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Coping strategies of German primary care physicians when dealing with meaningless work in daily practice: a mixed-methods study

Alina Stortz

alina.stortz@med.uni-muenchen.de

LMU Munich

Joséphine-Charlotte Coleman

LMU Munich

Matthias Stadler

LMU Munich

Martin R. Fischer

LMU Munich

Constanze Richters

LMU Munich

Katharina Schütte-Nütgen

Elisabeth-Hospital Essen

Marion Huber

ZHAW Zurich University of Applied Sciences

Matthias J. Witti

LMU Munich

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Alina Stortz[a]

Joséphine-Charlotte Coleman[a]

Matthias Stadler[a]

Martin R. Fischer[a]

Constanze Richters[a]

Katharina Schütte-Nütgen[b,c]

Marion Huber[d]

Matthias J. Witti[a,e]

[a]Institute of Medical Education, LMU University Hospital, LMU Medizin, LMU Munich, Munich, Germany

[b]Department of Acute and Emergency Medicine, Elisabeth-Hospital Essen, Essen, Germany

[c]Faculty of Medicine, University of Münster, Münster, Germany

[d]School of Health Sciences, ZHAW Zurich Universities of Applied Sciences, Zurich, Switzerland

[e]Department of Medicine IV, LMU University Hospital, LMU Medizin, Ludwig-Maximilians-Universität München, Munich, Germany

Corresponding author:

Alina Stortz, Institute of Medical Education, LMU University Hospital, LMU Medizin, LMU Munich, Munich, Germany Mail: alina.stortz@med.uni-muenchen.de

Address: Pettenkoferstraße 8a, 80336 Munich

Abstract

Background: Primary care physicians in Germany encounter tasks and situations in daily practice that they perceive as meaningless, including administrative tasks or structurally imposed work with limited perceived benefit for patient care. Such experiences may intensify psychological strain and reinforce an imbalance between effort and reward. This study examined how primary care physicians cope with meaningless situations and whether strategies differ by physician characteristics.

Methods: We conducted a mixed-methods study among primary care physicians in Germany. Quantitative data were collected via an online survey using the German Brief COPE questionnaire. Data from 187 participants with complete Brief COPE responses were analyzed. Coping strategies were grouped into problem-focused, emotion-focused, and avoidance-focused strategies. Group differences were examined by gender, specialty, region, practice type and professional experience. Qualitative data were collected through 24 semi-structured interviews and analyzed using reflexive thematic analysis.

Results: Problem-focused strategies were used most frequently when dealing with meaningless situations. Women reported problem-focused coping strategies significantly more often than men. Avoidance-focused strategies differed by specialty, with internal medicine specialists reporting higher use than pediatricians. Increasing professional experience was negatively associated with problem-focused and emotion-focused coping strategies. Qualitative analysis identified three themes: (1) Dealing with feelings and thoughts through communication with others, (2) Taking responsibility for one's own well-being and (3) Coping strategies cannot be applied.

Conclusions: Primary care physicians in Germany mainly use adaptive coping strategies when dealing with meaningless situations. However, these strategies are difficult to implement under current structural conditions. Prevention should therefore address both individual resources and structural barriers.

Keywords Primary care physicians, general practitioners, pediatricians, meaningless work, coping strategies, mixed methods

Background

During and after the COVID-19 pandemic, the issue of physicians' mental health has gained prominence both nationally and internationally [1]. In Germany, healthcare workers experience significantly higher levels of psychological stress compared to the general population [2]. This stress can negatively impact individual performance, such as concentration and decision-making ability, and compromise the quality and safety of patient care [3]. Furthermore, it has been shown that approximately 30 % of physicians in Germany are affected by burnout [4]. Primary care physicians (PCPs), which include general practitioners (GPs) and pediatricians (PPs), are particularly affected by risk factors for burnout or serious mental health conditions [5-7]. The psychological strain on PCPs is closely linked to the structural conditions of primary care in Germany. In 2024, a general practitioner in Germany cared for an average of 1,264 citizens. Furthermore, 67.5 % of all GP practices are run as solo practices, which structurally limits resources for collegial support and task sharing [8].

In addition to the high workload, it is worth noting that approximately 54 % of German PCPs experience an effort-reward imbalance, described as an imbalance between individual professional effort and perceived reward [6]. In GP and pediatric practices, this effort manifests itself particularly in a high administrative workload [9], limited time available for core medical activities, and demanding patient consultations characterized by high expectations [2,5,6]. At the same time, a lack of appreciation, low recognition, and limited autonomy and self-efficacy resulting from systemic requirements contributes to maintaining and reinforcing this imbalance [6].

The effort-reward imbalance can further be exacerbated by meaningless tasks in everyday work. These increase the perceived effort required while simultaneously diminishing the perceived effectiveness of one's own work. In a previously published paper using the same dataset, meaningless tasks can be characterized as activities in which the time and energy invested are perceived as disproportionate to their impact, as well as administrative and non-medical duties that consume resources and interfere with the enactment of physicians' professional role [10]. Since the experience of effectiveness is linked to a central form of intrinsic reward, meaningless tasks exacerbate the imbalance between effort and reward. In the long term, this can contribute to a loss of meaning in daily practice [11]. The meaningfulness of work can be determined across three dimensions: significance, overarching purpose, and self-

actualization [12]. The experience of meaningfulness in one's work is considered an important protective factor in relation to burnout [12,13].

To minimize the risk of psychological consequences resulting from persistently experienced feelings of meaninglessness [14], the application of effective coping strategies (CS) by PCPs is necessary [14 —16]. CS encompass actions and cognitive processes aimed at dealing with internal and external stressors [17].

CS can be divided into adaptive CS, including (1) problem-focused and (2) emotion-focused CS, and the maladaptive CS (3) avoidance CS [18,19]. (1) Problem-focused strategies involve actively addressing the source of stress. (2) Emotion-focused strategies aim to regulate the emotional stress response [20], while (3) avoidance strategies include measures such as repression and substance abuse.

Recent studies suggest that adaptive CS are associated with better mental health and more effective stress management compared to maladaptive CS [21 —23]. In that, the choice of CS may be influenced by demographic factors [19,24,25]. For instance, there is evidence of gender-specific differences in the use of CS, with women reporting more frequent use of coping strategies, particularly problem- and emotion focused strategies [20], while differences based on medical specialty have hardly been investigated to date. Professional experience may also influence CS, with greater experience potentially contributing to more mature, objective, and less emotionally involved responses to stressful situations [26].

To date, there are only a few studies that explicitly examine the coping strategies of PCPs, especially in Germany, particularly in dealing with a sense of meaninglessness in one's work [27,28]. The results of such studies could, however, provide important starting points for health promotion among PCPs as well as key learning content for education, training, and continuing professional development. Based on this, we ask the following research questions:

RQ1: How do primary care physicians in Germany deal with meaningless tasks, and what coping strategies do they apply?

RQ2: Do different groups of primary care physicians (based on specialty training, gender, or professional experience) use different strategies?

RQ3: How are these coping strategies implemented in daily practice and beyond?

Methods

Design

This study is part of a cross-national research collaboration employing a common conceptual framework on meaningful and meaningless work in cooperation with researchers at the Auckland University of Technology in New Zealand and Karolinska Institutet in Sweden. An analysis of the German data concerning the perceptions of meaningful and meaningless work by PCPs practicing in Germany was previously published in BMC Primary Care in August 2026 [10]. The present study focuses exclusively on the German data on coping strategies.

We employed a mixed-methods design. Quantitative data were collected between June and September 2025 using an online questionnaire via SoSci Survey [29]. Qualitative data were collected through semi-structured interviews conducted from April to October 2025, which were subsequently analyzed using reflexive thematic analysis (RTA) [30].

Study population

The study's target group consisted of primary care physicians (PCPs), which include general practitioners (GPs), either trained in family or internal medicine, and pediatricians working in private practices (PPs), currently practicing in Germany [7].

Sampling

Our sampling method was designed to reflect the diversity of the target population, and ensure an equal distribution of gender and region (i.e., North, South, East and West Germany. We purposively sampled PCPs practicing in Germany. Potential multipliers (e.g., institutes of general medicine, medical associations, pediatric and general practice societies) and individual PCPs were contacted via email, which included a brief summary of the study, an invitation to participate, and a link to the questionnaire. Additionally, a snowball sampling method was employed to reach more PCPs. The recruitment process was concluded upon attaining the target sample size (quantitative part) and satisfying information power and richness respectively (qualitative part). PCPs who actively declined the invitation cited time constraints as the reason for their non-participation. PCPs participating in the interviews received a personal letter that outlined the study's details and a consent

form. Prior to the interviews, they were asked to sign and return the form prior to the interviews.

Quantitative Method

Sample size

The sample size was determined using the G*Power software (Version 3.1.9.7) [31]. The goal was to achieve a power of at least 80 percent with a significance level (alpha) of 5 percent for a specified statistical effect size (f) of 0.25. The results of the analysis showed that a target sample size of at least 179 participants was required to achieve the desired power.

Data collection

A short version of the COPE (Coping Orientation to Problems Experienced) questionnaire, the Brief COPE (BC) [32], was used to collect the quantitative data [33]. It was administered in German [34]. The BC consists of 14 scales, each containing two items (see Supplementary A). We ensured in the instructions that the CS were in relation to meaningless tasks. Responses are recorded using a four-point Likert scale, with values of 1 (“I did not do this at all”), 2 (“I did this a little”), 3 (“I did this to a moderate extent”), and 4 (“I did this very often”).

Several studies [18,19,35] propose a three-factor solution for grouping the BC subscales. McDonald’s Omega (ω) was calculated to estimate the factors’ internal consistency. Accordingly, the BC subscales were grouped into (1) problem-focused $\omega = 0.81$, (2) emotion-focused $\omega = 0.67$, and (3) avoidance-focused $\omega = 0.70$ coping strategies (CS). Mean composite scores were calculated across the items assigned to each coping factor, resulting in scores ranging from 1 to 4, with higher scores indicating more frequent use of the respective CS.

To enable a comparison of CS across the different participants, additional demographic questions were integrated into the online questionnaire asking for participants’ age, gender, specialty, region (Eastern, Western, Northern, and Southern Germany), and federal state.

Data analysis

Statistical analysis was performed using JAMOVI (version 2.6.44) [36]. Only questionnaires with complete BC data were included in the analyses. During data

cleaning, clearly invalid or non-evaluable responses to individual demographic items were treated as missing. Cases with missing information for a demographic variable were excluded only from analyses involving that variable; therefore, the sample size varied slightly across demographic analyses. The significance level was set at $\alpha = 0.05$ for all analyses. To quantify the effect sizes, η^2 and Cohen's d were calculated.

To answer RQ1, we calculated descriptive statistics for the three coping domain scores employed by the PCPs. The coping domain scores were treated as continuous variables. Gender, specialty training, type of practice, region, and town size were classified as nominal variables, and age and years of practice as continuous variables.

To answer RQ2, group differences in the three coping domain scores across gender, specialty training, practice type, region, and town size were examined using one-way analyses of variance (ANOVA). For all statistically significant effects, Tukey-corrected post hoc analyses were calculated to perform pairwise group comparisons.

Associations between professional experience and the three coping domain scores were examined using linear regression models. Age and professional experience were initially considered simultaneously as predictors. However, substantial multicollinearity was observed (variance inflation factor VIF = 7.99; tolerance = .125). As professional experience was considered more directly relevant to the RQ2, age was excluded from the final regression models.

Qualitative Method

Data collection

AS and JCC conducted 24 semi-structured interviews between April and October 2025. Data collection was based on a common interview guide originating from the international research project in which the present study was embedded. The broader project examines PCPs' experiences of meaningful and meaningless work and their strategies for coping with meaningless work across several countries. The New Zealand research team, which initiated and coordinated the international collaboration, developed the original English-language interview guide to provide a consistent framework for data collection across participating countries. For use in Germany, the guide was translated and contextually adapted by AS and JCC using the TRAPD (translation, review, adjudication, pretest and documentation) Method

[37]. The translated and adapted interview guide was piloted by AS and JCC with one GP and one PP.

The interview guide comprised open-ended questions addressing several aspects of participants' professional lives, including their backgrounds and everyday work, experiences of meaningful and meaningless work, CS for dealing with meaningless work, and perceptions of the German healthcare system. As the research questions of the present study focus specifically on CS used by PCPs, only the interview guide sections relevant to these research questions are summarized in Table 1. The full interview guide is provided in Supplementary B. The same interview dataset has previously been analyzed with respect to PCPs' experiences of meaningful and meaningless work [10]. The present study addresses distinct research questions and focuses specifically on CS. Accordingly, only interview material relevant to coping was included in the qualitative analysis. The final section of the interview guide comprised administrative questions related to concluding the interview and was therefore excluded from the analysis. AS and JCC conducted and audio-recorded the one-on-one interviews via the software platform Zoom. Subsequently, the interviews were transcribed verbatim [38] and the data were anonymized [39]. No repeat interviews were conducted. Four participants made use of the option to review their interview transcripts prior to analysis. However, no substantive changes to the transcripts resulted.

1. Introduction	
1.1 Career	Career overview Career span Specialist qualifications
1.2 Everyday work and practice structure	Typical working week Workload Frequent medical consultations and treatments Patient population Practice setup and structure.
2. Coping strategies (CS)	
2.1 Coping with meaningless work	CS in dealing with meaningless work Talking to other about meaningless work Talking with colleagues about meaningless work Engagement in primary care related activities outside of work

Effectiveness of the CS mentioned

Table 1: **Interview guide summary**

Data analysis

We carried out a reflexive thematic analysis (RTA) to evaluate the data [30]. This enabled us to systematically examine not only the type of CS applied in dealing with meaningless work, but also how these CS were implemented in daily practice. JCC (female physician) and AS (female medical student) initially transcribed and annotated their own interviews. Following this, they read and annotated the other researcher's interviews. They then proceed to code all the interview transcripts in unison, subsequently generating themes from the codes.

The codes were continuously reflected upon, and the factors that informed their development were examined. Furthermore, the team of researchers (AS, JCC, MS, KSN, MH, MRF, CR and MJW) held regular reflective sessions. A list of codes, themes, and their corresponding definitions was established and continuously revised throughout the analytical process.

We used the software MAXQDA 24 [40] for data analysis, and the Reflexive Thematic Analysis Reporting Guidelines (RTARG) [41] for reporting.

Reflexivity

All researchers are acutely aware of their central role in the active interpretation of the data. AS, JCC KSN, and MRF have a background in medicine and have accumulated experience in primary care practices, which they have obtained through internships and lectures during their medical studies. MJW contributed many years of professional experience in clinical, outpatient, and long-term inpatient care. Additionally, MJW and MH have extensive expertise in qualitative research. During the RTA, the author team continuously engaged with their own preconceptions and prior experiences and reflected upon their own assumptions with the aim of understanding the influence of these on the analytical process and the results thereof. Regular discussions on coding and analysis took place within the author team (AS, JCC, MS, KSN, MRF, CR, MH, MJW).

Ethics

This study was submitted to the Ethics Committee of the Faculty of Medicine at LMU Munich (No. 25-0307), and was conducted in accordance with the ethical principles of the Declaration of Helsinki

Results

Study population

Of the 390 questionnaires received, 187 participants provided complete BC data and were included in the quantitative analyses. A small number of demographic responses were missing or considered invalid during data cleaning; consequently, the number of valid observations varied slightly across demographic characteristics.

We conducted the interviews with 24 participants from this sample between April and October 2025. A detailed description of the sample can be found in Table 2 (interview and questionnaire participants).

Characteristics	**Category**	**Total (N) (Interview)**	**Total (N), %, M ± SD (Questionnaire)**
Gender	Female	13	111 (60.3 %)
	Male	11	73 (39.7 %)
Age	Years	-	51.8 ± 9.24
Years of Experience	< 10 years	2	
	10 - 20 years	7	
	20 - 30 years	8	23.6 ± 9.69
	> 30 years	3	
	Not mentioned	4	
Years of Experience in private practices	< 10 years	10	-
	10 - 20 years	6	-
	> 20 years	6	-
	Not mentioned	2	-
Specialty	General Practitioner	17	95 (51.1 %)
	Internal Medicine		38 (20.4 %)
	Pediatrician	7	53 (28.5 %)

Type of Practice	Solo Practice	6	100 (55 %)
	Group Practice	15	67 (36.8 %)
	Ambulatory Healthcare Center	3	15 (8.2 %)
Town Size	Village	3	22 (11.8 %)
	Small Town	7	52 (28 %)
	Large Town	5	51 (27.4 %)
	City	8	61 (32.8 %)
Region	Northern Germany	3	42 (22.6 %)
	Southern Germany	11	87 (46.8 %)
	Western Germany	6	30 (16.1 %)
	Eastern Germany	4	27 (14.5 %)

Note. Percentages are based on the number of valid responses for each variable. Missing or invalid demographic responses were excluded from the respective calculations. M = mean; SD = standard deviation

Table 2: **Questionnaire and Interview participants**

Quantitative Data

Results for RQ1

The participating PCPs reported problem-focused CS most frequently (M = 2.81, SD = 0.61), followed by emotion-focused CS (M = 2.29, SD = 0.44), and used avoidant CS least frequently on average (M = 1.75, SD = 0.36).

Results for RQ2

Significant group differences were found in the use of problem-focused CS between male and female PCPs, F = 9.29, p = .003, η^2 = 0.049. Post-hoc tests showed that women used these CS more frequently than men when dealing with meaningless situations. A significant difference in the use of avoidant CS was found between specialties, F = 3.24, p = 0.042, η^2 = 0.034. Internal medicine specialists working in primary care reported higher scores for avoidance CS than pediatricians, p_{Tukey} = 0.043. General practitioners also had higher mean avoidance scores than pediatricians. However, this difference did not reach statistical significance. The complete results of the group comparisons are presented in Table 3.

Group 1		Group 2	*ΔM*	SE	df	*t*	p Tukey	*Cohen's d*
Problem focused strategies - Gender								
Male	-	Female	-0.275	0.090	182	-3.05	**.003**	-0.46
Avoidant strategies - Specialty								
Pediatrician	-	Internal Medicine	-0.182	0.075	182	-2.43	**.043**	-0.52
	-	General Practitioner	-0.115	0.060	182	-1.91	.139	-0.33
Internal Medicine	-	General Practitioner	0.068	0.068	182	0.99	.582	0.19
Avoidant strategies - Region								
Southern Germany	-	Northern Germany	0.088	0.065	181	1.36	.526	0.26
	-	Eastern Germany	0.260	0.076	181	3.42	**.004**	0.76
	-	Western Germany	0.184	0.073	181	2.52	.060	0.54
Northern Germany	-	Eastern Germany	0.172	0.085	181	2.02	.183	0.50
	-	Western Germany	0.096	0.082	181	1.17	.649	0.28
Eastern Germany	-	Western Germany	−0.076	0.091	181	−0.83	.840	-0.22

Table 3: **Post-hoc comparisons for significant effects on CS**

Regression analyses showed that professional experience was significantly negatively associated with both problem-focused and emotion-focused CS. Higher professional experience was associated with lower use of problem-focused CS (β = -.206, p = .005), with the model explaining 4.2 % of the variance, F(1, 184) = 8.15, R^2 = .042. Similarly, professional experience was negatively associated with emotion-focused CS (β = -.182, p = .013), explaining 3.3 % of the variance, F(1,184) = 6.28, R^2 = .033. The complete regression models are presented in Table 4.

CS	B	SE(B)	β	t	p	R^2
Problem-focused	-0.0130	0.00456	-0.206	-2.86	.005	0.0424
Emotion-focused	-0.00821	0.00327	-0.182	-2.51	.013	0.0330
Avoidant	-0.00236	0.00270	-0.0644	-0.873	0.384	0.00415

Table 4: **Association between professional experience and CS**

Qualitative Data

Results of RQ3

In total, we interviewed 24 PCPs with interviews lasting between 20 and 60 minutes. From these, we generated a total of three themes and 15 codes, which are presented in Table 5.

Theme	Codes
Dealing with feelings and thoughts through communication with others	Similar views and opinions among colleagues
	Team-based problem-solving
	Discussions with trusted friends and family
	Peer exchange
	Letting your feelings run free
Taking responsibility for one's own well-being	Use self-efficacy whenever possible
	Acceptance
	Focus on the positive aspects of work
	Staying true to one's values
	Recognizing, defining, and implementing personal boundaries
	Teaching activities
	Political activities related to one's work
CS cannot be applied	CS cannot be applied
	Involuntary inability to take breaks
	Unbalanced sense of responsibility

***Table 5*: Themes and codes**

Theme 1: Dealing with feelings and thoughts through communication with others

One coping strategy (CS) participants use is to find an outlet through talking with others, allowing them to give free rein to their feelings and thoughts regarding

meaningless tasks in their daily practice routine. They can find people to talk to both in their personal lives and among colleagues at work.

> *So, for me, it happens that I do swear sometimes. I think it's part of the job to just let off some steam or vent your frustration, and sometimes swear or just let it all out to your colleagues. GP10*

According to the participants, it is particularly helpful to realize that their colleagues are in a similar situation and share their views regarding stressors. This can be a relief in that those affected feel less alone in their situation and feel seen and understood among colleagues. Especially with colleagues within their own practice, this offers the chance to search for solutions together as a team.

> *I find the team meetings with my staff important and also positive for the whole team, because there we can talk about the things that annoy everyone and, of course, think about how to handle them organizationally so they take up as little space as possible. GP13*

> *Yes. So, a strategy to make things more sensible—that is, to reduce such pointless downtime (...)—is our regular staff meetings. We have a staff meeting once a week to bring these challenging issues together and look for strategies as a group on how to deal with them. GP11*

Tackling problems and finding solutions on one's own is an expression of initiative when dealing with pointless tasks. In this way, the participants take a bit more responsibility for their own well-being.

Theme 2: Taking Responsibility for One's Own Well-Being

Participants were able to increase meaningfulness through self-efficacy. This was achieved, for example, by consciously deciding to accept unchangeable aspects and focusing on the positive aspects of their daily work. To improve their well-being or cope with meaningless situations, some participants mentioned trying to stay true to their own values by recognizing their individual boundaries and asserting them with colleagues and patients.

> *But yes, I always tell myself, this is how it is now, and if I realize for myself that it's beyond my strength, then I say stop. PP4*

> *So that's really important to me—that I can, let's say, simply follow my moral principles, my moral convictions. That I can say, "This is medically correct for me, and it's right for the child." And I'm not going to do something just to get the patient to come back. PP4*

Participants mentioned that this CS was something they had developed over the course of their professional careers.

I think I've been doing this job long enough now that I work relatively independently. (Interview 16.04 (A) AS, Item 34) In addition to their daily work, meaning could also be found in the form of teaching or professional advocacy. In this way, self-efficacy is not only maintained within the practice, but experiences can also be passed on and, ideally, an impulse can be provided to change the broader framework.

> *Whether it's the opportunity to get involved in [medical] student training, participating in seminars and lectures, or serving as a lecturer at the [medical] department, where I try to raise awareness among the next generations about this sense of meaningfulness and meaninglessness […] I also do this in continuing education for GPs. GP6*

However, these strategies take up a lot of time and cannot always be implemented, mostly due to structural constraints.

Theme 3: CS Cannot Be Applied

The interviews revealed that the majority of participants already know what CS are available and which ones would be suitable for them. However, they are unable to apply these strategies for various reasons. On the one hand, time pressure, the heavy workload faced by PCPs, and the resulting overtime and lack of breaks stand in the way, as does a shortage of staff. In addition, doctors have a responsibility to keep the practice financially afloat and are therefore forced to handle a certain number of cases.

> *Personally, I'm home today because I tested positive for strep last night […]. That way, I can go back tomorrow if it's somehow possible—and it has to be possible somehow, because (…) otherwise I won't make any money. So, I have to go in tomorrow. There's no way around it. PP1*

So as far as my state of mind goes, you've kind of hit the nail on the head there. What does this do to me, and how can I find balance? I'm definitely not managing that in my current life situation […]. It would be hypocritical of me to talk about it now. I know what's good for me in life, and I know that it needs much more space for me to be able to get through this for much longer. And I also see that it's an absolute necessity to keep that at a distance. But if I tell you what I'm actively doing now, then I'm really a bad example. Not because I don't feel like it, but because I don't have the time. GP8

The obstacles to implementing CS include not only extrinsic but also intrinsic factors. For example, some participants show a tendency toward a heightened sense of responsibility, which leads to a shift in priorities away from their own health and toward the health of others. They are unable to set sufficient boundaries.

Sometimes I wish I had the coping mechanisms of, say, my colleague—who's done for the day by 6:00 p.m. I just can't manage that. PP1

Discussion

This mixed-methods study provides detailed insights into the coping strategies (CS) used by primary care physicians (PCPs) in Germany when dealing with meaningless tasks. This study extends the foundation laid by previous studies on CS used by PCPs [5, 26] by targeting meaninglessness specifically. While the quantitative data show which groups of CS are most frequently used, the qualitative data offer a deeper understanding of how these strategies are implemented in practice.

In the general context of coping with meaninglessness, our overall results indicate that PCPs tend to predominantly use adaptive CS, particularly in the form of problem-focused strategies, which aligns with previous studies [27, 28]. Within the qualitative data, this is evident through communication and active problem-solving within the team and the incorporation of self-efficacy into daily practice. This can be seen as an attempt to reestablish room for action within a context experienced as devoid of meaning. However, the qualitative data also make it clear that efforts to implement these adaptive CS often fail due to a lack of the necessary time and structural conditions. This pattern can be understood within the effort-reward imbalance model [42]. Adaptive coping is itself effortful. When structural conditions prevent these

strategies from being executed, the failed coping attempt adds effort without restoring meaning, potentially deepening rather than resolving the effort-reward imbalance.

In addition, the quantitative results suggest that women are more likely than men to cope with meaningless situations with adaptive CS. This finding is consistent with the broader coping literature: Tamres et al. [20] reported that women engage in more active coping across a wide range of stressors, and Aragonès et al. [19] found similar gender differences in GPs specifically. The effect sizes are medium, and the practical relevance of these differences should therefore be interpreted with caution.

Furthermore, our quantitative results show that the use of problem- and emotion-focused CS decreased with increasing professional experience. Our findings partly align with those of Lourenção et al. [26], who reported significantly lower use of emotion-focused CS among professionals with more than 10 years of experience. Two interpretations are possible: greater experience may be associated with greater resilience and a reduced need to actively process meaningless tasks, or experienced physicians may increasingly disengage because active coping has repeatedly failed. Our qualitative data offer partial support for the first account. Several experienced participants described deliberate, values-based acceptance and firmer boundary-setting, which is more consistent with consolidated professional identity than suppression. A longitudinal design tracking coping profiles over time would be needed to distinguish between these accounts.

Moreover, as shown in the quantitative results, internists reported higher use of avoidant strategies when dealing with a sense of meaninglessness than pediatricians, while GPs showed a similar, but non-significant, tendency. Currently, there are few comparative studies that directly examine and explain coping profiles across different medical specialties. We propose that differences in patient complexity may play a role: managing multimorbid and chronically ill patients [43] may offer fewer experiences of visible efficacy than the more prevention-oriented structure of pediatric practice [44], making emotional disengagement a more likely response. However, this explanation is not directly tested, as the groups were not recruited to be comparable on workload or practice structure. This finding should be treated as hypothesis-generating, and a study directly measuring perceived meaninglessness across specialties with workload as a mediator would allow a more rigorous test. At the same time, coping may be shaped not only by specialty-specific

demands but also by the structural conditions in which physicians work. Previous studies among GPs and other physician populations suggest that social support and collegial exchange can serve as relevant resources for coping with work-related stress and adverse professional experiences [45,46]. Among physicians in private practice specifically, social resources have been associated with lower levels of burnout, whereas limited feedback and less satisfactory leadership have been identified as challenges in this setting [47]. Research among pediatricians likewise highlights the relevance of collegial and peer support following adverse work-related experiences [48]. These findings are consistent with our qualitative data in which participants described communication with colleagues, shared experiences and joint problem-solving as helpful ways of dealing with meaningless work.

The recurrence of similar CS across physician groups may partly reflect a shared perception of meaningless tasks and situations within the primary care system, which may be shaped less by individual job profiles than by the broader context of the healthcare system. The structural and temporal barriers revealed by our qualitative data simultaneously hinder the implementation of CS. Our qualitative findings make it clear that coping in primary care represents a context-dependent, fragile resource. Knowledge regarding adaptive CS already exists, but that these are not necessarily implementable due to the prevailing conditions.

Effective interventions should therefore address two levels: reducing meaninglessness within the system while simultaneously strengthening resources to support coping with remaining meaninglessness. At the systemic level, this could include reducing externally imposed requirements that generate medically unnecessary work. For example, requirements to provide a medical certificate from the first day of absence may result in consultations that physicians perceive as medically unnecessary and meaningless [10]. At the individual level, our findings highlight the importance of strengthening adaptive CS and especially collegial support. Our qualitative results show that PCPs already use collegial exchange as both an emotional and instrumental coping resource. This is consistent with research in primary care describing informal collegial exchange as providing emotional support, professional advice, workload sharing and mentorship [49]. Structured peer support systems represent a more formalized approach to collegial support and have already been implemented for physicians and other healthcare professionals [50]. In

Germany, the PSU-HELPLINE provides a concrete example of an implemented peer-based support service [51]. Although the service was developed for healthcare workers more broadly, rather than specifically for PCPs, its evaluation highlights the potential of low-threshold peer support in situations of occupational distress [51]. While direct evidence form German primary care remains limited, such approaches may therefore provide a useful model for strengthening collegial support in this setting. Balint groups may provide an additional structured setting for collegial reflection and have been described as supporting self-care, resilience, collegial connection and job satisfaction among GPs [52]. Taken together, these findings suggest that peer support could strengthen a coping resource that is already relevant to PCPs rather than introducing an entirely new strategy. In the context of our findings, opportunities for shared reflection, validation and problem-solving may help physicians regain agency and thereby contribute to maintaining meaningfulness in daily practice. In addition, structural measures are necessary, particularly administrative relief, sufficient time resources, and team-oriented care structures. Furthermore, physicians' mental health and the management of conflicts of meaning should be mandatorily integrated into education, training, and continuing education to create a foundation for effective coping when dealing with meaningless tasks.

One Limitation is that the Brief COPE measures coping with general stressors and was not designed specifically for meaningless situations. Furthermore, participants were not asked to specify which tasks they personally regarded as meaningless. Heterogeneity in what each respondent considered "meaningless" could therefore introduce noise into the data. We chose this instrument because it is a validated, widely used tool, and because no psychometrically tested instrument for coping specifically with meaninglessness in occupational settings currently exists. This heterogeneity most likely attenuates observed effect sizes. If participants were responding to different stressors, true associations between meaninglessness-specific coping and outcomes would be underestimated rather than inflated. The qualitative component partly compensates by anchoring respondents to concrete experiences of meaningless tasks, and the consistency of findings across both strands suggests the signal is real. Future studies could develop and validate a context-specific instrument for coping with occupational meaninglessness, and ask participants to define concrete meaningless tasks before completing the coping measure.

Furthermore, the generalizability of our findings is limited by the specific study population and healthcare context. Our sample consisted exclusively of PCPs in Germany, and coping with meaningless work may be shaped by profession-specific responsibilities as well as structural characteristics of the healthcare system. The findings may therefore not be directly transferable to other healthcare professions or healthcare systems. Future studies should examine whether similar coping patterns and barriers are observed across different professional groups and healthcare contexts.

Conclusion

Primary care physicians (PCPs) in Germany predominantly rely on adaptive coping strategies (CS) when dealing with meaningless tasks. Crucially, however, these strategies do not primarily fail due to a lack of coping knowledge or motivation on the part of physicians, but rather due to the time constraints and structural limitations of the primary healthcare system.

Meaninglessness in everyday practice should not be understood merely as an individual perception or as a problem that can be solved by strengthening resilience alone. Instead, it reflects systemic conditions that reduce physicians' perceived effectiveness, autonomy, and professional purpose.

The contribution of this study is not only descriptive, but practical. By identifying where adaptive coping is blocked, it provides concrete starting points for future intervention: Reducing structural burdens, minimizing administrative futility, and creating more space for physician self-efficacy. Interventions aiming to protect physicians' mental health should therefore combine individual-level support with structural changes that reduce meaninglessness at its source. If meaningless tasks were reduced and adaptive CS were actually feasible, a sense of meaning in daily practice could be strengthened, and the risk of long-term psychological stress consequences will be reduced.

Abbreviations

PCP(s)	Primary care physician(s)
GP(s)	General practitioner(s)

PP(s)	Pediatrician(s) in private practice
CS	Coping strategies
BF	Brief COPE
RTA	Reflexive thematic analysis
RTARG	Reflexive thematic analysis reporting guidelines
TRAPD	Translation, review, adjunction, pretest, and documentation
LMU	Ludwig-Maximilians-Universität München
ZHAW	Züricher Hochschule für Angewandte Wissenschaften (Zurich University of Applied Sciences)

Declarations

Ethics approval and consent to participate

The study was conducted in accordance with the ethical principles of the Declaration of Helsinki and has been submitted to the ethics committee of the medical faculty of the Ludwigs-Maximilians-University Munich [Nr. 25-0307].

Qualitative data were collected through semi-structured interviews. Prior to participation in the interviews, all participants provided written informed consent. Participation was voluntary and anonymous, and could be retracted at any time. No disadvantages were identified for non-participation.

Consent for publication

Not applicable.

Availability of data and materials

The datasets generated and analyzed during the current study are not publicly available due to restrictions imposed by the ethics approval governing this study, as the interview transcripts contain sensitive qualitative data that cannot be shared openly, but are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

AS: Conceptualization, Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review and editing; JCC: Conceptualization, Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review and editing; MS: Conceptualization, Supervision, Writing – review and editing; MRF: Supervision, Writing – review and editing; CR: Supervision, Data curation, Formal analysis, Methodology, Writing – review and editing; MH: Supervision, Writing – review and editing; KSN: Supervision, Writing – review and editing; MJW: Conceptualization, Supervision, Data curation, Formal analysis, Methodology, Project administration, Writing – review and editing

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Supplementary file(s)

Supplementary A: Brief COPE

Supplementary B: Interview guide

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Supplementary file(s)

Supplementary A: Brief COPE

1 = I haven't been doing this at all

2 = I've been doing this a little bit

3 = I've been doing this a medium amount

4 = I've been doing this a lot

1. I've been turning to work or other activities to take my mind off things.
2. I've been concentrating my efforts on doing something about the situation I'm in.
3. I've been saying to myself "this isn't real.".
4. I've been using alcohol or other drugs to make myself feel better.
5. I've been getting emotional support from others.
6. I've been giving up trying to deal with it.
7. I've been taking action to try to make the situation better.
8. I've been refusing to believe that it has happened.
9. I've been saying things to let my unpleasant feelings escape.
10. I've been getting help and advice from other people.
11. I've been using alcohol or other drugs to help me get through it.
12. I've been trying to see it in a different light, to make it seem more positive.
13. I've been criticizing myself.
14. I've been trying to come up with a strategy about what to do.
15. I've been getting comfort and understanding from someone.
16. I've been giving up the attempt to cope.
17. I've been looking for something good in what is happening.
18. I've been making jokes about it.

19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.
20. I've been accepting the reality of the fact that it has happened.
21. I've been expressing my negative feelings.
22. I've been trying to find comfort in my religion or spiritual beliefs.
23. I've been trying to get advice or help from other people about what to do.
24. I've been learning to live with it.
25. I've been thinking hard about what steps to take.
26. I've been blaming myself for things that happened.
27. I've been praying or meditating.
28. I've been making fun of the situation.

Supplementary B: Interview guide

The following table shows the interview guide used, including key questions (in bold) with follow-up questions.

Outline	Key questions with follow-up questions
1. General information	
1.1 Career overview	▪ **Could you please give me an overview of your career as a GP/pediatrician?** ▪ How long have you been in this profession? ▪ Which medical specialization do you have and/or what specialist training(s) do you have?
1.2 Everyday work and practice	▪ **Please tell me about your current work as a GP/pediatrician. Please describe a typical working week as a GP/pediatrician.** ▪ Workload (How many patients do you see per day/week?) ▪ Types of medical consultations and procedures that are most commonly attended to ▪ Patient base ▪ Practice setup (e.g., colleagues, individual or group practice) ▪ If you work in a group practice, what is your role (e.g., head of the practice or employee) in the practice?
2. Meaningful work	
2.1 Meaningful work	▪ **Thinking about the last week or month of work, please tell me about one or more situations in which you experienced work as meaningful?** ▪ Why did this work feel meaningful? What caused this work to feel meaningful?
2.2 Outcomes of meaningful work	▪ **What was/were the outcome(s) of that meaningful work on yourself, your family, your patients and your practice?**
3. Meaningless work	
3.1 Meaningless work	▪ **Thinking about the last week or month of work, please tell me about one or more situations in which you experienced work as meaningless?** ▪ Why did this work feel meaningless? What caused this work to feel meaningless?
3.2. Outcomes of meaningless work	▪ **Think about yourself, your family, your patients, and your practice – who <u>suffers</u> when your work feels meaningless, and in what ways?**
3.3 Proportion of meaningful vs.	▪ IF NOT ALREADY MENTIONED, SPECIFICALLY ASK: **In your opinion, what proportion of your working time is spent on meaningful versus meaningless work?**

meaningless work	
4. Coping	
4.1 Dealing with meaningless work	▪ We've talked about when and why you feel your work is meaningful or meaningless**. Are there things you do in your day-to-day work or even outside of your work to cope with meaningless work or to make your role as a GP/pediatrician feel more meaningful to you? If so, could you please tell me what you do?** ▪ Do you talk to someone about the meaninglessness of your work? If so, with whom? And what do they say then? ▪ How do your work colleagues feel about the issues we've been discussing in this interview? Is there any informal discussion about these issues at work? If so, what do people say? ▪ Do you engage in primary-care-related activities outside of your paid work? For example, are you involved in professional groups or community initiatives related to health? If so, where and to what extent does this commitment contribute to the meaningfulness of their work? ▪ IF NOT ALREADY MENTIONED, SPECIFICALLY ASK: **How effective are your strategies for dealing with meaningless work? How do these coping strategies impact you, your family, your patients, and your organization?**
5. Healthcare system	
5.1 Influence of the health system	▪ IF NOT ALREADY MENTIONED, SPECIFICALLY ASK: **How does the German healthcare system (e.g., the financing model) influence your experience with meaningful and meaningless work?** ▪ In your opinion, what would have to change in the structure and organization of primary care in order to enable the doctors involved to feel meaning in their work? ▪ **How could other professional groups (e.g., nurses) involved in the care of your patients support you in your day-to-day work (inside and outside your practice)?** ▪ **In your opinion, what would have to change in the structure and organization of outpatient patient care?**
6. Conclusion	
6.1 Conclusion	▪ I realize that we can only cover so much in 60 minutes, so do you agree to being asked about a follow-up interview to share information we did not cover today? (Please note that agreeing to being asked about a follow-up interview is not the same as agreeing to such an interview; you can still decline the follow-up interview when asked about it) ▪ Recommendation of other participants: Are there other people you would suggest for this interview? (Snowball method) ▪ Would you like to read through the transcript of your interview before it is analyzed? ▪ Would you like to receive a summary of the research results?