrot, J. S., Llenares, I. I., & del Rosario, L. S. (2021). Students' online learning challenges during the pandemic and how they cope with them: The case of the Philippines. *Education and Information Technologies*, *26*, 7321–7338. https://doi.irg/10.1007s10639-021-10589

Batley, N. J., Bakhti, R., Chami, A., Jabbour, E., Bachir, R., El Khuri, E., & Mufarrij, A. J. (2017). The effect of patient death on medical students in the emergency department. *BMC Medical Education*, *17*, 110. https://doi.org/10.1186/s12909-017-0945-9

Bewick, B., Koutsopoulou, G., Miles, J., Slaa, E., & Barkman, M. (2010). Changes in undergraduate students' psychological wellbeing as they progress through university. *Studies in Higher Education*, *35*(6), 633–645. https://doi.org/10.1080/03075070903216643

Bhurtun, H. D., Azimirad, M., & Turunen, H. (2019). Stress and coping among nursing students during clinical training: An integrative review. *Journal of Nurse Education*, *59*(5), 266–272. https://doi.org/10.3928/01484834-20190422-04

Bhurtun, H. D., Saaranen, T., Estola, M., & Turunen, H. (2021a). Stress in the clinical learning environment: Perceptions of first-year Finnish nursing students. *Nursing Education Perspectives*, *42*(1), E2–E6. https://doi.org/10.1097/01.NEP.0000000000000693

Bhurtun, H. D., Turunen, H., Estola, M., & Saaranen, T. (2021b). Changes in stress levels and coping strategies among Finnish nursing students. *Nurse Education in Practice*, *50,* 102958. https://doi.org/10.1016/j.nepr.2020.102958

Bledsoe, S., Baskin, J. J., & Berry, F. (2018). Fear not! How students cope with fears and anxieties of college life. *College Teaching*, *66*(3), 158–165. https://doi.org/10.1080/87567555.2018.1472064

Bob, M. H., Popescu, C. A., Armean, M. S., Suciu, S. M., and Buzoianu, A. D. (2014). Ethical views, attitudes and reactions of Romanian medical students to the dissecting room. *Revista Medico-Chirurgicala a Societatii de Medidici si Naturalisti din Iasi*, *118*(4): 1078–1085.

Bovero, A., Tosi, C., Miniotti, M., Torta, R., & Leombruni, P. (2018). Medical students reflections towards end-of-life: A Hospice experience. *Journal of Cancer Education, 33*(3), 634–639. http://doi.org/10.1007/s13187-017-1171-1

Bowden, J. (2008). Why do nursing students who consider leaving stay on their courses? *Nurse Researcher*, *15*(3), 45–58. https://doi.org/10.7748/nr2008.04.15.3.45.c6456

Brigati, J. R., England, B. J., & Schussler, E. E. (2020). How do undergraduates cope with anxiety resulting from active learning practices in introductory biology? *PLOS One*, *15*(8), e0236558. https://doi.org/10.1371/journal.pone.0236558

Brougham, R. R., Zail, C. M., Mendoza, C. M., & Miller, J. R. (2009). Stress, sex differences and coping strategies among college students. *Current Psychology*, *28*, 85–97. https://doi.org/10.1007/s13144-009-9047-0

Bryl, N., Czarnecka-Iwańczuk, M., Romanowska, M., Goran-Stanišić, M., Michalak, M., & Posadzy-Malaczyńska, A. (2020). Drinking alcohol as a way of coping with stress in students of medical faculties. *Psychiatria Polska*, *54*(2), 265–277. https://doi.org/10.1240/PP/99029

Burnard, P., Binti, H. T., Rahim, H. A., Hayes, D., & Edwards, D. (2007). A descriptive study of Bruneian student nurses' perceptions of stress. *Nurse Education Today*, *27*(7), 808–818. https://doi.org/10.1016/j.nedt.2006.11.002

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the brief COPE. *International Journal of Behavioral Medicine*, *4*(1), 92–100. https://doi.org/10.1207/s15327558ijbm0401_6

Casafont, C., Fabrella, N., Rivera, P., Olivé-Ferrer, M.C., Querol, E., Venturas, M., Prats, J., Cuzco, C., Frías, C. E., Pérez-Ortega, S., & Zabalegui, A. (2021). Experiences of nursing students as healthcare aid during the COVID-19 pandemic in Spain: A phenomenological research study. *Nurse Education Today*, *97*, 104711. https://doi.org/10.106/j.nedt.2020.104711

Caskurlu, S., Richardson, J. C., Maeda, Y., & Kozan, K. (2021). The qualitative evidence behind the factors impacting online learning experiences as informed by the community of inquiry framework: A thematic synthesis. *Computers & Education*, *165*, 104111. https://doi.org/10.1016/j.compedu.2020.104111

Chaabane, S., Chaabna, K., Bhagat, S., Abraham, A., Doraiswamy, S., Mamtani, R., & Cheema, S. (2021). Perceived stress, stressors, and coping strategies among nursing students in the Middle East and North Africa: An overview of systematic reviews. *Systematic Reviews*, *10*(1), 136. https://doi.org/10.1186/s13643-021-01691-9

Chan, C., So, W. K. W. & Fong, D. Y. T. (2009). Hong Kong baccalaureate nursing students' stress and their coping strategies in clinical practice. *Journal of Professional Nursing*, *25*(5), 307–313. https://doi.org/10.1016/j.profnurs.2009.01.018

Chang, E., Eddins-Folensbee, F., & Coverdale, J. (2012). Survey of the prevalence of burnout, stress, depression and the use of supports by medical students at one school. *Academic Psychiatry*, *36*(3), 177–182. https://doi.10.1176appi.ap.11040079

Chang, J. (2015). The interplay between collectivism and social support process among Asian and Latino American college students. *Asian American Journal of Psychology*, *6*(1), 4–14. https://doi.org/10.1037/a0035820

Cheng, C., Lau, H. B., & Chan, M. S. (2014). Coping flexibility and psychological adjustment to stressful life changes: A meta-analysis review. *Psychological Bulletin*, *140*(6), 1582–1607. https://doi.org/10.1037/a0037913

Ching, S. S. Y., Cheung, K., Hegney, D., & Rees, C. S. (2020). Stressors and coping of nursing students in clinical placement: A qualitative study contextualizing their resilience and burnout. *Nurse Education in Practice*, *42*, 102690. https://doi.org/10.1016/j.nepr.2019.102690

Christopherson, S., Gertler, M., & Gray, M. (2014). Universities in crisis. *Cambridge Journal of Regions, Economy and Society*, *7*(2), 209–215. https://doi.org/10.1093/cjres/rsu006

Clark, C. M., Nguyen, D. T., & Barbosa-Leiker, C. (2014). Students' perceptions of stress, coping, relationships and academic civility: A longitudinal study. *Nurse Educator*, *39*(4), 170–174. https://doi.org/10.1097/NNE.0000000000000049

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, *24*(4), 385–396. https://doi.org/10.2307/2136404

Crary, P. (2013). Beliefs, behaviors and health of undergraduate nursing students. *Holistic Nursing Practice*, *27*(2), 74–88. https://doi.org/10.1097/HNP.0B013e318280f75e

Crouch, A. T. (2019). Perceptions of the possible impact of dyslexia on nursing and midwifery students and of the coping strategies they develop and/or use to help them cope in clinical practice. *Nurse Education in Practice*, *35*, 90–97. https://doi.org/10.1016/j.nepr.2018.12.008

Cruz, S. Y., Fabián, C., Pagán, I., Rios, J. L., González, A. M., Betancourt, J., González, M. J., Rivera-Soto, W. T., & Palacios, C. (2013). Physical activity and its association with socio-demographic characteristics, dietary patterns, and perceived academic stress in students attending college in Puerto Rico. *Puerto Rico Health Sciences Journal*, *32*(1), 44–50.

Dawson, A. F., Brown, W. W., Anderson, J., Datta, B., Donald, J. N., Hong, K., Allan, S., Mole, T. B., Jones, P. B., & Galante, J. (2019). Mindfulness-based interventions for university students: A systematic review and meta-analysis of randomised controlled trials. *Applied Psychology: Health and Wellbeing*, *12*(2), 384–410. https://doi.org/10.1111/aphw.12188

De Ridder, D. (1997). What is wrong with coping assessment? A review of conceptual and methodological issues. *Psychology and Health*, *12*(3), 417–431. https://doi.org/10.1080/08870449708406717

Deasy, C., Coughlan, B., Pironom, J., Jourdan, D., & Mcnamara, P. M. (2014). Psychological distress and lifestyle of students: Implications for health promotion. *Health Promotion International*, *30*(1), 77–87. https://doi.org/10.1093/heapro/dau086

Denovan, A., & Macaskill, A. (2013). An interpretative phenomenological analysis of stress and coping in first year undergraduates. *British Educational Research Journal*, *39*(6), 1002–1024. https://doi.org/10.1002/berj.3019

Dickson, M. (2019). Student mothers' experiences of workplace internships. *Journal of Workplace Learning*, *31*(7), 465–480. https://doi.org/10.1108/JWL-12-2018-0151

Donohoe, J., o'Rourke, M., Hammond, S., Stoyanov, S., & O'Tuathaigh, C. (2020). Strategies for enhancing resilience in medical students: A group concept mapping analysis. *Academic Psychiatry*, *44*(4), 427–431. https://doi.org/10.1007/s40596-020-01208-x

Dorantes, A. R., & Low, J. R. (2016). Financial crisis management in higher education: Responses by 20 private colleges and universities to the 2007-2009 financial crisis. *Journal of Education Finance*, *42*(2), 188–219. https://doi.org/10.1353/jef.2016.a649725 https://www.jstor.org/stable/44162581

Edo-Gual, M., Tomás-Sábado, J., Bardallo-Porras, D., & Monforte-Royo, C. (2014). The impact of death and dying on nursing students: An exploratory model. *Journal of Clinical Nursing*, *23*(23-24): 3501–3512. https://do.org/10.1111jocn.12602

Endler, N. S., & Parker, J. D. (1990). *Coping inventory for stressful situations (CISS): manual*. Multi-Health Systems.

Engelbrecht, L., Mostert, K., Pienaar, J., & Kahl, C. (2020). Coping processes of South African first year university students: An exploratory study. *Journal of Student Affairs*, *8*(2), 1–16. https://doi.org/10.24085/jsaa.v8i2.443

Ersan, N., Fişekçioğlu, E., Dölekoğlu, S., Oktay, I., & Ilgüy, D. (2017). Perceived sources and levels of stress, general self-efficacy and coping strategies in clinical dental students. *Psychology, Health and Medicine*, *22*(10), 1175–1185. https://doi.org/10.1080/13548506.2017.1286359

Erschen, R., Loda, T., Herrmann-Werner, A., Keifenheim, K. E., Stuber, F., Nikendei, C., Zipfel, S., & Junne, F. (2018). Behaviour-based functional and dysfunctional strategies of medical students to cope with burnout. *Medical Education Online*, *23*, 1535738. https://doi.org/10.1080/10872981.2018.1535738

Ersig, A. L. (2019). An exploratory study: Transition for college students with type 1 diabetes and their parents. *Journal of Pediatric Nursing*, *46*, 12–17. https://doi.org/10.1016/j.pedn.2019.01.008

Faize, F. A., & Husain, W. (2021). Students with severe anxiety during COVID-19 lockdown – exploring the impact and its management. *The Journal of Mental Health Training, Education and Practice*, *16*(2), 153–163. https://doi.org/10.1108/JMHTEP-09-2020-0062

Fawaz, M., Al Nakhal, M., & Itani, M. (2022). COVID-19 quarantine stressors and management among Lebanese students: A qualitative study. *Current Psychology*, *41*, 7628–7635. https://doi.org/10.1007/s12144-020-01307-w

Findik, U. Y., Ozbas, A., Cavdar, I., Topcu, S. Y., & Onler, E. (2015). Assessment of nursing students' stress levels and coping strategies in operating room practice. *Nurse Education in Practice*, *15*(3), 192–195. https://doi.org/10.106/j.nepr.2014.11008

Fitzgibbon, F., & Murphy, K. D. (2023). Coping strategies of healthcare professional students for stress incurred during their studies: A literature review. *Journal of Mental Health*, *32*(2), 492–503. https://doi.org/10.1080/09638237.2021.2022616

Folkman, S., & Lazarus, R. S. (1988). *Manual for the ways of coping questionnaire*. Palo Alto, Consulting Psychology Press.

Foster, K. M., & McCloughen, A. J. (2020). Emotionally intelligent strategies students use to manage challenging interactions with patients and families: A qualitative inquiry. *Nurse Education in Practice*, *43*, 102743. https://doi.org/10.1016/j.nepr.2020.102743

Frazier, P., Liu, Y., Asplund, A., Meredith, L., & Nguyen-Feng, V. N. (2021). US college student mental health and COVID-19: Comparing pre-pandemic and pandemic timepoints. *Journal of American College Health*, *11*, 1–11. https://doi.org/10.1080/074481.2021.1987247

Gadzella, B. M. (1994). Student-life stress inventory: Identification of and reactions to stressors. *Psychological Reports*, *74*(2), 395–402. https://doi.org/10.2466/pr0.1994.74.2.395

Garbee, W. H., Zucker, S. B., & Selby, G. R. (1980). Perceived sources of stress among dental students. *Journal of the American Dental Association*, *100*(6), 853–857. https://doi.org/10.14219/jada.archive.1980.0279

Garber, M. C. (2017). Exercise a stress coping mechanism in a pharmacy student population. *American Journal of Pharmaceutical Education*, *81*(3), 50.

Gomathi, K. G., Ahmed, S., & Sreedharan, J. (2013). Causes of stress and coping strategies adopted by undergraduate health professions students in a university in the United Arab Emirates. *Sultan Qaboos University Medical Journal*, *13*(3), 437–441.

Govender, P., Mkhabela, S., Hlongwane, M., Jalim, K., & Jetha, C. (2015). OT student's experiences of stress and coping. *South African Journal of Occupational Therapy*, *45*(3), 34–39. https://doi.org/10.17159/2310-3833/2015/v45n3/a7

Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information & Libraries Journal*, *26*(2), 91–108. https://doi.org/10.1111/j.1471-1842.2009.00848.x

Greenman, J., Lowe, G., Urquhart, J., & Lowe, G. (2000). Academic stress and secretory immunoglobin A. *Psychological Reports*, *87*(3), 721–722. https://doi.org/10.2466/pr0.2000.87.3.721

Griffith, A. N., Hurd, N. M., & Hussain, S. B. (2019). I didn't come to school for this": A qualitative examination of experiences with race-related stressors and coping responses among Black students attending a predominantly white institution. *Journal of Adolescent Research*, *34*(2), 115–139. https://doi.org/10.1177/0743558417742983

Gross, J. J. (2008). Emotion and emotion regulation: Personality processes and individual differences. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 701–724). Guilford Press.

Gubbins, P. O. (2014). The scholarship of teaching and learning: An opportunity for clinical faculty members in academic pharmacy and other health professions to develop a program of scholarship. *International Journal of Teaching and Learning*, *8*(1), Article 3. https://doi.org/10.20429/ijsotl.2014.080103

Gustems-Carnicer, J., Calderón, C., & Calderón-Garrido, D. (2019). Stress, coping strategies and academic achievement in teacher education students. *European Journal of Teacher Education*, *42*(3), 375–390. https://doi.org/10.1080/02619768.2019.1576629

Guszkowska, M., & Dąbrowska-Zimakowksa, A. (2022). Coping with stress during the second wave of the COVID-19 pandemic by Polish university students: Strategies, structure, and relation to psychological well-being. *Psychology Research and Behavior Management*, *15*, 339–352. https://doi.org/10.2147/PRBM.S345648

Hamadi, H. Y., Zakari, N. M. A., Jibreel, E., Nami, F. N. A. L., Smida, J. A. S., & Haddad, H. H. B. (2021). Stress and coping strategies among nursing students in clinical practice during COVID-19. *Nursing Reports*, *11*, 629–639. https://doi.org/10.3390/nurserep11030060

Hamaideh, S. H., Al-Omari, H., & Al-Modallal, H. (2017). Nursing students' perceived stress and coping behaviors in clinical training in Saudi Arabia. *Journal of Mental Health*, *26*(3), 197–203. https://doi.org/10.3109/09638237.2016.1139067

Han, S., Dean, M., & Okoroji, C. (2018). Minority student experiences in a living and learning community on a predominantly white college campus. *Journal of Ethnographic & Qualitative Research*, *13,* 1–7–121. https://eric.ed.gov/?id=EJ1257011

Hasratian, A. M., Nordberg, H. O., Meuret, A. E., & Ritz, T. (2021). Fear and coping in students during the early stages of the COVID-19 pandemic: A combined cross-sectional and longitudinal study. *International Journal of Environmental Research and Public Health*, *18*, 6551. https://doi.org/10.3390/ijerph18126551

Henderson, R. M., Chetty, O., & Gurayah, T. (2021). Coping styles and sources of stress of undergraduate health science students: An integrative review. *South African Journal of Occupational Therapy*, *51*(2), https://doi.org/10.17159/2310-3833/2021/vol51n2a5

Hilliard, J., Kear, K., Donelan, H., & Heaney, C. (2020). Students' experiences of anxiety in an assessed, online, collaborative project. *Computers & Education*, *143*, 103675. https://doi.org/10.1016/j.compedu.2019.103675

Hoggart, L. S., Byrd, C. M., & Sellers, R. M. (2012). Comparison of African American college students' coping racially and nonracially stressful events. *Cultural Diversity and Ethnic Minority Psychology*, *18*(4), 329–339. https://doi.org/10.1037/a0029437

Ickes, M. J., Brown, J., Reeves, B., & Martin, P. D. (2015). Differences between undergraduate and graduate students in stress and coping strategies. *Californian Journal of Health Promotion*, *13*(1), 13–25. https://doi.org/10.1186/s13104-017-2395-1

Insel, P., & Roth, W. (1985). *Core concepts in health* (4th edition). Mayfield Publishing Co.

Jarvis, M. A., Martin, P., Williams, M., Walters, F., Balovi, O. B., Hoffman, J., & Chipps, J. (2021). Stress and coping – perceptions of final year nursing students returning to clinical practice during the COVID-19 pandemic. *Health SA Gesondheid*, *26*(0), a1641. https://doi.org/10.4102/hsag.v26i0.1641

Jennings, R. A., Henderson, C. S., Erla, M. A., Abraham, S., & Gillum, D. (2018). Stress coping behaviours of faith-based college non-student athletes vs student-athletes. *College Student Journal*, *52*(2), 245–257. https://eric.ed.gov/?id=EJ1180294#:~:text=Non%2Dstudent%20athletes%20identified%20listening,exercise%20to%20cope%20with%20stress

Jones, M. C., & Johnston, D. W. (1999). The derivation of a brief Student Nurse Stress Index. *Work & Stress*, *13*(2), 162–181. https://doi.org/10.1080/026783799296129

Jones, K., Mendenhall, S., & Myers, C. A. (2016). The effects of sex and gender role identity on perceived stress and coping among traditional and nontraditional students. *Journal of American College Health*, *64*(3), 205–213. https://doi.org/10.1080/07448481.2015.1117462

Karyotaki, E., Cuijpers, P., Alborm, Y., Alonso, J., Auerbach, R. P., Bantjes, J., Bruffaerts, R., Ebert, D. D., Hasking, P., Kiekens, G., Lee, S., McLafferty, M., Mak, A., Mortier, P., Sampson, N. A., Stein, D. J., Vilagut, G., & Kessler, R. C. (2020). Sources of stress and their associations with mental disorders among college students: Results of the World Health Organization World Mental Health Surveys International College Student Initiative. *Frontiers in Psychology*, *11*, Article 1759. https://doi.org/10.3389/fpsyg.2020.01759

Kaseke, F., & Mutsambi, M. (2014). Experiences of health science students during clinical placement at the University of Zimbabwe. *The Central African Journal of Medicine*, *60*(5-8), 45–52.

Kaur, G., Chernomas, W. M., & Scanlan, J. M. (2020). Nursing students' perceptions of and experiences coping with stress in clinical practice. *International Journal of Nursing Education Scholarship*, *17*(1), 20200005. https://doi,org/10.1515iknwa-2020-0005

Kaya, M., Genç, M., Kaya, B., & Pehlivan, E. (2007). Prevalence of depressive symptoms, ways of coping and related factors among medical school and health services higher education students. *Türk Psikiyatri Dergisi*, *18*(2), 1–9.

Kerr, A. M., Spaeth, L. S., & Gerome, J. M. (2022). Medical students' stress and uncertainty during the COVID-19 pandemic. *Health Communication*, *19,* 1–11. https://doi.org/10.1080/10410236.2022.2062826

Kershner, S., George, T., & Hucks, J. M. (2021). Self-efficacy concerns of graduate nursing students registering during the COVID-19 pandemic. *Online Journal of Rural Nursing and Health Care*, *21*(2), 69–83. https://doi.org/10.14574/ojrnhc.v21i2.678

Khademian, F., Aslani, A., Ravengard, R., Nami, M., Abbasi, S., & Bastani, P. (2021). Iranian university students' stressors and coping strategies: A qualitative study. *Journal of Education and Health Promotion*, *10*, 244. https://doi.org/10.4103/jehp.jehp_1278_20

Khoshaim, H. B., Al-Sukayt, A., Chinna, K., Nurunnabi, M., Sundarasen, S., Kamaludin, K., Baloch, G. M., & Hossain, S. F. A. (2020). How students in the Kingdom of Saudi Arabia are coping with COVID-19 pandemic. *Journal of Public Health Research*, *9*(s1), 1989. https://doi.org/10.4081/jphr.2020.1898

Kinchen, E. V., & Loerzel, V. (2019). Nursing students' attitudes and use of holistic therapies for stress relief. *Qualitative Research*, *37*(1), 6–17. https://doi.org/10.1177/0898010118761910

Koolhaas, J. M., Bartolomucci, A., Buwalda, B., de Boer, S. F., Flugge, F., Korte, S. M., Meerlo, P., Murison, R., Olivier, B., Palanza, P., Richter-Levin, G., Sgoifo, A., Steimer, T., Stiedl, O., van Dijk, G., Wohr, M., & Fuchs, F. (2011). Stress revisited: A critical evaluation of the stress concept. *Neuroscience and Biobehavioral Reviews*, *35*(5), 1291–1301. https://doi.org/10.1016/j.neubiorev.2011.02.003

Korolkiewicz, P. K., Skrzypkowska, P., Ali, S., & Grabowski, J. (2022). A descriptive study of welfare and mental health issues among health-related sciences undergraduate students at the Medical University of Gdansk. *International Journal of Social Psychiatry*, *68*(6), 1184–1191. https://doi.org/10.1177/00207640211068982

Kumar, K., & Kadhiravan, S. (2012). Perceived stress and proactive coping of college students. *Indian Journal of Positive Psychology*, *3*(3), 302–304. https://www.i-scholar.in/index.php/ijpp/article/view/49788

Kwaah, C. Y., & Essilfie, G. (2017). Stress and coping strategies among distance education students at the University of Cape Coast, Ghana. *Turkish Online Journal of Distance Education*, *18*(3), 8. https://files.eric.ed.gov/fulltext/EJ1147588.pdf

Labrague, L. J., McEnroe-Peitte, D. M., De Los Santos, J. A. A., & Edet, O. B. (2018). Examining stress perceptions and coping strategies among Saudi nursing students: A systematic review. *Nurse Education Today*, *65*, 192–200. https://doi.org/10.1016/j.nedt.2018.03.012

Labrague, L. J., McEnroe-Petitte, D. M., Al Amri, M., Fronda, D. C., & Obeidat, A. A. (2017a). An integrative review on coping skills in nursing students: Implications for practice. *International Nursing Review*, *65*(2), 279–291. https://doi.org/10.1111/inr.12393

Labrague, L. J., McEnroe-Petitte, D. M., Gloe, D., Thomas, L., Papathanasiou, I. V., & Tsaras, K. (2017b). A literature review on stress and coping strategies in nursing students. *Journal of Mental Health*, *26*(5), 471–480. https://doi.org/10.1080/09638237.2016.1244721

Lavoie-Tremblay, M., Sanzone, L., Aubé, T., & Paquet, M. (2022). Sources of stress and coping strategies among undergraduate nursing students across all years. *Canadian Journal of Nursing Research*, *54*(3), 261–271. https://doi.org/10.1177/08445621211028076

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. Springer.

Lemieux, C. M., Moles, A., Brown, K. M., & Borskey, E. J. (2020). Social work students in the aftermath of the Great Flood of 2016: Mental health, substance use, and adaptive coping. *Journal of Social Work Education*, *56*(4), 630–648. https://doi.org/10.4377/97.2019.1661914

Li, Y., Lindsey, B. J., Yin, X., & Chen, W. (2012). A comparison of American and Chinese students' perceived stress, coping styles, and health promotion practices. *Journal of Students Affairs, Research and Practice*, *49*(2), 211–227. https://doi.org/10.1515/jsarp-2012-6298

Liu, X., Ping, S., & Gao, W. (2019). Changes in undergraduate students' psychological wellbeing as they experience university life. *International Journal of Environmental Research and Public Health*, *16*(16), 2864. https://doi.org/10.3390/ijerph16162864

Lopez, V., Yobas, P., Chow, Y. L., & Shorey, S. (2018). Does building resilience in undergraduate nursing students happen through clinical placements? A qualitative study. *Nurse Education Today*, *67*, 1–5. https://doi.org/10.1016/j.nedt.2018.04.020

Louis, C. J., Landry, A., Silvera, G., Robbins, J., Shay, P., Lee, H., Felix, J., Cave, S., & Fisherman, P. (2021). The COVID-19 impact on health administration education: Understanding student perspectives on the transition from in-person to remote course instruction. *The Journal of Health Administration Education*, *38*(1), 247–264. https://digitalcommons.trinity.edu/cgi/viewcontent.cgi?article=1056&context=hca_faculty

Lovibond, S. H., & Lovibond, P. F. (1995). *Depression Anxiety Stress Scales (DASS-21, DASS-42)*. APA PsycTest.

Mabrouk, F., Mekni, M. M., & Aldawish, A. (2022). Digital learning, life satisfaction, and perceived stress due to COVID-19 emergency: Case study among female Saudi university students. *Frontiers in Psychology*, *13*, 875608. https://doi.org/10.3389/fpsyh.2022.875608

Mahrashi, A., Khalil, A., Al Nagshabandi, E., & Majrashi, A. (2021). Stressors and coping strategies among nursing students during the COVID-19 pandemic: Scoping review. *Nurse Reports*, *11*(2), 444–459. https://doi.org/10.3390/nursrep11020042

Malau-Aduli, B. S., Roche, P., Adu, M., Jones, K., Alele, F., & Drovandi, A. (2020). Perceptions and processes influencing the transition of medical students from pre-clinical to clinical training. *BMC Medical Education*, *20,* 279. https://doi.org/10.1186/s12909-020-02186-2

Malghani, P. G., Abbasi, L. S., Majeed, S., & Saleem, T. (2021). Level of anxiety in clinical settings and coping mechanisms used by dental undergraduate students to overcome it. *Journal of Dental Education*, *85*(11), 1749–1755. https://doi.org/10.1002/jdd.12751

Malinauskas, R., & Malinauskiene, V. (2022). Meta analysis of psychological interventions for reducing stress, anxiety and depression among university students during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, *19*(15), 9199. https://doi.org/10.3390/ijerph19159199

Mason, H. D. (2017). Stress-management strategies among first-year students at a South Africa University: A Qualitative Study. *Journal of Student Affairs in Africa*, *5*(2), 131–149. https://doi.org/10.24085/jsaa.v5i2.2744

Masten, R., Tušak, M., Zalar, B., & Ziherl, S. (2009). Stress, coping and social support in three groups of university students. *Psychiatria Danubina*, *21*(1), 41–48.

McCarthy, B., Trace, A., O'Donovan, M., Brady-Nevin, C., Murphy, M., O'Shea, M., & O'Regan, P. (2018). Nursing and midwifery students' stress and coping during their undergraduate education programmes: An integrative review. *Nurse Education Today*, *61*, 197–209. https://doi.org/10.1016/j.nedt.2017.11.029

McCloughen, A., & Foster, K. (2018). Nursing and pharmacy students' use of emotionally intelligent behaviours to manage challenging interpersonal situations with staff during clinical placement: A qualitative study. *Journal of Clinical Nursing*, *27*(13–14), 2699–2709. https://doi.org/10.1111/jocn.13865

McGonagle, K. A., & Kessler, R. C. (1990). Chronic stress, acute stress, and depressive symptoms. *American Journal of Community Psychology*, *18*(5), 681–706. https://doi.org/10.1007/BF00931237

Mills, A., Ryden, J., & Knight, A. (2020). Juggling to find balance: Hearing voices of undergraduate student nurses. *British Journal of Nursing*, *29*(15), 897–903. https://doi.org/10.1296/8bjon.2020.29.15.897

Mills, S., Krouse, A. M., Rossi-Schwartz, R., & Klein, J. M. (2017). Curriculum revision: student stress ad lessons learned. *The Journal of Nursing Education*, *56*(6), 337–342. https://doi.org/10.3928/01484823-20170518-04

Mirzaei, T., Oskouie, F., & Rafi, F. (2012). Nursing students' time management, reducing stress and gaining satisfaction: A grounded theory study. *Nursing and Health Sciences*, *14*(1), 35–51. https://doi.org/10.1111/j.1442-2018.2011.00661.x

Moos, R. H. (1993). *Coping responses inventory: CRI-adult form professional manual*. Psychological Assessment Resources.

Mudhovozi, P. (2011). Analysis of perceived stress, coping resources and life satisfaction among students at a newly established institution of higher learning. *South Africa Journal of Higher Education*, *25*(3), 510–522. https://eric.ed.gov/?id=EJ967427

Munn, A. C., George, T. P., Phillips, T. A., Kershner, S. H., & Hucks, J. M. (2022). Resilience and GRIT among undergraduate nursing students during the COVID-19 pandemic. *International Journal of Nursing Education and Scholarship*, *19*(1), 20220012. https://doi.org/10.1515/ijnes-2022-0012

Nabavian, M., Rahmani, N., & Alipour, H. (2021). Experiences of nursing students in the care for patients diagnosed with COVID-19: a qualitative study. *Journal of Patient Experience*, *8*, 1–8. https://doi.org/10.1177/2374375211039925

Nadeau, J. (2014). Listening and responding to the voices of Latina prenursing students. *Nursing Education Perspectives*, *35*(1), 8–13. https://doi.org/10.5480/11-594.1

Nakanishi, J., Suematsu, Y., Arimura, T., Kuwano, T., Shiga, Y., Kitajima, K., Morito, N., Nii, T., Saku, K., & Miura, S. (2018). Recommendations of lifestyle modification according to a survey of first-year university students. *Journal of Clinical Medicine Research*, *10*(10), 772–780. https://doi.org/10.14740/jocmr2574w

Nau, J., Dassen, T., Halfens, R., & Needham, I. (2007). Nursing students' experiences in managing patient aggression. *Nurse Education Today*, *27*(8), 933–9468. https://doi.org/10.1016/j.nedt.2007.01.007

Nebhinani, M., Kumar, A., Parihar, A., & Rani, R. (2020). Stress and coping strategies among undergraduate nursing students: A descriptive assessment from Western Rajasthan. *Indian Journal of Community Medicine*, *45*(2), 172–175. https://doi.org/10.4103/ijcm.IJCM_231_19

Negash, A., Ahmed, M., Medhin, G., Wondimagegn, D., Pain, C., & Araya, M. (2021). Explanatory models for mental distress among university students in Ethiopia: A qualitative study. *Psychology Research and Behavior Management*, *14*, 1901–1913. https://doi.org/10.2147/PRBM.S338319

O'Brien, L., Mathieson, K., Leafman, J., & Rice-Spearman, L. (2012). Level of stress and common coping strategies among physician assistant students. *The Journal of Physician Assistant Education*, *23*(4), 25–29. https://doi.org/10.1097/01367895-201223040-00006

Okoro, R. N., Biambo, A. A., & Jamiu, M. O. (2021). Perceived stress and its predictors, stressors and coping strategies among undergraduate pharmacy students in northern Nigeria. *Currents in Pharmacy Teaching and Learning*, *13*(7), 804–811. https://doi.org/10.1016/j.cptl.2021.03.014

Oliveira, C., Pereira, A., Vagos, P., Nòbrega, C., Gonçalves, J., & Afonso, B. (2021). Effectiveness of mobile app based psychological interventions for college students: A systematic review of the literature. *Frontiers Psychology*, *12*, 647606. https://doi.org/10.3389/fpsyg.2021.647606

Onieva-Zafra, M. D., Fernández-Muñoz, J.J., Fernández-Martínez, E., García-Sánchez, F.J., Abreu-Sánchez, A., & Parra-Fernández, M.L. (2020). Anxiety, perceived stress and coping strategies in nursing students: A cross-sectional, correlational, descriptive study. *BMC Medical Education*, *20*, 370. https://doi.org/10.1186/s12909-020-02294-z

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hrobjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, *372*(71). https://doi.org/10.1136/bmj.n71

Patterson, J. M., & McCubbin, H. I. (1987). Adolescent coping style and behaviors: Conceptualization and measurement. *Journal of Adolescence*, *10*(2), 163–186. https://doi.org/10.1016/S0140-1971(87)80086-6

Persaud, N., & Persaud, I. (2016). The relationship between socio-demographics and stress levels, stressors, and coping mechanisms among undergraduate students at a University in Barbados. *International Journal of Higher Education*, *5*(1), 11–27. https://eric.ed.gov/?id=EJ1082101

Peters, M. D., Marnie, C., Tricco, A. C., Pollock, D., Munn, Z., Alexander, L., McInerney, P., Godfrey, C. M., & Khalil, H. (2020). Updated methodological guidance for the conduct of scoping reviews. *JBI Evidence Synthesis*, *18*(10), 2119–2126. https://doi.org/10.11124/JBIES-20-00167

Petley, B., Husted, M., Lees, A., & Locke, R. (2022). The effectiveness of interventions and behaviour change techniques to reduce stress in student nurses: A systematic review. *Nurse Education Today*, *109*, 105212. https://doi.org/10.1016/j.nedt.2021.105212

Pfeifer, T. A., Kranz, P. L., & Scoggin, A. E. (2008). Perceived stress in occupational therapy students. *Occupational Therapy International*, *15*(4), 221–231. https://doi.org/10.1002/oti.256

Putwain, D. (2007). Researching academic stress and anxiety in students: Some methodology considerations. *British Educational Journal*, *33*(2), 207–219. https://doi.org/10.1080/01411920701208258

Rafati, F., Nouhi, E., Sabzevari, S., & Dehghan-Nayeri, N. (2017). Coping strategies of nursing students for dealing with stress in clinical setting: A qualitative study. *Electronic Physician*, *9*(12), 6120–6128. http://doi.org/10.19082/6120

Ramluggun, P., Lacy, M., Cadle, M., & Anjoyeb, M. (2018). Managing the demands of the preregistration mental health nursing programme: the views of students with mental health conditions. *International Journal of Mental Health Nursing*, *27*(6), 1793–1804. https://doi.org/10.1111/inm.12486

Reeve, K. L., Shumaker, C. J., Yearwood, E. L., Crowell, N. A., & Riley, J. B. (2013). Perceived stress and social support in undergraduate nursing students' educational experiences. *Nurse Education Today*, *33*(4), 419–424. https://dex.doi.org/10.1016j.nedt.2012.11.009

Rith-Najarian, L. R., Boustani, M., & Chorpita, B. F. (2019). A systematic review of prevention programs targeting depression, anxiety and stress in university students. *Journal of Affective Disorders*, *257*(1), 568–584. https://doi.org/10.1016/j.jad.2019.06.035

Rodriquez, A. A., & Mallinckrodt, B. (2021). Native American-identified students' transition to college: A theoretical model of coping challenges and resources. *Journal of College Student Retention: Research, Theory & Practice*, *23*(1), 96–117. https://doi.org/10.1177/1521025118799747

Russa, A., & Miligilche, N. L. (2014). Inspiring Tanzanian medical students into the profession: Appraisal of cadaveric dissection stress and coping strategies. *Italian Journal of Anatomy and Embryology*, *119*(3), 268–276. https://doi.org/10.1312/8IJAE-15560

Ruth-Sahd, L. A., & Schneider, M. A. (2022). Alcohol use and binge drinking in baccalaureate nursing students: A descriptive study. *Journal of Professional Nursing*, *38,* 114–120. https://doi.org/10.1016/j.pronurs.2021.12.006

Ryan, T., Baik, C., & Larcombe, W. (2022). How can universities better support the mental wellbeing of higher degree research students? A study of students' suggestions. *Higher Education Research & Development*, *41*(3), 867–881. https://doi.org/10.1080/07294360.2021.1874886

Salam, A., Mahadevan, R., Rahman, A. A., Abdullah, N., Harith, A. A. A, & Shan, C. P. (2015). Stress among first and third year medical students at university Kebangsaan Malaysia. *Pakistan Journal of Medical Science*, *31*(1), 169–173. http://doi.org/10.12669/pjms.311.6473

Salam, A., Yousuf, R., Bakar, S. M. A., & Haque, M. (2013). Stress among medical students in Malaysia: A systematic review of literatures. *International Medical Journal*, *20*(6), 649–655. https://doi.org/10.1371/journal.pone.0217430

Salinas-Harrison, D. L. (2018). Coping and pre-licensure registered nursing students: An integrative literature review. *International Nurse Education Scholarship*, *15*(1), https://doi.org/10.1515/ijnes-2018-0023

Sam, C. P., Mamat, N. H., & Nadarajah, V. D. (2022). An exploratory study on the challenges faced and coping strategies used by preclinical medical students during the COVID-19 crisis. *Korean Journal of Medical Education*, *34*(2), 95–106. https://doi.org/10.3946/kjme.2022.222

Samson, P. (2019). Role of coping in stress, anxiety, depression among nursing students of Purbanchal University in Kathmandu. *Journal of Nepal Health Research Council*, *17*(44), 325–330. https://doi.org/10.33314/jnhrc.v17i3.1843

Shaban, I. A., Khater, W. A., & Akhu-Zaheya, L. M. (2012). Undergraduate nursing students' stress sources and coping behaviours during their initial period of clinical training: A Jordanian perspective. *Nurse Education in Practice*, *12*(4), 204–209. https://doi.org/10.1016/j.nepr.2012.01005

Shahjahan, R. A., Estera, A. L., Surla, K. L., & Edwards, K. T. (2022). Decolonizing" curriculum and pedagogy: A comparative review across disciplines and global higher education contexts. *Review of Educational Research*, *92*(1), 73–113. https://doi.org/10.3102/00346543211042423

Sheu, S., Lin, H., & Hwang, S. (2002). Perceived stress and physio-psycho-social status of nursing students during their initial period of clinical practice: the effect of coping behaviors. *International Journal of Nursing Studies*, *39*(2), 165–175. https://doi.org/10.1016/S0020-7489(01)00016-5

Shofler, D. W., Oh, E., Kaur, K., Flavin, K., & Danesh, P. (2021). Prevalence of depression in Podiatric medical students. *Journal of the American Podiatric Medical Association*, *111*(1), 1–6. https://doi.org/10.7547/18-108

Sikander, S., & Aziz, F. (2012). Stressors and coping strategies among baccalaureate nursing students at Shifa college of nursing Islamabad, Pakistan. *International Journal of Nursing Education*, *4*(2), 193–197. https://ijone.org/scripts/IJONE%20JOURNAL.July-Dec%2012.pdf#page=199

Simionescu, M., Pellegrini, A., & Bordea, A. (2022). The effect of COVID-19 pandemic on stress vulnerability of nursing students according to labour market status. *Healthcare*, *9*(6), 633. https://doi.org/10.3390/healthcare9060633

Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin*, *129*(2), 216–269. https://doi.org/10.1037/0033-2909.129.2.216

Son, C., Hegde, S., Smith, A., Wang, C., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research*, *22*(9), e21279. https://doi.org/10.2196/21279

Średniawa, A., Drwila, D., Krotos, A., Wojtaś, Kosechka, N., & Tomasik, T. (2017). Insomnia and the level of stress among students in Krakow, Poland. *Trends in Psychiatry and Psychotherapy*, *41*(1), 60–68. https://doi.org/10.1590/2237-6089-2017-0154

Sreeramareddy, C. T., Shankar, P. R., Binu, V. S., Mukhopadadhyay, C., Ray, B., & Menezes, R. G. (2007). Psychological morbidity, sources of stress and coping strategies among undergraduate medical students of Nepal. *BMC Medical Education*, *7*, 26. https://doi.org/10.1186/1472-6920-7-26

Stanisławski, K. (2019). The coping circumplex model: An integrative model of the structure of coping with stress. *Frontiers in Psychology*, *10*, 694. https://doi.org/10.3389/fpsyg.2019.00694

Stock, C., Helmer, S. M., & Heinrichs, K. (2022). COVID-19 related disruption in higher education students' health and wellbeing: Implications for university action. *Frontiers in Public Health*, *10*, 1015352. https://doi.org/10.3389/fpubh.2022.1015352

Sun, F., Long, A., Tseng, Y. S., Huang, H, You, J., & Chiang, C. (2016). Undergraduate student nurses' lived experiences of anxiety during their first clinical practicum: A phenomenological study. *Nurse Education Today*, *37*, 21–26. http://dx.doi/10.1016j.nedt.2015.11.001

Trifoni, A., & Shahini, M. (2011). How does exam anxiety affect the performance of university students. *Mediterranean Journal of Social Sciences*, *2*(2), 93–100. www.mcser.org.

Tupler, L. A., Zapp, D., DeJong, W., Ali, M., O'Rourke, S., Looney, J., & Swartzweider, H. S. (2017). Alcohol-related blackouts, negative alcohol-related consequences and motivations for drinking reported by newly matriculating transgender college students. *Alcohol: Clinical and Experimental Research*, *41*(5), 1012–1023. https://doi.org/10.111/acer.13358

Türkles, S., Bogahan, M., Altundal, H., Yaman, Z., & Yılmaz, M. (2021). Diaries of nursing students during the COVID-19 pandemic: A qualitative descriptive study. *International Journal of Environmental Research and Public Health*, *18*(16), 8556. https://doi.org/10.3390/ijerph18168556

Vally, Z., Cody, B. L., Alsheraifi, S. N., & Albloshi, M. A. (2018). A comparative description of perceived stress and coping strategies among psychology and nonpsychology students in the United Arab Emirates. *Perspectives in Psychiatric Care*, *54*(4), 539–546. https://doi.org/10.1111/ppc.12268

Vedhara, K., & Nott, K. (1996). The assessment of the emotional and immunological consequences of examination stress. *Journal of Behavioural Medicine*, *19*(5), 467–478. https://doi.org/10.1007/BF01857679

Velarde-García, J. F., González-Hervías, R., Álvarez-Embarba, B., Cochón-Pére, J. M., Oliva-Fernáguez, O., Palacoi-Ceña, D., Moro-López-Menchero, P., & Fernández-de-las-Peñas, C. (2021). Undergraduate nursing students working during the first outbreak of the COVID-19 pandemic: A qualitative study of psychosocial effects and coping strategies. *International Journal of Nursing Practice*, *28*(5), e13065. https://doi.org/10.1111/ijn.13065

Vitaliano, P. P., Maiuro, R. D., Mitchell, E., & Russo, J. (1989). Perceived stress in medical school: Resistors, persistors, adaptors and maladaptors. *Social Science and Medicine*, *28*(12), 1321–1329. https://doi.org/10.1016/0277-9536(89)90351-1

Waterhouse, P., Samra, R., & Lucassen, M. (2020). Mental distress and its relationship to distance education students' work and family roles. *Distance Education*, *41*(4), 540–558. https://doi.org/10.1080/01587919.2020.1821606

Webb, A. S. (2019). Navigating the lows to gain new heights: Constraints to SoTL engagement. *The Canadian Journal for the Scholarship of Teaching and Learning*, *10*(2), 3. https://doi.org/10.5206/cjsotl-rcacea.2019.2.8173

Webber, S. C., Wener, P., MacDonald, L. L., Tittlemier, B. J., Hahn, F., & Cooper, J. E. (2021). This program should come with a warning sign!": Mental wellness in occupational therapy and physical therapy students. *Journal of American College Health*, *70*(8), 2491–2498. https://doi.org/10.1080/07448481.2020.1865983

Weber, J., Skodda, S., Muth, T., Angerer, P., & Loerbroks, A. (2019). Stressors and resources related to academic studies and improvements suggested by medical students: A qualitative study. *BMC Medical Education*, *19*, 312. https://doi.org/10.1186/s12909-019-1747-z

Weston, J. F., Gardner D., & Yeung, P. (2017). Stressors and protective factors among veterinary students in New Zealand. *Journal of Veterinary Medical Education*, *44*(1), 22–28. https://doi.org/10.3138/jvme.0116-014Rl

Williams, B., King, C., Shannon, B., & Gosling, C. (2021). Impact of COVID-19 on paramedicine students: A mixed methods study. *International Emergency Nursing*, *56*, 100996. https://doi.org/10.1016/j.ienj.2021.100996

World Health Organization. (2023). *Stress.* https://www.who.int/news-room/questions-and-answers/item/stress (Accessed 18 April 2024).

Wu, L., Farquhar, J., Ma, J., & Vidyarthi, A. R. (2018). Understanding Singaporean medical students' stress and coping. *Singapore Medical Journal*, *59*(4), 172–176. https://doi.org/10.11622/smedj.2018044

Yi, Q., Yan, J., Zhang, C., Yang, G., Huang, H., & Yang, Y. (2022). The experience of anxiety among Chinese undergraduate nursing students in the later period of their internships: Findings from a qualitative study. *BMC Nursing*, *21*, 70. https://doi.org/10.1186/s12912-022-00847-9

Yusufov, M., Nicoloro-SantaBarbara, J., Grey, N. E., Moyer, A., & Lobel, M. (2019). Meta-analytic evaluation of stress reduction interventions for undergraduate and graduate students. *International Journal of Stress Management*, *26*(2), 132–145. https://doi.org/10.1037/str0000099

Yzer, M., & Gilasevitch, J. (2019). Beliefs underlying stress reduction and depression help-seeking among college students: An elicitation study. *Journal of American College Health*, *67*(2), 153–160. https://doi.org/10.1080/07448481.2018.1462828

Zhang, N., & Henderson, C. N. R. (2022). Coping strategies and chiropractic student perceived stress. *Journal of Chiropractic Education*, *36*(1), 13–21. https://doi.org/10.7899/JCE-20-28

Zhang, Y., Chernaik, M., & Hallet, K. (2017). Relationship issues among college nursing students: Associations with stress, coping, sleep, and mental disorders. *Teaching and Learning in Nursing*, *12*(4), 246–252. https://doi.org/10.1016/j.teln.2017.06.005

Zhao, F., Lei, X., He, W., Gu, Y. & Li, D. (2015). The study of perceived stress, coping strategy and self-efficacy of Chinese undergraduate nursing students in clinical practice. *International Journal of Nursing Practice*, *21*(4), 401–409. https://doi.org/10.1111/ijn.12273