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Posted Date: 20 January 2026

doi: 10.20944/preprints202601.1503.v1

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Review

A Scoping Review of 2020–2025, Peer-Reviewed Publications to Investigate Possible Relationships Among Burnout, Nutrition, and Nutrition/Food Literacy

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Abstract

This scoping review represents the first concerning 2020–2025, peer-reviewed publications to investigate possible relationships among burnout, nutrition, and nutrition/food literacy during and following the COVID-19 pandemic. 9 January 2026 searches were of the keywords (burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy). Eight databases were searched (CINAHL Plus, Google Scholar, JSTOR, OVID, PubMed, Science Direct, Scopus, Web of Science). With 160 returns, the included reports from these searches were from Google Scholar alone (n = 6). The addition of four relevant reports from the 3 June 2025 searches of "burnout AND nutrition AND (nutrition literacy OR food literacy)" increased the included studies to 10. Although 2020 was the lower date limit, publication of the results was between 2023 and 2025. The finding is that research conducted during this period reports co-occurring issues of burnout, nutrition, and nutrition/food literacy in specific populations. The primary discovery is that assessing the relationships among these terms was not the aim of the included studies. This lack of dedicated research on this topic presents an opportunity for burnout and nutrition researchers to investigate these relationships intentionally.

Keywords: burnout; nutrition; nutrition literacy; food literacy; COVID-19 pandemic

1. Introduction

Initially described in 1974 [1], burnout is a syndrome resulting from unmanaged chronic workplace stress [2] that reduces accomplishment. Its symptoms are energy depletion or exhaustion, job mental distancing, and pessimistic or cynical feelings regarding work [3]. Although any employee can develop burnout [4], those dedicated to work-related perfection are particularly susceptible [5]. Burnout can lead to interpersonal conflict and negligent mistakes [6]. Before the COVID-19 pandemic [7,8], employees in high-pressure jobs often experienced burnout [9]. During the pandemic, all employee types experienced an escalation of burnout [10]. Finding burnout solutions for employees has become increasingly complex post-pandemic [11], especially for healthcare professionals [12,13]. Psychological flow [14] at work is effective in avoiding burnout. As such, a focus on attaining workplace flow might be beneficial in reducing employee burnout [15].

Nutrition is the effect of food on the body [16]. Since 1990, the requirement has been a nutrition facts panel label for foods [17,18]. Nutrition literacy represents the ability to obtain and understand nutrition information [19]. A related term is food literacy—the knowledge, skills, and attitudes responsible for informed decisions about nutrition [16]. Together, nutrition literacy and food literacy encompass the requirements for preparing healthy meals [20] in helping people understand and interpret available foods [21].

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Burnout and nutrition have a significant, bidirectional relationship that influences mental and physical health [22,23]. Burnout symptoms, such as fatigue and emotional exhaustion, are increased with poor nutrition. These symptoms are decreased with the consumption of nutrient-dense fruits and vegetables [24]. Chronic stress from burnout can exacerbate poor eating habits [25]. In contrast, stabilization of mood and energy results from balanced nutrition, aiding burnout recovery and prevention [26].

As a consistently well-researched topic, systematic review and meta-analysis publications on burnout are numerous and well-cited [27]. A search of Google Scholar on 2 June 2025 of "burnout AND systematic review AND meta-analysis" produced "About 199,000 results". Limiting the search on that day to publications between 2021 and 2025 (the last five years), there are "About 40,500 results". Therefore, it is notable that a search of Google Scholar on the same day identified none that focused on burnout and nutrition. A related 2020 systematic review examines the association between energy balance-related behavior and burnout [28]. Among the included reports, two publications refer to dietary behavior. A 2016 publication concludes that fast-food consumption is associated with the risk of burnout [29]. The other publication, from 2000, found that a healthy workday diet decreases the risk of burnout [30]. Both publications were pre-pandemic.

Additionally, no peer-reviewed scoping review exists that examines the current research on nutrition and burnout. Following a Google Scholar search on 9 January 2026, this absence became evident. There is a preprint by this author regarding searches conducted on 3 June 2025 [31]. A scoping review does exist on teachers regarding physical activity, nutrition, and/or sleep interventions to improve their mental well-being [32]. In that review, burnout and nutrition are among the keywords searched—teachers (e.g. teacher, educator) AND positive lifestyle behaviors (e.g. physical activity, exercise, nutrition, sleep, body mass index, steps, walk, weight loss) AND well-being (e.g. stress, burnout, well-being, mental health) AND interventions (e.g. intervention, program, evaluation, prevention, professional development, impact, effectiveness, implementation, randomized controlled trial). However, none of the 16 results involves burnout.

The extent of current peer-reviewed research on burnout and nutrition [33] is unknown. A scoping review is advisable before performing a systematic review and meta-analysis [34,35]. Thus, this study aims to be the initial peer-reviewed scoping review regarding those publications since the start of the COVID-19 pandemic in 2020. The hypothesis is that a scoping review between 2020 and 2025 can locate several peer-reviewed studies published on burnout and nutrition that mention nutrition literacy and food literacy. The assumption is that long-lasting [36] adjustments to eating habits [37] likely affected the relationship between burnout and nutrition regarding the COVID-19 pandemic.

This scoping review supersedes the initial scoping review attempt by the author, conducted on 3 June 2025. It used the keywords "burnout AND nutrition AND (nutrition literacy OR food literacy)" [31]. Its preregistered is at osf.io/76ktw. The previous attempt—searching CINAHL, OVID, PubMed, Scopus, Web of Science, and Google Scholar—produced eight results, all from the Google Scholar search. With the intent to expand the reach of the search, this scoping review also includes the databases JSTOR and ScienceDirect, and the number of keywords increased to include (burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy).

2. Methodology

This study follows the internationally standardized [38] 2020 Preferred Reporting Items for Systematic Reviews (PRISMA) guidelines for scoping reviews (PRISMA-ScR) [39,40] as the preferred process for scoping reviews [41].

A single researcher completed all aspects of the scoping review. Several steps diminish cognitive bias. (1) The review protocol is preregistered at https://osf.io/gkur8. The registration date was 17 January 2026. The registration DOI is 10.17605/OSF.IO/JXKM7. Pre-registration is at OSF Registries of the Centre for Open Science [42]. (2) **Supplementary S1**—eight database searches of 9 January 2026

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for the keywords (burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy)—contains the results in order of their return of each search undertaken, demonstrating the method of elimination checkable by any investigator. (3) **Supplementary S2:** Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist outlines the location of each aspect of the scoping review process.

The searched databases were CINAHL, Google Scholar, JSTOR, OVID, PubMed, Science Direct, Scopus, and Web of Science, selected based on the topic searched and their high regard [43].

2.1. Database Searches

The databases, search parameters, and returns are in Table 1, following the order of the eight databases searched. Google Scholar returned the most (n = 98); next was CINAHL (n = 44). Web of Science followed with (n = 7). Three databases returned three results each: JSTOR, PubMed, and Science Direct. OVID returned two, and Scopus had no returns.

Table 1. Databases searched on 9 January 2026, the search parameters, and # (the number of returns) regarding searches of the keywords (burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy) in the order searched.

Database	Search Parameters	#
CINAHL	Keywords: ((burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy)) Limits: Proximity, Full Text, March 2020 to December 2025, English Language, Food labeling Education, Nutritive Value Education, Food Intake Education/Physiology	44
Google Scholar	Keywords: "burnout" OR "job stress" "nutrition" OR "diet" OR "eating pattern" OR "food intake" "nutrition literacy" OR "food labeling" "food literacy" OR "health literacy" Limit: 2020–2025	98
JSTOR	Keywords: ((burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy)) Limits: 2020–2025, English, Articles	3
OVID	Resources selected: Embase Classic+Embase 1947 to 2026 January 07 APA PsycInfo 1806 to January 2026 Week 2 Ovid Healthstar 1966 to November 2025 AMED (Allied and Complementary Medicine) 1985 to November 2025 JBI Best Practice Current to December 24, 2025 Journals@Ovid Full Text January 09, 2026 Ovid MEDLINE(R) ALL 1946 to January 08, 2026 Keywords: ((burnout or job stress) and (nutrition or diet or eating pattern or food intake) and (nutrition literacy or food labeling) and (food literacy or health literacy)) Limits: English Language, Full Text, 2020–2025	2
PubMed	Keywords: ((burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy)) Limit: 2020–2025	3
ScienceDirect	Keywords: ((burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy)) Limits: 2020-2025, Research articles	3
Scopus	Keywords: ((burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy)) Limit: 2020–2025	0

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Web of Science	Keywords: ((burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy)) Limit: 2020-2025	7

2.2. Selection of Sources of Evidence

Supplementary S1 records the PRISMA-ScR process results for eight searches. One of the eight database searches produced the included records—Google Scholar (n = 6). Added were four unique results from an initial search on 3 June 2025 of the keywords "burnout AND nutrition AND (nutrition literacy OR food literacy)" [31] for a total of 10 included reports. The standardized PRISMA process summary is in **Figure 1**.

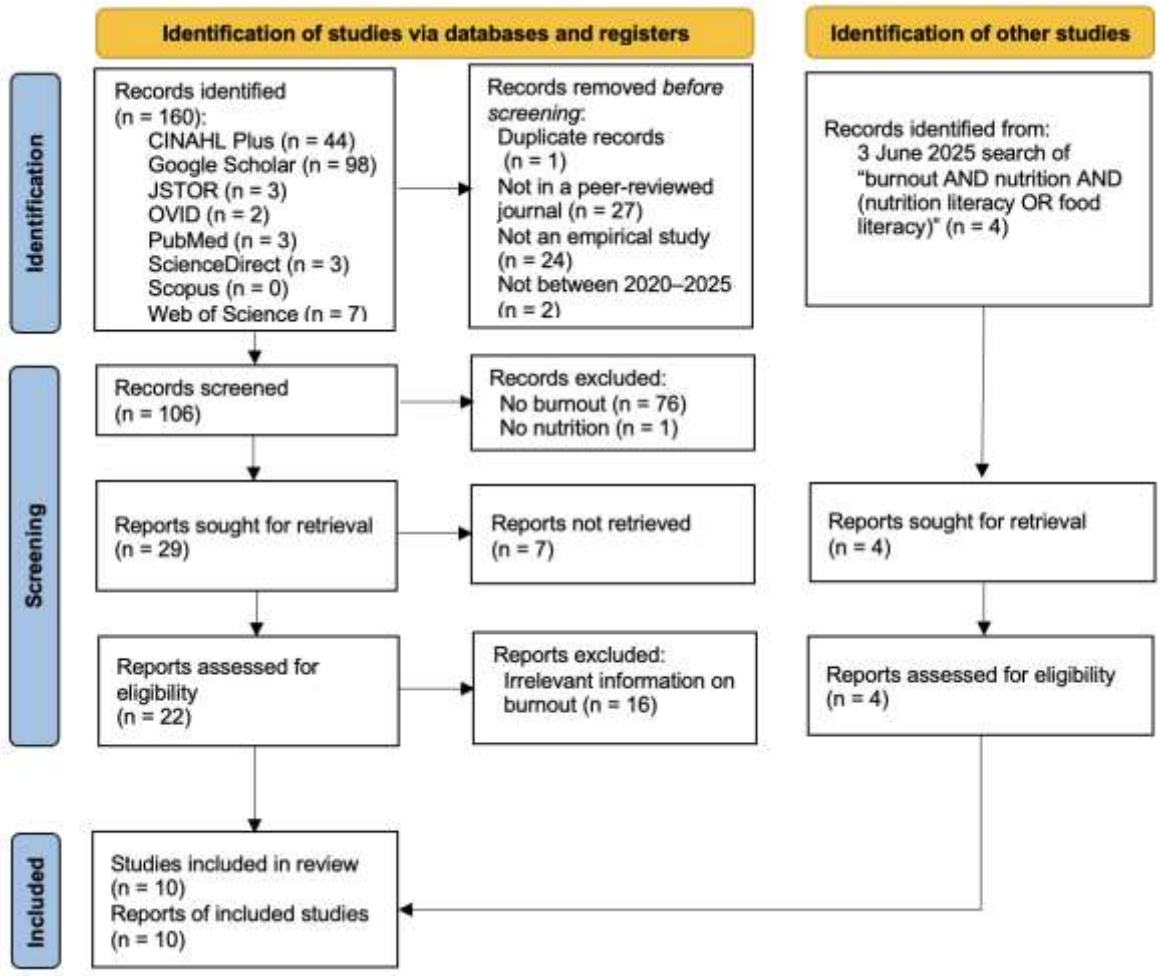

Figure 1. The PRISMA 2020 flow diagram for new systematic reviews, including searches of databases, and other sources [44] of a 9 January 2026 search of (burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy).

2.3. Data Items and Summary

Supplementary S1 notes the data items of each database. **Table 2** summarizes them. Unexpectedly, the largest number of returns excluded in a search for burnout were those results that did not mention burnout. For the CINAHL Plus database, these were 37 of the 44 returns, or 84%. For Google Scholar, 34 of the 98 did not mention burnout, equivalent to almost 35%. Three of the seven returns for Web of Science did not mention burnout (approximately 43%), and although PubMed returned only three results, two of these, or 67%, were not burnout-related. There were articles with irrelevant references to burnout. This result represented 12 of the Google Scholar returns and one

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each for JSTOR, OVID, ScienceDirect, and Web of Science. Adding together those results from Google Scholar that either did not mention burnout or referred to it in an irrelevant manner eliminated 47% of the returns. The next-largest reason for excluding the number of results from Google Scholar was that the publication was not from a peer-reviewed journal. These were 26 or just over 26%. CINAHL also returned one result that was not from a peer-reviewed journal. Several returns from each of CINAHL (n = 6), Google Scholar (n = 16), and JSTOR (n = 2) were not empirical studies. These were reviews, government reports, or book chapters. For each of these databases, they were over 13%, over 16%, and almost 67% of the returns. A few of the returned were unable to be retrieved. At 4, this was a small percentage of the Google Scholar returns (just over 4%). However, the one for OVID represented 50% of the results, and for ScienceDirect, almost 67%. Surprisingly, there was only one duplicate record—Web of Science duplicated with PubMed. Yet, although duplicated, it was not among the final results included. For this search, only six results were included—all from the Google Scholar search.

Table 2. Detailed results of the 9 January 2026 searches of eight databases.

	CINAHL Plus	Google Scholar	JSTOR	OVID	PubMed	Science Direct	Scopus	Web of Science
Duplicate Records								1
Not 2020-2025								2
Not in a Peer-Reviewed Journal	1	26						
Not an Empirical Study	6	16	2					
No Burnout	37	34			2			3
No Nutrition					1			
Not Retrieved		4		1		2		
Irrelevant information on burnout		12	1	1		1		1
Included	*0*	*6*	*0*	*0*	*0*	*0*	*0*	*0*
Total Results	44	98	3	2	3	3	0	7

3. Results

The Results section of the Checklist (**Supplementary S2)** includes four required sections and one optional (not completed for this scoping review). The results of the first of these four completed sections are represented by **Figure 1**. The other three sections are (1) the characteristics of the sources of evidence, (2) the results of individual sources of evidence, and (3) a synthesis of the results. The subsections to follow regard each of these three sections of the Checklist.

3.1. Characteristics of the Sources of Evidence

Of the ten included reports, all are from the Google Scholar search. Their characteristics are in **Table 3**. The first four are from the 3 June 2025 search [31]. The next six are from the 9 January 2026

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search. Their titles and citation numbers are as follows. Exploring the role of dietitians in mental health services and the perceived barriers and enablers to service delivery: A cross-sectional study [45], Burnout Status Among Health and Non-Health Sciences Students During the COVID-19 Pandemic: A Nutritional Perspective [46], Nutrition Literacy: What are Young Adults with Type-1 Diabetes Missing? [47], Fruit and Vegetable Intake, Food Security, Barriers to Healthy Eating, and Empowerment among Dietetic Interns and Physician Assistant Interns: A Cross-Sectional Pilot Study [48], Development of Master Chef: A Curriculum to Promote Nutrition and Mindful Eating among College Students [49], Survey of Nutrition Education Among Medical Students [50], Teaching Kitchens: An innovative program for enhancing self-management skills in adolescents living with type 1 diabetes (T1D)–A feasibility study [51], Treat yourself: Food Delivery Apps and the Interplay Between Justification for Use and Food Well-Being [52], Investigating pre-professional dancer health status and preventative health knowledge [53], and More PEAS Please! Process Evaluation of a STEAM Program Designed to Promote Dietary Quality, Science Learning, and Language Skills in Preschool Children [54].

After further consideration, one additional study, included as part of the 3 June 2025 search results, was excluded from this scoping review. A criterion for inclusion was that the study be empirical research. A Delphi consensus [55], although this work was a study, the goal of reaching consensus, where a panel of experts synthesize and agree upon the existing scientific literature [56], was judged to be not an empirical study assessing new findings.

A research team authored nine of the included reports [45–51,53,54]. Only one was co-authored [52]. No reports have a single author, and none are by the same research team.

The publications are from various journals. Five of these are nutrition journals [45,46,48,53,54], one concerns public health [48], one is a general medicine journal [47], and another is a medical specialty [51], another involves lifestyle management [50], and one concerns business practices [52]. The order of the returns was nutrition reports, health and medicine studies, lifestyle management publications, and business practices.

Although the search spanned 2020-2025, no included report was older than 2023. There were five publications in 2023 [45,47,50,52,53], three in 2024 [46,48,49], and two in 2025 [51,54].

The bibliographic details of these reports are in **Table 3.**

Table 3. Bibliographic details (# (citation number), article title, authors, publication journal, and publication year) of the unique results from the 3 June 2025 search of "burnout AND nutrition AND (nutrition literacy OR food literacy)" (first four) and those of the 9 January 2026 search of (burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy) , listed in the order of their returns.

#	Title	Authors	Journal	Year
[45]	Exploring the role of dietitians in mental health services and the perceived barriers and enablers to service delivery: a cross-sectional study	Teasdale et al.	Journal of Human Nutrition and Dietetics	2023
[46]	Burnout status among health and non-health sciences students during the COVID-19 pandemic: a nutritional perspective	Karaagac et al.	Revista de Nutrição	2024
[47]	Nutrition literacy: what are young adults with type-1 diabetes missing?	Abrams et al.	Cureus	2023
[48]	Fruit and vegetable intake, food security, barriers to healthy eating, and empowerment among dietetic interns and physician assistant interns: a cross-sectional pilot study	Campbell et al.	Nutrients	2024

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[49]	Development of Master Chef: a curriculum to promote nutrition and mindful eating among college students	Parsons et al.	International Journal of Environmental Research and Public Health	2024
[50]	Survey of nutrition education among medical students	Duggan et al.	Journal of Wellness	2023
[51]	Teaching Kitchens: An innovative program for enhancing self-management skills in adolescents living with type 1 diabetes (T1D)–A feasibility study	Lim et al.	Diabetic Medicine	2025
[52]	Treat yourself: food delivery apps and the interplay between justification for use and food well-being	Capito and Pergelova	The Journal of Consumer Affairs	2023
[53]	Investigating pre-professional dancer health status and preventative health knowledge	Nicholas et al.	Frontiers in Nutrition	2023
[54]	More PEAS Please! Process Evaluation of a STEAM Program Designed to Promote Dietary Quality, Science Learning, and Language Skills in Preschool Children	Stage et al.	Nutrients	2025

3.2. Individual Sources of Evidence

Of the ten studies included, only one aimed to investigate the relationship between burnout and nutrition [46]. Two focused on mental health and nutrition [45,47]. Five considered health and well-being in conjunction with nutrition, and two represented critiques assessing nutrition advice [49,50].

The recommendation [57] is that studies with more than three variables have more than 100 participants. Three studies followed this recommendation [46,48,50]. Two studies attempted to do so, but of the 100 recruited in one, only 16 participated—a study involving experts [49]. For the other, only 69 of the enrolled 116 students chose to participate [53]. One of the studies with fewer than 100 participants specified the participant type by age [45] and two by their academic specialty [48,50]. Two [46,50] indicated that these participants were university students. Two studies concerned people diagnosed with type-1 diabetes [47,51]. One other study did not specify the characteristics of the participants surveyed [52]. Three others concerned unique populations: nutrition experts [49], ballet students [53], and preschool teachers [54].

The completion of all studies was during the COVID-19 pandemic. The earliest was undertaken in the second half of 2020 [52]. Two were from early 2021 [47,50], and one from later that same year [46]. One study was from 2021 to 2022 [54]. There were three studies in 2022. One was conducted in the spring [45], another in the fall [53], and the third began in the fall of 2022 and extended to the spring of 2023 [51]. Those conducted in 2023 alone were one undertaken at the beginning of the year [48] and the other during the spring [49].

Most studies were from the USA. Five were USA [47–50,54]. Australia had three studies [45,51,53] and Canada [52] one. The only representation of a non-Western country was Türkiye [46].

These individual sources of evidence are in **Table 4.**

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Table 4. Citation number (#), study aim, type of participants and their number, study date, and study location of the four unique additions from a 3 June 2025 search of "burnout AND nutrition AND (nutrition literacy OR food literacy)" and the six results from the 9 January 2026 search of (burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy) listed in the order of their returns.

#	Study Aim	Participants	Study Date	Location
[45]	In mental health services, exploring the dietitian's role and service delivery regarding identified barriers and enablers	48 respondents between 23–67 years	March to April 2022	Australia
[46]	Among university students studying online during the COVID-19 lockdown, assessing burnout regarding nutrition and lifestyle habits	747 university students	October and November 2021	Türkiye
[47]	In young adults with type-1 diabetes, evaluating nutrition literacy and perceived disease emotional burden	42 young adult type-1 diabetics	January and February 2021	USA
[48]	In dietetic and physician assistant interns, comparing fruit and vegetable intake, food security, and barriers to healthy dietary choices during an internship.	81 dietetic and 79 physician assistant interns	January and February 2023	USA
[49]	Regarding nutrition experts reviewing and assessing the feasibility of the Master Chef mindful eating curriculum	16 experts of the 100 recruited	Spring 2023	USA
[50]	Among medical students, gathering perspectives on the necessity of medical school nutrition education	1182 medical students	January 2021	USA
[51]	For adolescents with type-1 diabetes, exploring the effectiveness of a pilot to develop healthy meal preparation skills through individualizing core nutrition principles through tailored cooking skills of their preferred foods.	21 adolescents with type-1 diabetes between 13 and 17 years old	October 2022 and March 2023	Australia
[52]	Among participants, examining the relationship between the use of mobile food delivery apps and well-being	30 unique participants	June–November 2020	Canada
[53]	For Australian ballet students at one institution, establishing baseline measures of their current health, nutrition, lifestyle, and well-being	69 of 116 enrolled students	September 2022	Australia
[54]	For preschool teachers, a pilot study to support them in improving children's learning in science, language, and diet	24 preschool teachers	August 2021 to May 2022	USA

The most evident outcome from the study aims is that none of the outcomes directly concern burnout. Although lacking nutrition knowledge [48], those with medical training considered nutrition education vital to improved patient care [50]. Furthermore, dietitians are viewed as helpful in this regard, working as a collaborative healthcare team [45]. Those students with health sciences training were more likely to change their nutrition behavior during the pandemic than other students [46]. Two studies [49,53] assessed nutrition guidelines. In studies of type-1 diabetes [47,51] and users of mobile food delivery apps (FDAs) [52], the outcomes were affected by nutrition. One pilot study noted the value of improved nutrition knowledge [54].

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Six of the ten studies had a quantitative component [45–50]. Two of these had a qualitative component as well [45,49]. Four studies were entirely qualitative [52].

Three of the studies demonstrated statistical significance that was generalizable [46,47,50]. Two other studies were statistically significant; however, the sample sizes were too small for generalizability [45,48]. One study did not test for statistical significance because the sample size was too small [49]. Additionally, this research had a qualitative aspect that was the focus of the analysis. The testing of statistical significance was not appropriate for the qualitative studies [51–54].

Table 5 presents the methodological details of the studies.

Table 5. Citation numbers (#), outcomes of the aim, study type, and statistical significance of the results of the four unique additions from a 3 June 2025 search of "burnout AND nutrition AND (nutrition literacy OR food literacy)" and the six results from the 9 January 2026 search of (burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy) listed in the order of their returns..

#	Outcomes Regarding Aim	Study Type	Significance
[45]	Improvement in the health and quality of life of individuals with mental illness is possible by dietitians as members of collaborative mental healthcare teams	Fixed response questions plus voluntary open-ended questions	Small sample size, results not generalizable
[46]	Health sciences students, more than other students, were found to use supplements, have dietary habits, and change their physical activity during the COVID-19 pandemic	Cross-sectional web-based survey	Statistical
[47]	Compared to other age groups, young type-1 diabetic adults report higher HbA1c levels	40-question survey on Google Forms	Statistical
[48]	The vegetable intake of dietetic interns was higher than that of physician assistant interns, who lacked nutrition knowledge	Cross-sectional pilot study	Statistical; however, small sample size.
[49]	Most reviewers positively perceived the overall curriculum, providing feedback on the educational content, lesson objectives, and perceived feasibility	Qualitative and quantitative	Not tested, sample size too small
[50]	In this multi-institutional study of medical students, most believe that maximizing patient care requires their understanding of nutrition	Observational cohort study	Statistical
[51]	Parents report an increase in their child's food literacy, confidence, and interest in cooking at home, with 94.7% recommending the program	Quantitative and qualitative	Not tested
[52]	Consumers' well-being, depending on their self-regulation, awareness, and conscious management of their food relationship, is influenced by FDA licensing either positively or negatively	Interpretivist qualitative	Not tested
[53]	Based on the health knowledge provided, specific education strategies are needed to promote preventative health in pre-professional dancers	Cross-sectional	Not tested

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[54]	The Preschool Education in Applied Science program is feasible in improving the food-based science teaching practices of preschool teachers	Mixed methods	Not tested

3.3. Synthesis

Four of the reports focused on the relationship between burnout and food. The influence of burnout on university students was due to the types of food they ate during the pandemic [46]. For [48], eliminating food insecurity was considered relevant in reducing the burnout of physician assistant interns. On the other extreme, the research of [47] identified that significantly higher HbA1c levels of young adults living with type-1 diabetes compared to different age groups were likely not because of their eating habits. Instead, it was a result of their burnout from the demands of their disease—reiterated in [51], an article also concerned with type-1 diabetics. Two of the studies concerned groups formed specifically to reduce burnout. Master Chef is part of WellNurse, a Holistic Multidimensional Intervention intended to reduce burnout in nursing students [49], while Medicine in Motion (MM) is a non-profit student-run organization founded to reduce burnout in medicine [50]. Two studies report the cause of burnout. For ballet students, it is the strenuous level of training and competition [53]. For preschool teachers, the COVID-19 pandemic catalyzed workplace closures and high turnover [54]. The final two reports regard the effects of burnout. Dietitians have reduced working practices, skills, and objectivity [45]—individuals generally seek comfort and easy life choices [52].

Three reports focus on the role of nutrition in a broad consideration of health. Considering its relationship to dietary habits, a reduction in burnout involves the consumption of meat, eggs, and legumes, while milk and dairy consumption were negatively associated with emotional exhaustion and cynicism [46]. The identification was that nutrition choices extend to consumer selection of new food technology options [52]. The results of nutrition education were an overall improvement in the health of ballet students [53]. Physician assistant interns [48] and medical students [50] needed nutrition consideration. Yet, for young adults living with type-1 diabetes, the usual focus on nutrition was deemed counterproductive [47,51], as diabetes is multidimensional. Nutrition knowledge improved the teaching practice of preschool teachers [54]. The lack of awareness of the dietitian's role represents one of the difficulties in understanding the relationship between mental health and nutrition [45]. Similarly, mindfulness-based practices, resilience, and community in nutrition education are recognized as imperative for reducing systematic burnout [49].

Six reports refer to nutrition literacy [45–47,49,50,54]. Two specify food literacy [48,52]. Two refer to both [51,53]. Common to most of these articles is the agreement that increased literacy should be a focus. Of those concerned with nutrition, [45] views that there must be an improvement in nutrition literacy for individuals with mental illness because this population has a high prevalence of lifestyle diseases related to food choices. There was a potential benefit to health science and other university students from increased nutrition literacy [46]. The report of [49] agrees with this assessment but specifies that the college environment is unsupportive of nutrition literacy. Yet [50] stresses the value of encouraging medical students to become more nutrition literate—not only for their benefit but also to improve their future patient outcomes. Similarly, preschool student outcomes improve when their teachers achieve nutrition literacy [54]. The focus of [48] is on food literacy rather than nutrition literacy because physician assistant interns demonstrate food insecurity more in comparison to dietetic interns. Having this focus helps in avoiding food insecurity. Stressed are all aspects in [52] as what might be involved in improving food literacy. The one report regarding nutrition literacy that does not call for an increase in this literacy is [47]. The reason is that nutrition literacy has been the primary focus for young adults with diabetes without sufficient recognition of the more substantial role of burnout in the elevation of their HbA1c levels. In contrast, [51] regards increased nutrition and food literacy in this population as leading to their improved autonomy regarding nutrition-

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related decisions. The advice is increasing both nutrition and food literacy for elite ballet programs [53].

The study focus specified in Table 6 regards burnout, nutrition, nutrition literacy, or food literacy.

Table 6. Citation number (#), burnout, nutrition, and literacy (nutrition or food) of the four unique additions from a 3 June 2025 search of "burnout AND nutrition AND (nutrition literacy OR food literacy)" and the six results from the 9 January 2026 search of (burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy) listed in the order of their returns.

#	Burnout	Nutrition	Nutrition/Food Literacy
[45]	Formalized supervision arrangements enable better working practices, improve knowledge and skills, address issues objectively, and can minimize stress and burnout for dietitians, particularly those regularly encountering patients with high degrees of psychological distress	Barriers included a lack of awareness from others regarding the dietitian's role in mental health, and a lack of specific tools for nutrition screening	With a higher prevalence of lifestyle diseases (e.g., diabetes, metabolic syndrome, cardiovascular disease, and obesity) among individuals with mental illness, increasing nutrition literacy and the promotion of healthy behaviors, via group education or individual consultation, is essential to help improve physical health outcomes
[46]	Faculty, years of education, COVID-19-related thoughts, and precautions, paying attention to diet, and consuming milk, dairy products, meat, eggs, and legumes at least once a day were identified as factors influencing burnout in university students during the pandemic, demonstrating that adopting healthy eating habits was beneficial	Noteworthy correlation between being attentive to nutrition, dietary habits, and burnout in line with the existing literature—specifically, meat-egg and legumes consumption was associated with all sub-dimensions of burnout, and milk and dairy consumption were negatively related to emotional exhaustion and cynicism	The recommendation is to improve the health and nutrition literacy levels of not only health education students, but also non-health science university students
[47]	Significantly higher HbA1c levels of young adults living with type-1 diabetes compared to other age groups might be due to disease burnout rather than a lack of proper understanding of how nutrition can influence blood sugar	Diabetes is a multidimensional component, and for the literature to reduce poor management to nutrition alone is counterproductive to patient outcomes	The findings indicate that the elevation of HbA1c levels in these ages might not necessarily be due to a lack of nutrition literacy but emotional burnout from the disease burden
[48]	Food insecurity is a concern for dietetic and physician assistant interns, where the ramifications of food insecurity could impact other goals related to healthcare	Dietetic interns had higher vegetable intake than physician assistant interns, and a lack of nutrition-related knowledge for physician assistant interns may lead to	Physician assistant interns had a higher prevalence of food, housing, and transportation insecurity than dietetic interns, such that higher food literacy among

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	professions, including the ability to prevent burnout and sustain a diverse pool of practitioners	both poor nutrition-related behaviors long term and a lack of ability to provide accurate nutrition-related education to the patients they serve	physician assistant interns could play a role in helping them avoid food insecurity
[49]	The implementation of Master Chef will be as part of WellNurse: a Holistic Multidimensional Intervention, aiming to address systematic burnout and increase resilience among baccalaureate nursing students	This intervention is interdisciplinary, with initiatives in mindfulness, such as Mindfulness-Based Stress Reduction, mindful physical activity, mindful eating, and nutrition education, alongside a system-wide promotion of a culture that exhibits resilience and community	Included in the curriculum are the promotion of culinary skill self-efficacy, nutrition literacy, body appreciation, and mindful eating, while also addressing potential limiting factors of the college environment itself
[50]	Medicine in Motion (MM) is a non-profit, student-run Organization, founded in 2018, that aims to address burnout in medicine through physical activity, community service, and philanthropy	Most medical students in this cohort believe that understanding nutrition is vital to maximizing patient care	Physicians who have undergone health literacy training regarding nutrition are more likely to implement strategies and materials that improve the health literacy of their patients
[51]	Adolescents with type-1 diabetes can experience diabetes burnout, leading to self-management reduction and worsened glucose levels	Forced to estimate the macronutrient composition of their meals, adolescents with type-1 diabetes face unique nutrition challenges	Teaching Kitchens increases food and nutrition literacy and could be used to strengthen autonomy of eating habits in type-1 diabetes.
[52]	Once the individual becomes exhausted or reaches burnout, they seek comfort by making easy life choices.	While previous research has examined implications related to food labeling and nutrition policy, the need is to consider consumer choices regarding new technology options and their relationship to consumer well-being	Food well-being considers not only the aspect of eating food, but also includes shopping for ingredients, preparation, cooking (knowledge/food literacy), sharing/social context, and the resulting emotions and mood all of which impact consumer well-being
[53]	Regarding training and competitions, burnout is higher among ballet dancers compared to participants in elite sports	Nutrition education for dancers potentially reduces low energy availability, relative energy deficiency, disordered eating, an unhealthy focus on weight loss, and injury risk	Nutrition and food literacy are relevant to incorporate into elite dance programs.
[54]	The COVID-19 pandemic increased the level of burnout experienced by preschool teachers from workplace closures and a high turnover rate	89% of teachers completing the pilot program reported improvement in their practice regarding science and nutrition	Literacy was viewed as a concept in contrast to nutrition activity, reducing the integration of nutrition education into everyday instruction

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4. Discussion

Even proceeding an appraisal of their relationship to nutrition literacy and food literacy, considering burnout in association with nutrition is a multi-faceted concern. What is unclear is whether burnout, nutrition, or a combination of both precipitates this multidisciplinary interest. In 2023, the report was that recognizing burnout as a public health concern was recent [58]. Therefore, before this 2023 publication, investigating burnout would have remained outside the purview of public health. Similarly, 2022 was the first year that nutrition, health, work-related outcomes, and life satisfaction were evaluated together [59]. It was sometime between the publication of a 2021 report that assessed general concerns about health and wellness and burnout [60] and the 2022 publication [58], that there was an acknowledgement that the relationship between burnout and nutrition involves public health, medicine, lifestyle management, and business practices. The lack of association of these fields with burnout and nutrition wasn't evident until 2022. This result provides a reason why a search for relevant reports from 2020 to 2025 produced no included publications before 2023. Nevertheless, some studies were in 2021 (two early in the year [47,50], and one late [46]). There were two studies in 2022 (one in the spring [45] and the other in the fall [53]).

All publications included in this scoping review were of studies conducted during the COVID-19 pandemic, when burnout was particularly evident for all employee types [61]. Therefore, it is unexpected that in these articles mentioning burnout, only two of the included reports would explicitly refer to the effect of the COVID-19 pandemic [46,54]. 2021 was the most lethal year of the COVID-19 pandemic [62]. Due to imposed limitations, studies from that year were a challenge [63].

The 2021 study of young adults with type-1 diabetes was unique in its focus on burnout, nutrition, and nutrition/food literacy. Where all other articles mentioned the importance of good nutrition to reducing burnout dependent on increased nutrition and/or food literacy, [47] countered that there has been too great a focus on nutrition regarding higher HbA1c levels of young adults living with type-1 diabetes without recognizing that the cause of this result may be burnout in living with the disease rather than nutritional choices. Thus, reducing burnout is more imperative than making dietary changes for this population. Since the publication of [47], several studies have been published [64–66] on burnout and diabetes management. The finding is that diabetes burnout is distinct from other psychosocial conditions [67]. However, possibly the negative view on nutrition in [47] may have been an indirect effect of the pandemic during 2021. Once the pandemic was over, the other paper on nutrition in diabetics [51] had a more positive view of nutrition. Contrastingly, the 2025 publication [51] suggested that autonomy in food choices could follow increased nutrition and food literacy. The goal of autonomy for those with diabetes regarding nutrition was first recognized during the height of the pandemic in 2021 [68]. As such, the view of [47] may consider autonomy regarding nutrition for diabetes as the goal in recognizing the multidimensionality of this relationship, similar to [51].

Apart from [47], the remaining studies approach burnout, nutrition, and nutrition literacy or food literacy from a different perspective. Together, they provide a comprehensive message supported by additional research: (1) burnout is affected by nutrition [69], (2) nutrition literacy and food literacy by consumers and healthcare providers currently are at an insufficient level to inform appropriate nutrition choices [16], (3) the COVID-19 pandemic increased nutrition awareness but decreased coping in making healthy choices [70], (4) improvements to nutrition and food literacy are necessary to produce reductions in burnout based on better nutrition [71], and (5) improved standards regarding nutrition are achievable—and are being achieved [72].

4.1. Limitations

Keyword bias might be the reason for the paucity of returns from the primary databases. As the primary database, CINAHL, produced 44 returns, a gap in the keywords is unlikely to explain why the returns from most primary databases were lacking. In such cases, the advice is to search the supplementary database Google Scholar [73]—as was done. Nevertheless, with 3 returns from JSTOR,

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OVID, and ScienceDirect, 2 from PubMed, and 0 from Scopus, there is a weakened sense of review comprehensiveness.

In contrast to a systematic review and meta-analysis [27,33], this scoping review lacks an evaluation of either the sample sizes [74] or the validity of the measurement tools [75]. The choice of a scoping review limits the type of analysis, since, following the PRISMA-ScR guidelines [34,38,76–78] for scoping reviews, the aim is to investigate the range of information on burnout, nutrition, and nutritional literacy or food literacy alone.

Regarding the data charting process, one researcher alone completed the searches. This method may lead to cognitive bias [79]. Following PRISMA-ScR procedures for scoping reviews [40] was to counteract possible cognitive bias. **Supplementary S1** is a file listing all searches that produced returns. It contains detailed information regarding all the database returns. Any researcher may examine these. Additionally, the completed Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) Checklist [37] in **Supplementary S2** is included for transparency, reducing the possibility of bias.

4.2. Suggested Research Directions

This scoping review identified an effect of the COVID-19 pandemic on burnout, nutrition, and nutrition literacy/food literacy. This effect was not previously known [37]. Moreover, the outcome is that research publications only began in 2023. Therefore, as a topic that is newly developing, the suggestion is for additional research in this area, particularly in various countries to balance the relative abundance of Western English-speaking studies. Yet to be investigated is the effect on burnout in conjunction with nutrition when assessing nutrition literacy or food literacy caused by the pandemic. This scoping review has shown that burnout from attending to their disease is the primary reason for elevated HbA1c levels of young adults living with type-1 diabetes, compared to other age groups, rather than nutrition. The question is whether nutritionally related burnout associated with chronic disease is similarly the cause of any increasingly poor test results. Examples are colitis [80] and Crohn's disease [81]. Investigating whether burnout should be the primary focus of treatment options, rather than diet modification for these nutrition-related chronic diseases, requires research.

This scoping review encompasses several research areas regarding burnout, nutrition, and nutrition literacy/food literacy. They span nutrition [45,46,48,53,54], public health [49], medicine [47,51], lifestyle management [50], and business practices [52]. Fields that have yet to consider this topic are decision-making and app development. Decision-making is relevant regarding achieving consensus in defining nutrition and food literacy standards, and this decision-making has been considered from the perspective of nutrition analysis [55] rather than focusing on the methodology regarding decision-making [82]. App development is an appropriate research consideration because research has consistently identified apps as promising in improving nutrition literacy and food literacy. However, medicine [83,84] or nutrition [85,86] has been the focus. Research from the perspective of artificial intelligence is yet to be published. These examples represent the most obvious suggestions for investigations on this topic. As an emerging field of research, the range of directions is yet to be restricted.

5. Conclusions

There was corroboration of the hypothesis that several peer-reviewed studies published between 2020 and 2025 can be the result of searching eight databases for burnout, nutrition, nutrition literacy, and food literacy. The reports included were ten from Google Scholar. Concerning the importance of nutrition literacy and food literacy, research conducted during the COVID-19 pandemic reports co-occurring issues of burnout, nutrition, and nutrition/food literacy in specific populations. The primary discovery is that assessing the relationships among these terms was not the aim of the included studies. The pandemic increased burnout in various ways, such that one study, regarding young adults living with type-1 diabetes, explicitly found it resulted in significantly higher HbA1c levels. This result regarding burnout represented a more significant cause for the

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detrimental changes than nutrition itself. This scoping review has revealed that, when burnout is involved, the focus on changes in nutrition may be best initiated from the perspective of burnout rather than nutrition when considering enhancements to nutrition literacy or food literacy. Yet, with no dedicated research on this topic to date, there is an extensive opportunity for burnout and nutrition researchers to investigate these relationships intentionally.

Supplementary Materials: The following supporting information can be downloaded at the website of this paper posted on Preprints.org, **Supplementary S1**: Eight database searches of 9 January 2026 for the keywords (burnout OR job stress) AND (nutrition OR diet OR eating pattern OR food intake) AND (nutrition literacy OR food labeling) AND (food literacy OR health literacy) in order of their return, and **Supplementary S2**: Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist.

Author Contributions: The contribution of the one author was to all aspects of this work.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: No new data were created.

Acknowledgments: There was no use of GenAI for any purpose.

Conflicts of Interest: The author declares no conflicts of interest.

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