

Review

# Coping with Psychosocial Hazards: A Systematic Review of Young Construction Workers' Practices and Their Determinants

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**Abstract:** Young construction workers employ different practices to cope with psychosocial risks, most of which prevent them from achieving mental well-being. Managing this problem has been a challenge because research on the topic is fragmented. To contribute to addressing this problem, we systematically reviewed the literature on young construction workers' coping practices using meta-aggregation guided by the PICo and PRISMA frameworks. We sought to identify young construction workers' coping mechanisms and the factors that influence their choice of coping practices. A total of 345 studies were retrieved, and 24 studies published between 1993 and 2022 met the inclusion criteria. Using deductive thematic analysis, we identified 28 coping practices and categorized them into eight mechanisms and three domains. Eleven determinants of young construction workers' coping choices emerged and were classified as personal and environmental factors. This review provides knowledge for building theory on young construction workers' coping and stresses the need for further studies on the role of influencing factors such as age, individual resilience, coping experience, religion, and spirituality. Findings from this review can serve as an evidence base for researchers, occupational health practitioners, and policy-makers for developing interventions that can promote the uptake of beneficial coping practices by young construction workers.



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**Keywords:** youth; young workers; mental health; coping; occupational health; mental illness; psychological stress; construction industry; systematic review

## 1. Introduction

Young construction workers aged 15–35 years have significantly high rates of poor mental health [1–3]. It is well established that these are caused by the combined effects of a host of work and non-workplace psychosocial risk factors (PRFs) [4], for example, bullying [5], drug and alcohol abuse [6,7], poor home support [8], and long work hours [9], to which young construction workers are exposed. It is widely perceived that the unusually high levels of psychological distress, poor mental health, and poor help-seeking behaviour of young people are indicative of young people's poor coping behavior against PRFs [10,11]. Young construction workers have been found to employ different coping practices, i.e., dynamic behavioural or cognitive efforts for dealing with PRFs, their associated psychological distress, and any ensuing mental health problems [12,13]. They include activities such as seeking support from family and friends [14], drug and alcohol use [15,16], absenteeism [17], and problem repression [18], most of which prevent them from achieving mental well-being [10,11]. This serious problem calls for the integration and development of knowledge regarding the coping practices among young construction workers to understand and develop strategies to improve their mental health and enhance their workplace performance [17,19].

Accumulating evidence suggests that people's choice of coping and its effectiveness could largely be determined by a combination of factors such as age, gender, [20,21],

health status and socio-cultural background [6,7,22]. However, the determinants of young construction workers' choice of coping may operate across different levels, i.e., from personal/individual to organizational/industrial, and how they influence construction workers' coping behaviours is yet to be properly understood [4]. This recognition acknowledges the inherent complexity of coping behaviour [20,21] among young construction workers, in which individuals exposed to the same PRFs make different coping choices and experience different coping outcomes. Much progress, therefore, remains to be made in understanding coping among young construction workers, particularly those who have poor mental health due to the effects of PRFs.

Despite the emergence of literature on the topic of coping among young construction workers, issues such as the specific coping choices and their determinants have often been studied separately, leading to contradictory findings across different geographical locations, populations, and sub-groups. Furthermore, although a few systematic reviews have touched on coping, their main aim was to review the effects of workplace PRFs such as bullying [5] and employment transitions [18], with the discussion on coping being marginal. A need, therefore, exists for a comprehensive review of the coping literature, with the aim of synthesizing concurrently the wider range of coping practices and their determinants in order to provide a more nuanced and consolidated understanding of the structure of coping among young construction workers. Currently, however, no review of this kind exists, and this represents a knowledge gap in the current body of literature. We address this gap by undertaking a systematic literature review which answers the following questions:

RQ1: What coping mechanisms do young construction workers use to deal with psychosocial risk factors?

RQ2: What factors determine young construction workers' choice of coping practices?

Answering these questions will provide an in-depth understanding of young construction workers' coping experiences and behaviour. This can help to explain why certain coping practices are frequently adopted by young construction workers despite evidence of their adverse effects and vice versa. It can also enable policy-makers and occupational health practitioners to better understand and interact with young construction workers. Additionally, findings from this review can inform future research on the topic under investigation.

## 2. Theoretical Background

Coping is the attempt through which a person changes or interprets a stressful situation that results from an encounter with a threat, to make it appear more favourable [23]. Lazarus and Folkman's [13] Transactional Theory of Stress and Coping, arguably the most widely used theory on coping (adopted in this review), conceptualises coping as the end stage of a three-step reactionary stress management process, viz.: "primary appraisal" (i.e., noticing a threat), "secondary appraisal" (i.e., deciding on potential reactions to the threat), and "coping" (i.e., reacting to the threat) [11,23–25]. Coping is a continuous process in which a person may be compelled to reassess the severity of a threat and choose back and forth from among a range of potentially suitable solutions [23].

The most widely used classification for coping strategies is the multidimensional coping framework proposed by Carver et al. [11,24] (Table 1). Based on this framework, coping strategies are classified as "problem-focused", "emotion-focused", and "maladaptive". People may use problem-focused coping when they perceive that it is possible to resolve an unfavourable situation [26]. Emotion-focused coping on the other hand may be employed when people feel that an unfavourable situation must be tolerated [26]. Maladaptive coping strategies may offer relief in the short term but tend to create more unfavourable situations in the long term [27,28].

**Table 1.** Constructs of multidimensional coping.

Coping Strategy	Definition	Components
Problem-focused	Engaging in practical strategies with the aim of changing or mitigating an unfavourable situation or source of stress	Active coping
		Planning
		Suppression
		Self-restraint
Emotion-focused	Engaging in re-appraisal of an unfavourable situation to reduce its associated emotional impacts	Instrumental social support-seeking
		Emotional social support-seeking
		Positive reinterpretation and growth
		Acceptance
Maladaptive	Resorting to behaviours that offer temporary benefits and ultimately prevent effective coping	Denial
		Turning to religion
		Focus on and venting of emotions
		Behavioural disengagement
		Mental disengagement
		Alcohol–drug disengagement

Source: adapted from Carver et al. [24] (1989) and Lazarus [23] (1993).

### 3. Materials and Methods

The objective of this study was to review and synthesise published narrative text on the coping practices of young construction workers, and their determining factors. The research questions were therefore formulated according to the PICO framework, i.e., Population (young workers); Intervention or Phenomena of Interest (coping with PRFs and mental health issues); Context (construction industry) [29,30]. The PICO framework is useful for guiding reviews that seek to understand people’s experience of phenomena [30], in this case coping with PRFs, as part of their work in the construction industry. Results from this kind of review can help researchers and health professionals to obtain an understanding of why certain coping practices are preferred or not preferred by young construction workers [31]. The PICO framework provided the basis to determine the types of keywords for the literature search (see Section 3.1), and to formulate inclusion criteria for the identified studies and the data extraction and analysis process (see Section 3.2).

Several options exist for analysing data from systematic reviews, including meta-analysis and meta-aggregation [31,32]. We determined that meta-aggregation using narratives, tables, and visuals was more suitable for answering the research questions in this review because of lack of heterogeneity in the characteristics (i.e., specific samples, contexts, outcomes, and methodologies) of the included studies [32,33]. Following the analysis, the results of the review were reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework [34].

#### 3.1. Search Terms and Strategies

In the absence of an integrated or a large body of published research studies on a specific population, phenomenon, or context, a synthesis of data from different types of text and expert opinion drawn through a transparent systematic review process can serve as adequate evidence to guide practitioners and policy-makers when making critical decisions on issues that inform evidence-based practice [29,30]. Given that this was our motivation for conducting this study, it was our goal to ensure that the best quality evidence was obtained for use in this review. The keywords we used to conduct the systematic literature search, therefore, were derived from a logic table [35] developed in alignment with the key concepts (i.e., young workers, coping, PRFs, mental health, and construction industry) of the PICO framework (Table 2).

**Table 2.** Logic table with identified keywords.

Population (Young Workers)	Intervention or Phenomena of Interest (Coping with PRFs, Mental Health Problems)	Context (Construction Industry)
Apprentice *	Cope *	Architectur * firm *
Building professional *	Coping behav *	Building industry
Construction personnel *	Coping mechani?m *	Construction activit *
Construction professional *	Coping strateg*	Construction company *
Construction labo *	Coping *	Construction firm *
Construction staff	Psycho * risk *	Construction industry *
Construction workforce *	Psycho * risk * factor *	Construction sector
Manual worker *	Psychosocial *	Construction work *
Mason *	Anxiety	Consultan *
Student *	Depress *	Contractor *
Young construction worker *	Distress *	
	Emotional health	
	Mental health	
	Mental ill *	
	Mood disorder *	
	Psychiatr *	
	Psychiatric disorder *	
Youth *	Psychological disorder *	Engineering firm *
	Psychological health	
	Psychological ill *	
	Psychological injur *	
	Psychological well-being	
	PTSD	
	Stress *	
	Wellbeing	
	Well-being	

Note: A question mark or an asterisk at the end of a search keyword was used to cover a broad range of results within the keyword.

We performed searches with multiple electronic databases (Scopus, ISI Web of Science (WoS), PubMed, and CINAHL) using combinations strings (“AND” and “OR”) of the specified keywords. We restricted the searches to publications in the English language, with no limits applied to search dates due to the emerging nature of research on mental health in the construction industry. We also searched for grey literature on websites of relevant government, multinational, and occupational health agencies (e.g., ILO, the Australian Institute for Suicide Research and Prevention [AISRAP], Mates in Construction, and the Victorian Health Promotion Foundation). We briefly screened the references section of key articles to identify any studies that could be of relevance to the review. In total, 345 publications were retrieved.

### 3.2. Inclusion Criteria, Final Article Selection, and Quality Assessment

To be eligible for inclusion, studies had to meet the following criteria: (a) published in English; (b) any type of empirical study or a review of any aspect of coping in re-

lation to mental health; (c) focus specifically on any sub-group (e.g., professional and non-professional, consultancy and contracting, gender, site and non-site based, etc.) of young construction workers (i.e., those aged 35 years or younger, in line with the maximum youth age specified by the Organization for Economic Co-operation and Development (2018) in any type of construction occupation (e.g., construction management, engineering, architecture, manual occupations, etc.). Where studies did not focus exclusively on young construction workers, eligible studies had to meet at least one of the following criteria: (d) categorise sample into different age groups including workers aged 35 years and below (approximately 30% of the overall sample size); (e) report a sample mean age of approximately 35 years or less; (f) in the absence of detailed information on study sample, include substantial information in their results and discussion relevant to young construction workers.

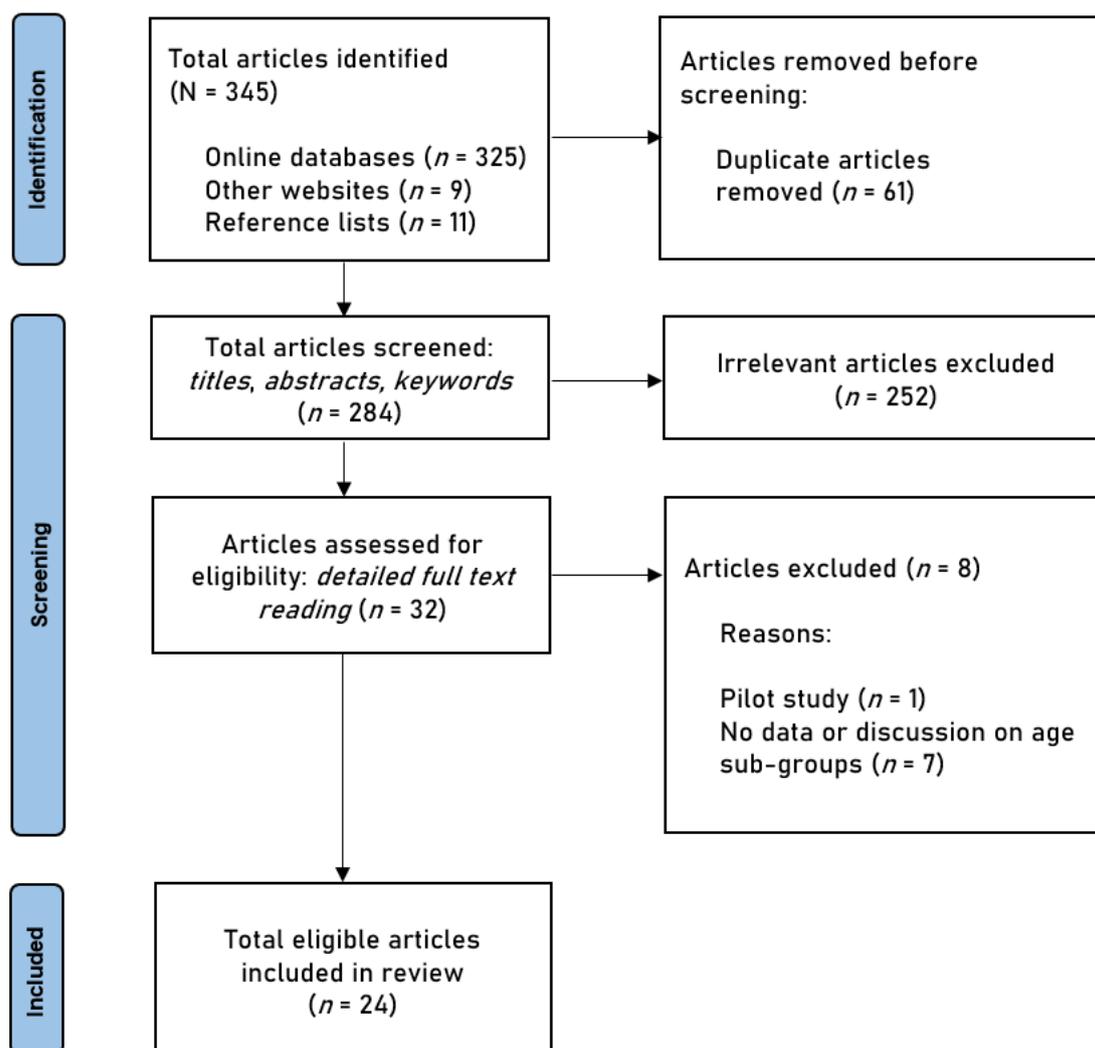
Studies were briefly checked for potential inclusion, leading to the removal of a total of 61 duplicate articles. Three stages of screening were undertaken against the inclusion criteria. First, article titles, abstracts, and keywords were screened (284 studies remained). Second, full texts of articles were screened (32 papers remained). Third, a final verification of the quality and eligibility of the articles for inclusion in the review was done through research team consensus. Eight articles were removed because they were either pilot studies or did not meet any of the last three aspects of the inclusion criteria. A total of 24 studies remained to be used in this review (included in the references section of this paper). This sample size ( $n = 24$ ) is within the range of published systematic reviews of a similar nature (e.g., [5]:  $n = 24$ ; [18]:  $n = 22$ ) and, therefore, is adequate for informing a comprehensive review of the topic of the current review. The PRISMA flowchart in Figure 1 shows an overview of these stages of article selection.

To determine the usefulness of studies for informing healthcare decisions, they must be assessed for quality and validity with respect to their methodology and results, as well as for the risk of bias in how they are conducted [36]. Thus, all the studies that met the inclusion criteria for this review were further assessed for methodological validity and quality. Qualitative studies were assessed using the Joanna Briggs Institute Qualitative Assessment and Review Instrument (JBI-QARI), whereas quantitative studies were assessed with the JBI Meta-Analysis of Statistics Assessment and Review Instrument (JBI-MASARI) [36]. The tools consist of questions that must be answered as “yes”, “no”, “unclear”, or “not applicable”. A “yes” answer is indicative of low risk of bias or poor quality, whereas a “no” or “unclear” answer indicates otherwise. Any differences in opinion on scores that arose during the analysis were resolved through consensus among the research team members. This was done to prevent the exclusion of relevant studies just because they did not strictly meet the reporting criteria specified in the assessment tools [37]. All 24 studies included in the review met the quality and validity assessment criteria to a reasonable degree.

### 3.3. Data Extraction and Analysis

Meta-aggregation was employed to synthesise the findings of this review. This approach involves extracting and merging published evidence in a manner that paints an overall picture of the phenomenon under investigation, but does not re-interpret the data, thus staying true to the content of the extant literature [31,38,39].

The analysis was carried out in three phases. The first phase involved a narrative synthesis of an overview of the studies used in this review. We began with a detailed reading of the text of each article. We extracted relevant data on the characteristics of each study, using a pre-designed data extraction template which consisted of sections on study details (title, author and year of publication, author background, and publication type), country of study (origin and focus), purpose of study, characteristics of study sample, study design, and summary of main study findings (see attached supplementary material Table S1 for full details).



**Figure 1.** PRISMA flow diagram of literature search and selection for the systematic review.

In the second phase, we engaged in a deductive analysis of the data by first extracting data on coping practices using a form that included 14 blocks of information, each reflecting a separate component of the multidimensional coping model developed by Carver et al. [24] and Lazarus [23] (see Section 2). Through this method, we identified 68 different coping practices. Subsequently, we refined the list by maintaining unique coping practices and combining similar ones. This resulted in a reduction to 29 coping practices. The identified coping practices were then assigned to Carver et al.'s [24] 8 themes of coping mechanisms viz.: active coping; instrumental social support-seeking; suppression; planning; emotional social support-seeking; alcohol–drug disengagement; focus on and venting of emotions; and behavioural and mental disengagement. The 8 mechanisms were further assigned to three domains, viz.: problem-focused, emotion-focused, and maladaptive.

The third phase involved a thematic content analysis that was done inductively to identify the factors that determine young construction workers' choice of coping practices. We developed the themes of determinants beginning with multiple readings of the texts. We highlighted keywords and statements that reflected underlying influences and young workers' motivations for utilising specific coping practices identified in the literature. This led to the emergence of 12 categories. The categories were cross-compared and unique ones were retained and similar ones merged. Labels that reflected the categories were then developed intuitively, and category assignment was done through a bottom-up approach, in which one reviewer assigned the categories and referred them to the

other team members for review and validation (see Table 3 for some categories and their examples). All 12 categories were maintained and further clustered under two themes, viz.: personal and environmental (socio-cultural and organisational/industrial) influences.

**Table 3.** Exemplar categories of coping determinants in the literature.

Category	Example
Level of knowledge	Mental health literacy Educational background (general and professional)
Industry and workplace culture	Attitudes of co-workers towards certain types of coping strategies Stigma around accessing certain types of support Descriptive norms associated with certain types of coping practices
Availability of workplace support	Formal workplace policies Availability of peer support Workplace support for the implementation of external intervention programs Attitude of employers and co-workers
Working conditions	Apparent risks to personal safety at the workplace Intensity of work pressure

In the final stage, the data from individual studies were summarised and reported under each domain and its associated themes and components.

## 4. Results

### 4.1. Overview of Included Studies

A total of 24 studies were included in the review. The studies were either published as peer-reviewed journal articles ( $n = 18$ ; 75%) or industry/organisational reports ( $n = 6$ ; 25%) between 1993 and 2022. Publications on the topic of young construction workers' coping have seen a dramatic increase over the last decade (Figure 2). Seven of the studies (29.17%) were exclusive to young construction workers. Data from at least 207,361 young construction workers are included in the review, with sample sizes varying from 12 to 193,200. All but three papers contained a study on a male-dominated sample. The studies focused on general construction tradespeople and labourers (33.33%), professional workers (e.g., architects, civil engineers, construction managers, etc.) (8.33%), both tradespeople and professional workers (37.50%), built environment students and apprentices (16.67%), and all categories of young workers in the construction industry (4.17%). The majority (66.66%) of studies focused on the Global North (e.g., 10 studies from Australia, 3 from the U.K., 2 from the U.S, and 1 from Canada). Of the studies, 29.17% focused on the Global South (e.g., two studies each from India and Ghana, and one each from South Africa, Vietnam, and Hong Kong), and the remaining 4.17% (one study) focused on mixed locations. Additional details on the studies included in this review are provided as supplementary material Table S1.

### 4.2. Young Construction Workers' Coping Mechanisms

Three domains of coping mechanisms, i.e., problem-focused (i.e., strategies aimed at dealing with the problem itself), emotion-focused (i.e., strategies meant to deal with one's emotions about the problem), and maladaptive (strategies that are supposed to deal with the problem or emotions surrounding it, but rather end up exacerbating the problem) were identified from the included studies (Figure 3). In total, these domains account for eight mechanisms and 29 specific coping practices employed by young construction workers. A total of eight coping practices were problem-focused, six were emotion-focused, and 15 were maladaptive.

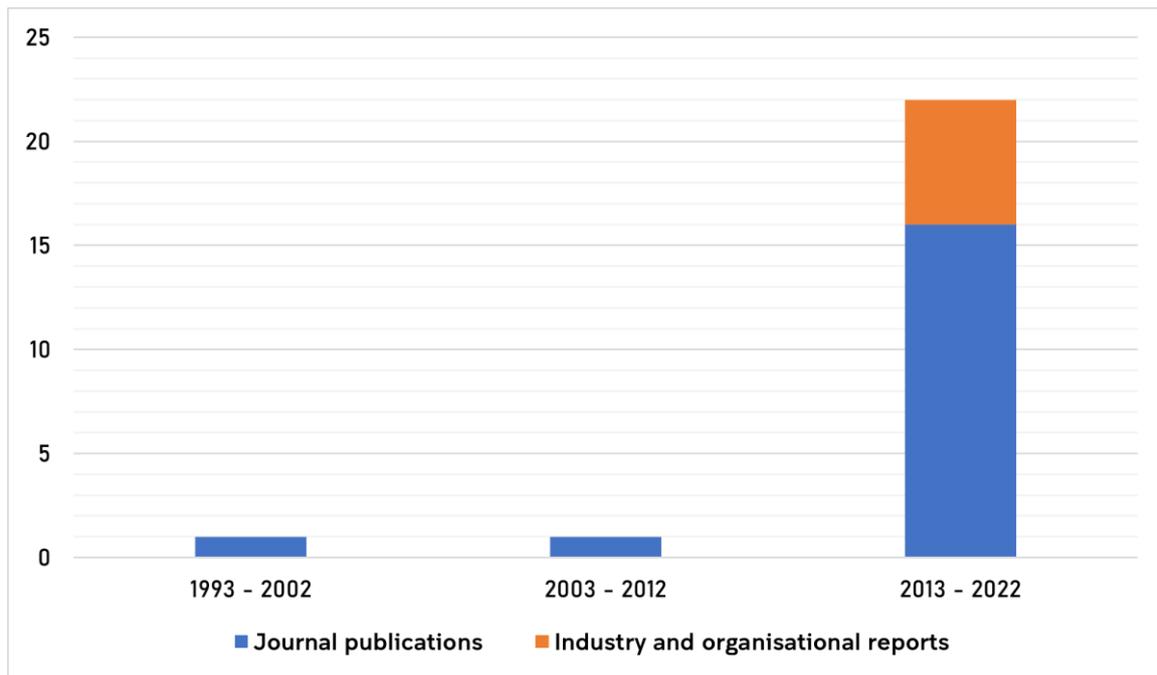


Figure 2. Number of published papers fulfilling the review criteria per decade.

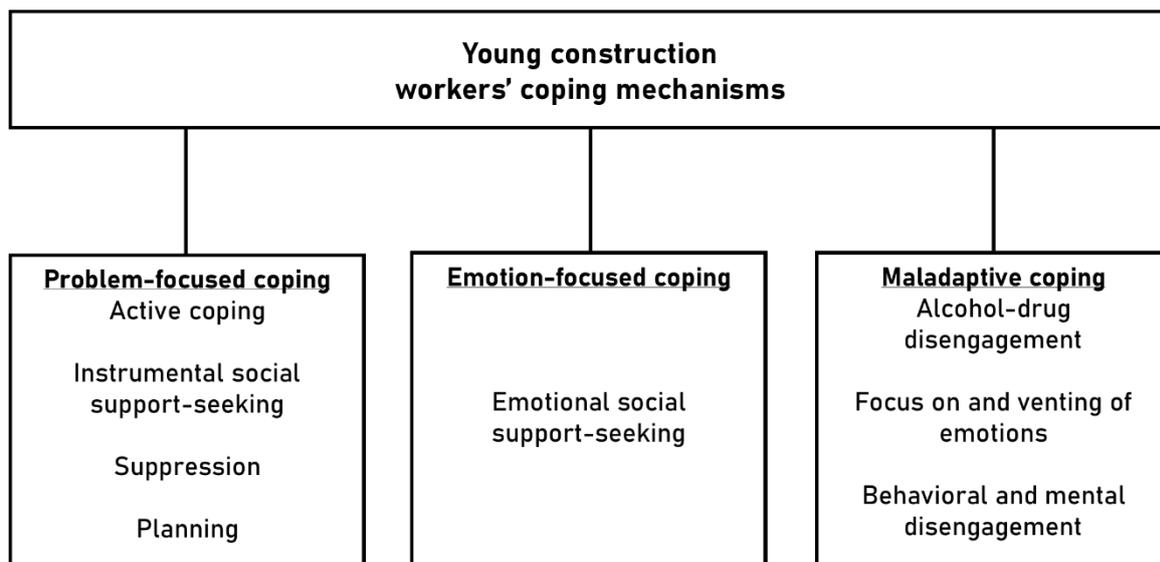


Figure 3. Domains of young construction workers' coping mechanisms.

#### 4.3. Determinants of Young Construction Workers' Choice of Coping Practices

In total, 12 determinants of young construction workers' coping practices were extracted. A total of six factors were personal, and six were environmental. Figure 4 shows the categories of factors that influence young construction workers' choice of coping practices.



**Table 4.** Young construction workers' problem-focused coping mechanisms and their examples in the reviewed literature.

Coping Mechanism	Specific Coping Practices	Source
Active coping	Delegating stressful tasks	[17]
	Seeking medical help for psychological problems	[6,7,40]
	Utilising workplace sources of information and assistance	[10,41]
	Learning about the problem (on the internet, radio, and social media)	[40]
Instrumental social support-seeking	Use of social and financial support from family and friends	[14,42,43]
Suppression	Reducing amount of time spent on work and/or study Focusing on what matters most	[43]
Planning	Anticipating future difficulties to enable priming	[44]

**Table 5.** Young construction workers' emotion-focused coping mechanisms and their examples in the reviewed literature.

Coping Mechanism	Specific Coping Practices	Source
Emotional social support-seeking	Maintaining communication with family members and close friends	[45,46]
	Living with friends or workmates	[46]
	Cohabiting with a new partner	[46]
	Positive reinterpretation and growth (e.g., being realistic about success)	[18]
	Accepting a situation as difficult and realistically dealing with it	[44]
	Engaging in religious practices and well-being techniques (e.g., mindfulness techniques of observation and awareness; prayer)	[19,40]

**Table 6.** Young construction workers' maladaptive coping mechanisms and their examples in the reviewed literature.

Coping Mechanism	Specific Coping Practices	Source
Alcohol–drug disengagement	Cigarette smoking	[47]
	Excessive alcohol consumption	[41]
	Abuse of prescribed and unprescribed medication (i.e., pain killers, sedatives, and stimulants) and other substances	[48–50]
	Use of illicit drugs (cannabis, marijuana, cocaine, meth/amphetamine, etc.)	[5–7,16,17,40,45]
Focus on and venting emotions	Keeping problems to themselves	[10,45,47]
	Emotional withdrawal	[10,45,47]
	Dwelling on their negative emotions	[10,45,47]
	Speaking harshly to others	[5,17,47]
	Retribution (e.g., hurting others back)	[5]
Behavioural and mental disengagement	Adopting a passive attitude towards work	[18]
	Absenteeism and presenteeism	[47,50]
	Denial	
	Immersing themselves in work	
	Forgoing personal desires	[45]
	Repressing problems	
	Withdrawal from work tasks	[17]

#### 5.1.1. Domain 1: Problem-Focused Coping Mechanisms

**Active coping:** This refers to the utilisation of formal (workplace and non-workplace) support. It has been mentioned among young construction workers both in the Global South and the Global North. In Ghana's construction industry, for example, young professional workers have been found to mostly cope with stress by consciously delegating

demanding tasks [17] and seeking both mainstream (hospital-based) and alternative (traditional and herbal) medical help for their psychological problems [40]. Recently, substance use (e.g., opioids and other pain killers) among young construction workers, although historically reported as maladaptive coping, has been found in some instances to be medically prescribed for young workers in the US who prefer to seek professional help for their psychological problems. This coping practice was however found to be used more by older youth and young females, and less by young males [6,7].

Beyond the use of medical help, utilisation of workplace resources for coping has been reported among young construction workers. King et al. [10], for example, found that among young construction workers in Australia, professional on-site construction managers, as well as those who worked in office environments, preferred to cope by seeking information about their problems at the workplace. A common approach to information seeking identified in the literature is talking to workmates about psychological problems [41]. Other identified information-seeking coping practices, preferred especially by young construction workers in Ghana, include learning more about health problems from the internet, social media, and radio [40].

**Instrumental social support-seeking:** As a form of problem-focused coping, instrumental social-support seeking refers to the use of practical coping support such as financial help, referrals, or goodwill provided by a person's social contacts to address PRFs. There is evidence of its use among different categories of construction workers. Migrant male construction workers from low-income countries working in other Global South countries minimise the psychosocial risks associated with long working hours, poor social support at work, and low wages by mostly making use, especially, of the financial and material resources available to their informal social support networks in the new countries where they work [42]. A similar trend was earlier reported among low-income mothers working in the Indian construction industry. This group often made use of support (cash and kind) from family, friends, and colleagues as a means of mitigating problems such as psychosocial stresses and consequent severe depression as well as suicidal ideation which arose from their constant concerns about the adverse effects of their work on childcare [14].

**Suppression:** There is evidence of the use of suppression, usually in combination with instrumental social support-seeking by built environment students in Australian universities who also happen to be construction workers. For example, Loosemore et al. [43] have found that these mechanisms were used by students to deal with the high levels of psychosocial pressures and attendant depression engendered by long study and work hours at school and work. Students specifically coped through the practice of reducing the amount of time they studied and worked, while simultaneously increasing their reliance on their social connections. This was done with the objectives of reducing academic and occupational stress and having time to concentrate on their health, which they felt was more important.

**Planning:** This involves anticipating difficulties in order to develop strategies for dealing with them. The only evidence of planning in the literature is on female undergraduate built environment students in Australia [44]. Among those studied, planning helped to develop resilience in response to a perceived difficult study and work environment. It also motivated choices such as students self-selecting into courses that they felt capable of studying.

### 5.1.2. Domain 2: Emotion-Focused Coping Mechanisms

Emotional social support-seeking is the main form of coping mechanism under the domain of emotion-focused coping used by young construction workers. Unlike instrumental social-support-seeking, this form of coping mechanism does not necessarily target the source of stress but rather enables a person to draw emotional stability required for dealing with a source of stress. It may be from a person's social connections or elsewhere. Several practices were identified in association with this coping mechanism, as observed

among rotational construction workers (e.g., fly-in-fly-out/drive-in-drive-out workers) [45], migrant workers [46], and built environment students at the tertiary level [43,44].

Construction workers in Australia, who often spent days away from home, for example, were found to deal with psychosocial stresses through continuous communication with close family and friends [45]. Migrant workers living and working in countries far away from their families often have to deal with psychosocial stresses associated with feelings of loneliness, boredom, and fatigue. These workers, therefore, were found to utilise coping practices that meet their emotional needs, such as living in shared accommodation with friends and workmates or “cohabiting with a new partner” [46]. Engaging in positive reinterpretation and growth has been reported as a coping practice against the tough nature of construction work. This was typical of some young and new entrants into construction work, who, in an effort to safeguard themselves against perceived future disappointment, were found to consciously develop modest and realistic expectations of professional success while working to build a construction career [18]. Acceptance, as a coping practice, has been identified among female students who self-select into academic construction programs [44]. Closely associated with, and perhaps giving rise to planning, acceptance was observed among female students who already perceived the academic and work environment in construction as tough and therefore, as a means of succeeding, tuned their minds to cope with the psychosocial effects of studying and working in a male-dominated environment [44].

Turning to religion and its associated practices are beginning to receive some research attention, as emerging studies indicate that young construction workers, especially those with Global South backgrounds, may prefer religion-based coping strategies. For example, the coping practice of “mindfulness” techniques from Buddhism [51] has been studied among young construction workers. An examination of the effects of individual mindfulness techniques on the stress levels of construction trade workers in Hong Kong found that the practice of “observation” was effective against “objective stress”; “observation and awareness” reduced “emotional stress”; and “awareness” mitigated “physical stress” [19]. A recent study by Frimpong et al. [40], for example, reported that among young construction workers in Ghana, there was a high preference for help-seeking from “religious leaders and faith healers” (50.8%) and “spiritualists” (16.8%) and as an alternative to Western-styled healthcare.

### 5.1.3. Domain 3: Maladaptive Coping Mechanisms

Alcohol–drug disengagement is arguably the most commonly identified maladaptive coping mechanism used by young construction workers, especially those who work on-site. Studies from both the Global North and Global South have confirmed alcohol and substance use as a practice associated with this coping mechanism. In Global North countries such as the US [6,7], UK [16,49,50] and Australia [45,47], many young construction workers engage in coping practices such as cigarette smoking, consumption of alcohol and stimulant drinks, and illicit drugs to suppress stresses emanating from problems such as physical pain, financially unrewarding construction work, bullying, loneliness, and family abuse. In the Global South context, studies in Ghana, for example, have linked the use of caffeinated drinks and excessive smoking to young construction workers’ coping with tiredness and its psychological effects that emanate from excessive work demands [17]. There is also evidence of the use of sedatives and stimulants (sleep and relaxation pills) to cope with sleep problems, which are a common mental health issue (i.e., sleep problems) among young construction workers in Ghana [17,40].

Young construction workers, both the Global North and South, employ other forms of maladaptive coping mechanisms. For example, some young workers, especially those who work on-site, when undergoing stress, tend to focus on and vent their emotions by keeping problems to themselves, withdrawing emotionally, and dwelling on their negative feelings [10,45,47]. Construction trade workers and apprentices, especially, vent their negative emotions by speaking harshly toward others and in some instances through

“retribution”, i.e., physical or emotional retaliation [5,17,47]. The mechanism of behavioural and mental disengagement has also been reported among young construction workers. Unlike suppression which creates more room for a person to focus on the most important ways to deal with a PRF, this coping mechanism momentarily distracts a person from focusing on the reality or intensity of a PRF and its potential impacts by providing some form of temporary emotional or physical relief. Some young workers, for example, adopt a passive attitude toward work as a means to avoid focusing on the difficult nature of construction work and being overly hurt when their expectations of professional progress are not met [18]. Rotational workers have been observed to cope through denial by taking too much work to distract themselves, ignoring personal aspirations, and pretending that their problems do not exist [45]. Trade workers have been noted to withdraw from work tasks [17], while those with managerial responsibilities prefer to engage in both absenteeism and presenteeism [47,50].

### 5.2. Determinants of Young Construction Workers’ Choice of Coping Strategies

The determinants of young construction workers’ choice of coping strategies can be categorised under two themes, viz.: personal influences (Table 7) and environmental influences (Table 8).

**Table 7.** Personal influences on young construction workers’ choice of coping strategies.

Influencing Factor	Source
Age	[6,7,10]
Coping experience	[48]
Individual resilience	[44,52]
Perception and attitude toward coping practices	[41,43,47]
Level of knowledge	[47]
Mental health literacy	
Educational background and attainment (general and professional)	[17]
Socioeconomic status	[6,10,53]

**Table 8.** Environmental influences on young construction workers’ choice of coping strategies.

Category	Influencing Factors	Source
Socio-cultural factors	Family conditions	[47]
	Level of willing support from family and close connections	[6,7,10,14,46,48,54]
	Cultural background and community attitudes	[16,40]
Organisational/ industry factors	Industry and organizational culture	[47]
	Attitudes of co-workers towards certain types of coping strategies	
	Stigma around accessing certain types of support	[45]
	Descriptive norms associated with certain types of coping practices	[16,55]
	Availability of workplace support	[56]
	Nature of workplace policies	
	Availability of peer support	[41]
	Workplace support for external interventions	[5]
Attitude of employers and co-workers	[14]	
Type of working conditions	[53–55]	
Apparent risks to personal safety at the workplace and severity of work pressure		

### 5.2.1. Theme 1: Personal Influences

Personal influences are directly related to workers' personal characteristics and circumstances, and include age, coping experience, individual resilience, perception and attitude towards coping practices, level of knowledge, and socioeconomic status. The influence of age difference on coping responses among male construction workers has been examined by King et al. [10]. They identified that compared to older workers, young male construction workers in Australia considered "mental health" to be a key health and safety issue at the workplace and were therefore more likely to utilise formal workplace coping support. Outside the workplace, however, young construction workers were more likely to make use of more informal coping mechanisms such as seeking help from social connections [10,21]. This, however, is not the entire picture as recent studies have indicated an inverse relationship between age and workers' preference for some maladaptive forms of coping. A longitudinal study among the US construction workforce, for example, has shown that in comparison with older workers, young male construction workers had a higher preference (three times) for illicit drugs as pain medication, instead of prescribed opioids [7]. Furthermore, they were more likely to suffer overdose fatalities, whether using prescribed medication or not, with those under 35 years accounting for at least 35% of overdose-related deaths [6].

Coping experience, which refers to how long a person has used and understands a certain kind of coping practice, has also been found as a determinant of young construction workers' choice of coping. It has been reported, for example, that in the South African construction industry, young professionals (e.g., architects, civil engineers, quantity surveyors, and construction managers) were more likely to resort to maladaptive coping compared to older professionals with "greater experience with appropriate coping mechanisms" [48]. Among the US construction workforce, the use of prescription drugs instead of illicit substances, such as analgesics, increased with age [7], with older workers less likely to engage in drug overdose [6], perhaps because they knew the implications of illicit drug use and were less likely to take risks. Although literature in this area is emerging, there is every indication that coping experience is closely related to age, and therefore tends to increase as workers mature professionally, accumulate experience with a range of efficient coping strategies [57], and are able to fully understand the benefits and risks associated with different coping practices.

Another personal factor that was uncovered in the literature is individual resilience—a person's ability to successfully manage difficult situations and achieve positive outcomes in the end [58]. The role of "individual resilience" has been explored among construction workers employed in micro- and large firms in Canada [54] and among first- and final-year built environment undergraduate students in Australia [44]. Both studies reported individual resilience as a key factor in protecting young construction workers' mental health since it increased their ability to cope positively. This is in line with findings in the broader literature which indicate that a higher level of individual resilience was predictive of better coping with chronic diseases such as cancer and mental illness [59–61].

Perceptions and attitudes toward a specific coping practice have also been reported to play a key role in young construction workers' coping practices. In relation to this, construction industry apprentices in Australia, although recognising the need to give attention to their mental health [10], have been found to make less use of formal workplace coping support because they perceive asking for help from others to be "embarrassing" and "drawing unwanted attention" [47]. Similar findings were reported in another study that focused on built environment students, which found that students, irrespective of their level of study and disciplinary background, did not cope well with depression because they were "cynical" toward the coping support provided by their institutions and employers [43]. It has however been found that young workers, especially males, who are taught how to get help and to develop self-confidence are able to overcome these attitudes, thereby overcoming their reluctance to make use of workplace support for coping [41].

Level of knowledge (i.e., educational background/attainment and mental health literacy) has been observed as an influencing factor in young construction workers' choice of coping practices. Fodjour et al. [17], for example, reported that the differences in the choice of useful versus maladaptive coping strategies made by construction professionals and trade workers in Ghana were largely attributable to differences between the "educational background" and attainment between the two groups. Specifically, professional construction workers, more than on-site manual workers, were reported to have a higher preference for more useful coping practices. This was noteworthy considering that many workers in Ghana's construction industry are casual and inexperienced workers [62,63] with inadequate mental health literacy [1]. A similar finding was made in the Australian construction industry [10]. Other studies in Australia (e.g., [47]) have indicated that many young workers who are highly susceptible to self-harm and suicide have low educational attainment and low rates of mental health literacy. Thus, they lack understanding of their health conditions and are largely unaware of the range of available formal support for coping.

Socioeconomic status, which is often linked with the level of education and finances, also has an impact on young people's choice of coping strategies. In China, for example, it was observed that young construction workers who had low socio-economic status had difficulty employing useful forms of coping for post-traumatic stress disorder compared to a control group with a better socio-economic background [53]. A similar influence has also been identified by studies conducted in Australia [10] and the US [6]. In the case of the US construction industry, for example, construction labourers, who constitute the largest occupational sub-group and have the low socioeconomic status, were found to have a high preference for the maladaptive practice of substance misuse and accounted for the largest proportion (25.5%) of overdose deaths in comparison with workers in skilled occupations who earned more income. Within the same population, unemployed construction workers were reported to have the highest use of marijuana (23.3%) and other illicit drugs (8%), which was almost twice the usage levels of employed workers.

#### 5.2.2. Theme 2: Environmental Influences

Environmental influences are associated with workers' surroundings and can be classified into two sub-categories namely, sociocultural and organisational/industry factors. Socio-cultural factors identified in the literature include family conditions [6,7,46,54]; level of willing support from family and other close connections [10,14,47]; and cultural background and community attitudes [16,48].

There is evidence from both the Global North (e.g., Australia: [54]; USA: [6]) and the Global South (e.g., Vietnam: [46]) that the male workers from families with good family circumstances (financial and other resources) prefer family-based social help-seeking, whereas those from families with weak finances resorted to substance use. In the US, for example, young males from Hispanic and Black (non-Hispanic) families were the least likely to use prescribed medical treatments (5.6% and 9.3% respectively). This was partly attributed to the fact that they came from families who likely had the least access to health insurance [6,7]. Male casual workers who move to work in urban areas in Vietnam, for example, have been found to principally cope with depression by seeking the help of their family members who accompany them to the city. Unmarried ones mainly rely on their new partners that they cohabit with [46]. In Australia, general construction workers have been found to cope with the effects of "long work hours", overtime, and childcare demands through the use of "partner practical support". This involves a spouse (family "resource") staying home to cater for family responsibilities that would otherwise suffer while the construction worker is away from home for long periods [54]. Workers from families with enough financial resources also benefit from "purchased domestic services" from the community [54]. This includes the employment of cleaning, gardening, laundry services, and "buying in pre-prepared meals" from the community, which are vital sources of coping against the effects of long work hours on workers who are single and married

people who do not have access to “partner practical support” [54]. While this trend is common among men, there is evidence from India that young women are also able to make use of family-based coping. Travasso et al. [14], for example, have reported that some low-income working mothers in India’s construction industry benefit from spousal support and have the extra advantage of having access to support from extended family members in instances where their spouses are unwilling to provide support.

Although family conditions are important, the level of support that a family is willing to provide, as well as the strength of the relationship a worker has with family and other close connections (e.g., friends) is also another determinant of young people’s choice of coping practices. It is known, for example, that, construction apprentices and the general population of young male construction workers in Australia, although not willing to seek formal help, find it easier to speak to “close friends” at work about their mental health problems because of the presence of strong relationships and the fact that their friends are always available and accessible [47]. Similar findings have been reported among other categories of young construction workers in Australia [10]. This confirms the fact that the degree to which family-based and other social support-seeking coping practices are used depends on availability, access, and convenience involved in seeking a specific type of coping support [14,54].

Culture is a determinant of “the acceptability” of certain forms of coping strategies and has been found to strongly influence young construction workers’ choice of maladaptive coping [16]. In Irish culture, for example, the maladaptive coping practice of alcohol disengagement is widely accepted among the general male population [64]. Thus, among peer groups on Irish-dominated construction sites, there is a positive attitude toward alcohol drinking as a means of dealing with the effect of exposure to psychosocial hazards such as childhood abuse and difficult work demands [16]. In some Global South countries, the predominant culture and consequent community attitude are that mental illness is not a disease, thus making it unacceptable for those affected by PRFs and poor mental health to utilise mainstream medical coping support [65]. As a result, some people with poor mental health are prevented by their communities from making use of available professional mental healthcare services [66,67]. Consequently, many people with poor mental health resort to self-harm and suicide as coping mechanisms [65]. Where it is recognised as a disease, poor mental health is widely perceived as a spiritual affliction in many Global South cultures [68] and thus, a good number of young construction workers in these areas tend to cope with PRFs and mental health challenges using religious and herbal remedies, as has been found in Ghana [40].

A host of organisational/industry factors play a predominant role in determining the coping practices of young construction workers. Primary among them are industry and organisational culture. Specific sub-factors that have been identified under this include common attitudes of co-workers towards certain types of coping [47], the stigma around accessing certain types of support [45], and descriptive norms associated with certain types of coping practices [55]. For example, it is established that the industry culture of masculinity is a key underlying factor for the high prevalence of substance abuse as a coping mechanism among young construction workers [5,16,47]. In addition to this, there is a culture of promotion of illicit drug use and excessive alcohol consumption [16,55] as coping practices, and this is further facilitated by the widespread availability of these substances on construction sites [69]. In respect of attitudes, there is evidence that while many employers care about physical illness, they have little regard for mental health. As a result, many young people with poor mental health cope through “presenteeism” since they feel their employers will not give them permission to stay away from work or support them to seek professional help [47].

Another critical factor is the availability of workplace support. Sub-categories in this domain include nature of workplace policies, availability of peer support, workplace support for the implementation of external interventions programs [5,56], and caring employers and friendly co-workers [14]. Recent evidence has shown that employees in organisations

that have policies for addressing social norms that increase the acceptability of help-seeking often make use of useful coping support provided at the workplace [41]. Under “type of working conditions”, issues such as frequent exposure to workplace hazards [53], apparent risks to personal safety at the workplace [55], and severity of work pressure [44] have all been linked to workers’ use of coping practices, especially maladaptive mechanisms.

### 5.3. Implications of Findings

#### 5.3.1. Theoretical Implications

The theoretical implications of our review are threefold. First, our findings suggest a complex interplay among the personal constructs of age, resilience, and coping experience as far as young construction workers’ choice of coping is concerned. Age has been hypothesised as an important mediator and moderator of young construction workers’ choice of using coping maladaptive coping [6,7] and negative mental health outcomes [4]. Nonetheless, the specific influence of age itself on the choice of coping still remains a debate. Both individual resilience and coping experience are known to increase with more exposure to difficult circumstances and have previously been found to be higher with age and account for differences between age groups in coping with and adjusting to chronic illness [57–59]. These are, however, yet to be assessed in relation to the coping practices of young construction workers. Considering the established conjecture that the incidence of poor mental health among young construction workers is because of their young age and the implications of still undergoing major changes physically, emotionally, psychologically, professionally, and socially [2,70], more research is needed to fully understand the interplay among age, coping experience, and individual resilience. In doing so, it would be important to utilise both qualitative and quantitative studies to establish an understanding of the gender and cultural differences in this area [6,7,44].

The second implication concerns the need to properly categorise different aspects of substance use as a coping mechanism. Within the literature, alcohol and drug use have featured strongly as maladaptive coping practices, being categorised as alcohol–drug disengagement. However, emerging literature suggests that the use of medically prescribed drugs accounts for substance use as a coping practice by young construction workers, including females [7]. A tenuous link currently exists between the need to deal with psychological distress and substance use among young construction workers, since some researchers (e.g., [15,17,48,69]) have reported conflicting findings on the relationship between the two, with others (e.g., [55]) arguing that alcohol and substance use are not necessarily coping practices against psychological distress. These conflicting views, if not clarified, can have negative implications for research and development of interventions against young workers’ substance abuse. It is therefore imperative to undertake more research to fully understand alcohol–drug disengagement among young construction workers.

The third implication concerns research on the role of religion and spirituality in the choice of both emotion-focused and problem-focused coping practices among young construction workers, especially those with Global South backgrounds. Although engaging in religious practices and seeking help from religious leaders were uncovered in this review as coping practices of interest to young construction workers, very little research currently exists on this topic. We argue that this is rather counter-intuitive considering that young workers from the Global South constitute a key source of both skilled and unskilled labour for the construction industry worldwide and have been envisaged as a target workforce for increasing post-Covid economic recovery in the construction industry [71,72]. In the broader mental health literature, there is a clear indication that coping practices rooted in indigenous culture and religions of the Global South are gaining global approval [73]. For instance, because scholars in both the Global North and South are advancing cultural concepts about indigenous mental well-being and its relationship with Western-styled concepts, Islamic, Chinese, and Indian psychological traditions are beginning to appeal to many people, both in the Global North and South, as alternatives to Western scientific procedures [73]. It is, therefore, crucial to give in-depth research attention to religion and

spirituality as coping mechanisms since they may have direct and significant implications for young construction workers' achievement of positive mental health.

### 5.3.2. Practical Implication

The practical contribution of this review is associated with the fact that in terms of useful coping, young construction workers have a strong preference for practices that are youth-led and online-based. These are inferred from the findings that young construction workers have a stronger preference for discussing mental health issues with their work-mates and close friends [10,41] and for seeking mental health information from non-print sources such as the internet and social media [40]. This insight can serve as evidence for policy recommendations and practice for the development and implementation of interventions aimed at helping young workers to cope effectively when exposed to the PRFs that cause poor mental health. For example, using young workers' social contacts (friends, family, and social groups) as mental information providers, instead of only medical professionals, could increase young construction workers' uptake of mental health literacy programs. Interventions should seek to provide young construction workers with access to peer groups and online content for promoting well-being. Furthermore, interventions should ideally be championed by young construction workers themselves and hosted on social media/online platforms (e.g., e-health and m-health) since these are more effective and fast becoming the main help-seeking avenues utilised by young people both in the Global North and the Global South [74–76].

### 5.4. Limitations

This review has some limitations that should be taken into consideration in the use of its findings and recommendations. Firstly, the studies used in the review focused predominantly on the case of young male workers. Thus, it is not practical to apply the findings of this study to the case of females and construction workers in other age groups. Secondly, because the objective of the review was to undertake a narrative synthesis of current research, the method of data analysis utilised, i.e., meta-aggregation, did not allow for determining the specific relationships among the determinants of coping, between the determinants of coping and coping methods, and their levels of influence on the choice of coping. Future empirical studies could be undertaken to determine these relationships and their levels of influence. Finally, the review was limited to only articles published in English and therefore might have omitted useful articles published in other languages.

## 6. Conclusions

We sought to undertake a comprehensive review of the literature with the aim of synthesising knowledge regarding young construction workers' coping mechanisms and their determinants. This synthesis allowed us to uncover 29 different coping practices, grouping them under eight coping mechanisms, and further into three main domains. Twelve main determinants of young construction workers' choice of specific coping practices within the domains were also identified. The evidence collected suggests that both personal and environmental factors such as age, individual resilience, coping experience, family situation, workplace support, and industry culture among others, play a crucial role in determining whether young construction workers would employ problem-focused, emotion-focused, or maladaptive coping mechanisms.

Taken together, the findings of this review contribute to the existing literature by explicitly integrating knowledge that provides a basis for theorising about the structure of young construction workers' coping behaviour and can help to explain why young construction workers have a strong preference for maladaptive coping practices despite their proven adverse mental health effects. In addition to providing directions for future research on the topic under investigation, our findings can, in practice, serve as evidence-based guidance to policy-makers, researchers, and mental health practitioners for the

development of the right interventions for improving young construction workers' coping with PRFs and mental health challenges.

**Supplementary Materials:** Studies included in the literature review. The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/buildings13010022/s1>, Table S1: Studies included in the literature review.

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