

Preventive and health-promoting activities in general practices in Germany: A scoping review

Mirjam Dieckelmann MA¹  | Dania Schütze MA¹ | Meike Gerber MA¹ |
Andrea Siebenhofer MD, PhD^{1,2} | Jennifer Engler PhD¹

¹Institute of General Practice, Goethe University Frankfurt, Frankfurt am Main, Germany

²Institute of General Practice and Evidence-based Health Services Research, Medical University Graz, Graz, Austria

Correspondence

Mirjam Dieckelmann, Institute of General Practice, Goethe University Frankfurt, Theodor-Stern-Kai 7, 60590 Frankfurt, Germany.

Email: dieckelmann@allgemeinmedizin.uni-frankfurt.de

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Abstract

General practices are rooted in the local community and considered to be particularly well-positioned for engaging in preventive and health-promoting activities. The overall aim of the scoping review is to identify priorities and gaps in research published in the past 20 years on preventive and health-promoting activities provided by general practitioners or their teams in general practices in Germany. MEDLINE and Embase databases were systematically searched in November 2020. Papers were selected in dual-review mode and extracted in single-review mode. Data analysis was finished by May 2021. In total, 530 papers were included in the synthesis. Little research has been carried out into collaboration opportunities both within the general practice team and in communities as a whole, with specialists (18%), hospitals (9%), and health insurance companies (6%) being the most frequent cooperation partners of GPs. 15%–20% of papers each dealt with 'early detection', 'information provision' and 'cardiovascular prevention'. Secondary (53%) and tertiary prevention (43%) was more often the subject of research than primary (39%) and quaternary prevention (15%). Healthy subjects (26%) were less often studied than people with pre-existing conditions (42%) and risk factors (48%). Little information was available on preventive activities in terms of gender, young people, migration background, housing conditions or educational background. Personal counselling (15%) was the most frequently described approach to health promotion in general practices, along with printed information materials (10%). This scoping review provides information on which to base targeted interventions and future research that can contribute towards transforming general practices into promoters of health within the community.

KEYWORDS

general practice, Germany, health education, outpatient care, preventive health services, primary health care, systematic review

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1 | BACKGROUND

Health science literature has identified a number of factors that make general practitioners (GPs) and their teams particularly well positioned for carrying out preventive and health-promoting activities (Ottomar Bahrs & Matthiessen, 2007; Hurrelmann & Altgeld, 2004; Klein et al., 2017; Naidoo & Wills, 2010; WONCA EUROPE, 2011). Low-threshold access to this setting for a broad patient population, regardless of age, gender, social, economic or cultural background, and the possibility to reach out to at-risk groups such as those with (multiple) chronic illnesses and limited mobility through, for example, home visits, are particularly important in this respect. As a result of local networking and the importance of GPs to the communities in which they are based, the general practice represents an important link in the chain of prevention, especially for vulnerable populations (Ottomar Bahrs & Matthiessen, 2007; The Royal Australian College of General Practitioners, 2016). The long-term relationships and experiences that GPs and patients build up over the courses of their lives and the holistic view of individuals that is characteristic of family medicine, enable GPs to develop an in-depth understanding and compassion for individual circumstances, patients' social support networks, families, work and housing conditions (Ottomar Bahrs & Matthiessen, 2007; World Health Organization, 2008). The general practice can also be understood as a place of participation. The traditional focus on narrative-based medicine, discussion of values and attitudes and shared decision-making processes are essential components in the routine care provided by GPs. As a result, a deep contextual understanding of people's health, preferences and values can emerge, and credibility, along with a sense of coherence, can be conveyed to patients. Health information can be explained and made comprehensible, and the need to take responsibility for one's own health can also be discussed. Lastly, health professionals that work in a general practice on a daily basis have the opportunity to strengthen their own health (Ottomar Bahrs & Matthiessen, 2007; World Health Organization, 2008). Consequently, patients may not be the only potential recipients of preventive care in general practices. As ambulatory care in Germany is provided by self-employed GPs who often employ other GPs and healthcare staff, the general practice also provides an important setting for opportunities of workplace health promotion for healthcare professionals themselves.

On the other hand, literature also names factors that may inhibit preventive action and health promotion in general practices (Ottomar Bahrs & Matthiessen, 2007; Hurrelmann & Altgeld, 2004; Klein et al., 2017; Naidoo & Wills, 2010; Offenbächer et al., 2015; Walter et al., 2010). In addition to a lack of time and financial resources, organisational processes in practice management, as well as a focus on the traditional understanding of curative medicine and pathogenesis, may be barriers. A strong pathogenetic perspective can lead to practice teams tending to view individuals as patients a priori. At the same time, individuals tend to visit GPs when health problems or symptoms have already emerged and associate a GP's success with his or her ability to reduce morbidity and mortality rather than improve health resources. Consequently, general

What is known about this topic

- As general practices are visited by a wide range of both healthy persons and those with acute and (multiple) chronic illnesses, they are considered to be particularly well-positioned for engaging in preventive and health-promoting activities.
- A comprehensive systematic scoping review by Peckham et al. (2015) summarises the literature on health improvement activities undertaken in general practice and primary care in the United Kingdom. However, the UK's publicly funded healthcare system and strong public health focus limits the applicability of the results to countries like Germany.

What this paper adds

- Provides the first systematic overview of research on preventive and health-promoting activities used in general practices in Germany.
- Highlights opportunities for collaboration between general practice teams and other community stakeholders aimed at promoting health and preventing disease.
- Identifies gaps in evidence that should be addressed in future research and future design of interventions to transform general practices into health-promoting environments in the community.
- Discusses the results and compares them with findings from similar research in the United Kingdom.

practices are often viewed from a medical perspective and not in terms of the social community in which they are based.

In the course of a reorientation of the concept of health and disease in the second half of the 20th century, and informed by scientific findings in social medicine and public health, general practices have undergone a shift in their focus towards prevention and health promotion (Rüter, 2003). Recent empirical studies have shown that GPs see the prevention of disease and the promotion of healthy habits and other individual health resources as one of their key responsibilities. However, a systematic review of research projects at Austrian and German general practice research institutes has come to the conclusion that most research is still on conventional medicine (curation), with the volume of research on health promotion in general practice being below the European average (Weber et al., 2018).

To date, it is only in the United Kingdom that a comprehensive systematic scoping review summarising the literature on health improvement efforts in general practice and primary care has been undertaken (Peckham et al., 2015). However, these data are valid for a tax-funded healthcare system with a strong public health focus, which limits the validity of the results in countries like Germany. Unlike countries such as the United Kingdom where ambulatory care is provided by GPs working in outpatient units of

hospitals, German ambulatory care is provided by self-employed GPs. In Germany, the healthcare system is governed by self-administration with citizens being covered either under statutory health insurance funded by employers and employees or private health insurance. German patients are mostly free to choose their primary care providers themselves.

Against this background, we decided to conduct the first systematic review in Germany, with the aim of identifying research on preventive and health-promoting activities employed general practices in Germany.

Scoping reviews are particularly suitable for this purpose because they can answer interdisciplinary questions by considering the evidence from different scientific disciplines. Our work is concerned with health promotion, preventive medicine and family medicine. These are areas in which different medical and non-medical professions are involved and this diversity needs to be taken into account. Specifically, the research questions are as follows:

- How many research papers on relevant studies have been published?
- What does the literature tell us about collaborating to support the preventive and health-promoting activities of general practice teams?
- What preventive and health promotion activities do the studies describe?
- What patient populations are studied in the literature?
- How do patients learn about prevention and health promotion in general practices?
- To what extent do the described studies refer to preventive and health-promoting activities that were or are (still) being implemented in practice?
- What resources support general practice teams in the implementation of preventive and health-promoting activities?

The aim of this scoping review is to identify research priorities and research gaps in scientific papers published in the past 20 years on the preventive and health-promoting activities employed in German general practices by GPs and their teams. The overall goal is to provide information on which to base targeted interventions and future research.

2 | METHOD

The methodological procedure was based on the PRISMA guidelines for scoping reviews and (Peters et al., 2020; Tricco et al., 2018). The protocol was presented to the funding body Stiftung Gesundheitswissen in November 2020 and is available from the authors on request.

2.1 | Eligibility criteria and information sources

The operationalisation of the research questions was based on the PCC mnemonic highlighted in Table 1.

TABLE 1 Operationalisation of the research question into search blocks

Population	People who receive care by primary care physicians or their practice team
Concept of Interest	Health-promoting and disease-preventing activities of all types
Context	Germany

Fully published journal articles in German and English language as well as study protocols of any design that described preventive and health-promoting activities employed by GPs and their teams in general practices across Germany were included in the analysis. Our review included individuals of any age, regardless of whether they were patients with pre-existing conditions or healthy individuals. Studies on all levels of prevention were considered, including primary prevention (e.g. vaccinations), secondary prevention (e.g. screening to detect alcohol dependence), tertiary prevention (e.g. anticoagulation after stroke) and quaternary prevention (e.g. de-prescribing antibiotics). The review included studies describing behavioural and structural prevention that involved general practices. Excluded were conference abstracts.

A pilot search was conducted in August 2020, based on which the final search strategy was developed. The MEDLINE and Embase databases were searched in November 2020. No hand search or grey literature sources were considered. The full search strategy is detailed in Appendix 1 [Appendix 1: Search strategies]. With the search period limited to 2000–2020, this review presents evidence of prevention research relevant to German general practice conducted over the past 20 years. In the year 2000, German prevention legislation (paragraph §20 SGB V on primary prevention and health promotion) was introduced.

2.2 | Study selection

Two reviewers (sociologist, health scientist) independently screened the titles, abstracts and full texts of studies based on the inclusion criteria described above. Study selection processes were managed using Covidence software (Veritas Health Innovation, 2021).

Reasons for exclusion were pre-specified in the protocol, with further details added after the first 10% of titles and abstracts had been screened (see Table 2).

2.3 | Data extraction

All extraction categories were defined before study selection and were based on the research questions. The extraction form was protocolled and some points were modified. Faced with an overwhelming number of publications eligible for full-text screening, we decided to focus the extraction categories on the extraction of categorical data that was preferably dichotomised. Appendix 2 [Appendix 2: Data charting form] contains the data charting form.

TABLE 2 Reasons for exclusion

Reason for exclusion	
1	Inappropriate population <ul style="list-style-type: none"> • 1a: Family physicians or their teams are not explicitly mentioned in the study (internists in private practice were also eligible). • 1b: Study does not indicate that patients received primary care (population sampling allowed); relevant information not exclusively related to GPs (medical disciplines mixed). • 1c: study describes outpatients of other healthcare disciplines; study objective explicitly concerns another discipline (medical specialty, therapy profession, rehabilitation...). • 1d: Study describes primary care physicians or their teams in a purely referral function; study addresses a medical area outside the range of general practice. • 1e: Study addresses medical training of students (physicians undergoing continuing education and training specific to general practice were permissible)
2	Inappropriate concept: preventive or health-promoting approach not apparent, e.g., purely diagnostic, therapeutic, or a rehabilitation study in which the preventive intention is not explicitly described.
3	Inappropriate means of publication: conference abstracts
4	Context not German <ul style="list-style-type: none"> • 4a: another country • 4b: study is a cross-national analysis in which relevant information is not described separately for Germany • 4c: country not explicitly mentioned
5	Duplicate
6	Language not English or German
7	Full text not available

2.4 | Data synthesis

When possible, data were analysed using descriptive statistics and summarised visually. When categories were inductively extracted, descriptions remained close to the original wording in the publication. This made it necessary to follow some abstraction steps to achieve a basis for meaningful synthesis: First, all extracted information in each category was read through in detail to select appropriate terms for abstraction. The formulation of these terms was based on deductive categories derived from the literature (Bayerisches Staatsministerium für Gesundheit und Pflege, 2019; Becklas & Janiczek, 2021; Weber et al., 2018) and the extraction content and broken down accordingly in a first iteration. Additional inductive categories were added when no term adequately represented the content. Single references to terms were subsumed under the collective category 'Other'. The multiple assignment of categories to one single study ensured sufficient abstraction, while maintaining sufficient differentiation in the various themes. Following category formation, either frequency analysis or a narrative-descriptive summary of the results was carried out.

3 | RESULTS

3.1 | How many relevant studies were published?

A total of 530 papers were included. Figure 1 shows the study selection process. The citations are provided in Appendix 3 [Appendix 3: Reference list of included studies]. More than half the articles and protocols were excluded following full-text screening because GPs were not explicitly mentioned or no explicit reference to prevention and health promotion was evident.

Figure 2 shows how the number of published papers has developed over the past 20 years and reveals that research into preventive and health-promoting activities in German general practice has stagnated in the past 5 years.

3.2 | What does the literature tell us about collaborating to support the preventive and health-promoting activities of general practice teams?

About half the papers ($n = 275$) mentioned at least one form of cooperation between general practice teams and other stakeholders in the field of prevention. Both collaborations that were already part of practice routine and cooperation that study authors recommended or discussed were mentioned in the papers. Table 3 lists the partners and settings for actual and potential collaboration with general practices according to the number of mentions.

Collaboration within general practice teams, in which healthcare assistants generally functioned as partners in prevention and health promotion, were also described. Only about one eighth of the papers ($n = 64$) on preventive and health-promoting activities described the cooperation of GPs with other practice team members. Case managers and prevention counsellors were virtually never available in a general practice.

3.3 | What preventive and health promotion activities do the studies describe?

The literature on the preventive and health promotion activities undertaken by GPs' cover all levels of prevention. The quantitative

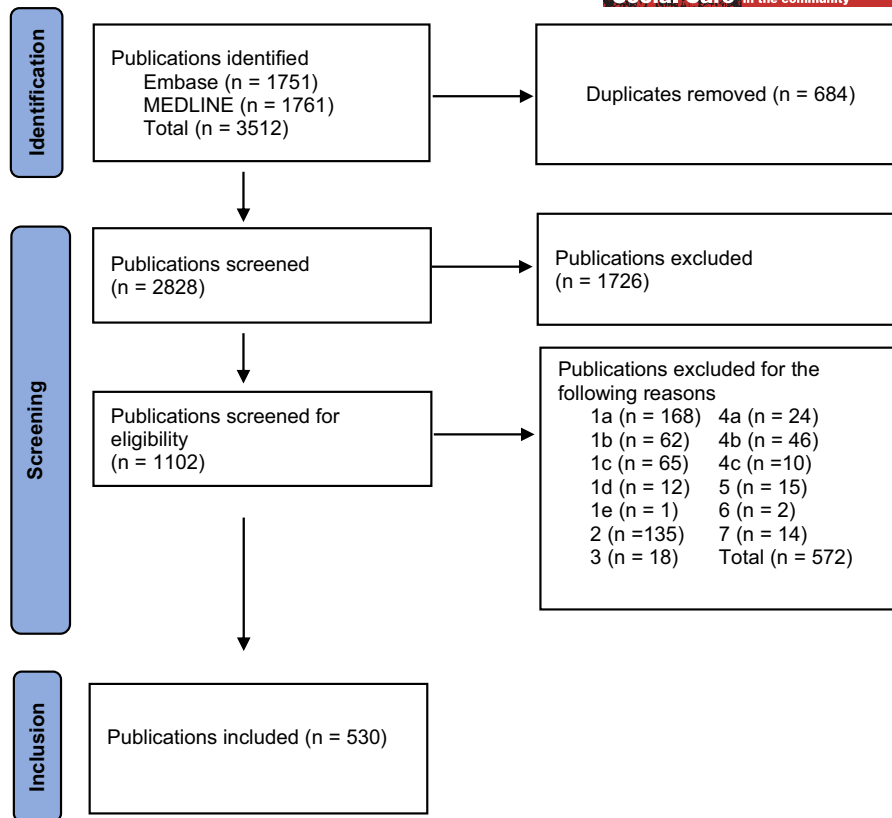


FIGURE 1 PRISMA scheme of study selection (Page et al., 2021)

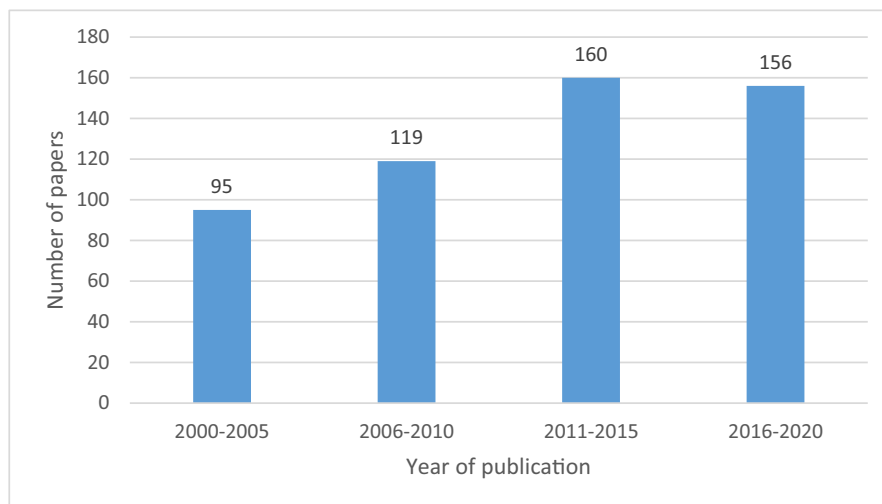


FIGURE 2 Number of published papers by year

focus of research lay on secondary prevention ($n = 287$) and tertiary prevention ($n = 232$). Primary preventive activities were less frequently the subject of research ($n = 206$) and quaternary prevention was only described in 15% of the papers ($n = 80$). Table 4 details the preventive and health-promoting activities undertaken in general practices in Germany and covered in research by thematic category. The themes are listed in descending order of the number of mentions. Multiple themes could be covered in a single paper.

3.4 | What patient populations are studied in the literature?

With regard to the social-demographics of the study populations, few studies described activities tailored to the specific needs of men ($n = 7$) women ($n = 11$), persons with a migration background ($n = 11$), people with inadequate housing ($n = 5$), or with a specific educational background ($n = 5$). Furthermore, the majority of studies did not differentiate between age groups ($n = 288$). Age-specific

TABLE 3 Actual and potential collaboration with general practices of all included studies in descending order of the number of mentions (multiple assignments permitted)

Potential co-operation partners and settings	Number of papers
Specialists (outpatient and inpatient sectors)	96
Hospital	48
(Statutory) Health insurers	33
Psychologists/ psychotherapists (Scientific) societies and institutes	20–26
Parents/relatives/family/volunteers Kindergarten/schools Politics/industry Sports therapists/physiotherapists (Sports) Clubs/recreational organisations Press/ media/communication designers Pharmacies/pharmacists Nursing professions Digital tools for training and decision support Public (health) authorities and health organisations DMPs and other (national/regional) programmes Nursing homes/ assisted living facilities Youth welfare offices/ social professions Outpatient/ inpatient rehabilitation	10–19
Cultural institutions/ foundations/ churches/ welfare organisations Nutrition therapists Information centres/ counselling centres Public health departments Self-help groups GP colleagues Companies/employers Therapists – general Justice/police	5–9
Students Laboratories Midwives Medical emergency service/paramedics Other	1–4

preventive activities undertaken by GPs targeted adult populations ($n = 143$), older adults ($n = 74$) and children and adolescents ($n = 22$). Most studies provided information on the patient's health status ($n = 402$), whereby under a quarter of the papers allowed conclusions to be drawn on health-promoting activities performed by healthy individuals with no prior conditions ($n = 140$). The majority of the literature dealt with patient populations with risk factors ($n = 254$) or previous health conditions ($n = 228$). [Table 5](#) lists the risk factors and pre-existing conditions according to how often they were mentioned.

3.5 | How do patients learn about prevention and health promotion in general practices?

Less than a quarter of the papers ($n = 162$) addressed how patients find out about prevention and health promotion, or how individuals might gain information on promoting their own health in general

practices in Germany. [Table 6](#) lists sources of information in descending order of how often they were mentioned.

3.6 | To what extent did studies describe preventive and health-promoting activities that were or are (still) being implemented?

We identified 184 papers describing studies that reported on an implemented preventive and health-promoting activity, including, for example, observational, interventional and process evaluation studies. This amounts to a share of approximately one third of papers that reported on activities that were being implemented in daily practice.

3.7 | What resources help general practice teams implement preventive and health-promoting activities?

A fair number of research papers ($n = 227$) described resources that are useful to general practices in the implementation of preventive and health-promoting activities in their daily practice. The resources that were mentioned in the literature are detailed in [Table 7](#). They support GPs in implementing preventive and health-promoting activities and help shift the overall focus of general practices to prevention and health promotion.

4 | DISCUSSION

Of 2828 identified papers, 530 were included in the synthesis. Over the past 20 years, little research has been carried out into collaboration opportunities both within the general practice team and in communities as a whole. Research has also failed to address the many different kinds of preventive and health-promoting activities that are available. Furthermore, the study of vulnerable populations has been neglected, and little research has focused on transforming general practices into health-promoting environments.

4.1 | The research landscape in numbers

Over the past 20 years, research on preventive and health-promoting activities in general practices in Germany has increased. However, the number of published articles and protocols on the subject has stagnated in the past 5 years. Stagnation, or even a slight decrease in the amount of published literature, is surprising considering the increase in the attention paid by the public and policy makers to keeping the general population healthy. However, it should be taken into account that new journals in the field of prevention are now available and that relevant German-language studies may therefore have been published in journals that were not indexed in the searched databases (Hirt et al., 2020). Nevertheless, considering the total

TABLE 4 Thematic areas of the included studies in descending order of the number of mentions (multiple assignments permitted)

Thematic area of prevention	Number of papers
Screening/ diagnostics/ early detection	96
Patient education and counselling	83
Cardiovascular prevention – general	80
Vaccination status	37–46
Medicinal prevention	
Avoidance of overmedication/medication errors/ deprescribing/ drug safety	
Lifestyle modifications/behavioural modifications/ motivation/ adherence	29–36
Cancer prevention	
Mental health	
Sports/ physical activity	
Smoking prevention	
Diabetes prevention	18–28
Shared decision-making/ promotion of health literacy/ empowerment	
Healthy diet	
Stroke prevention	
Alcohol consumption	
Prevention of acute infects and infectious diseases	10–17
Access/ cross-care coordination	
Obesity prevention	
Preventive health screening (Vorsorgeuntersuchung)	
Guideline-based care	
Empowerment in the self-management of chronic diseases	
Geriatric assessments/ preventive home visits	
Activities to prevent complications/ chronification	
Dementia prevention	
Disease management programs	
Avoiding underuse/overuse in diagnostics	
E-health	
Respiratory health	
Skin health	5–9
Healthy back	
Thrombosis prevention	
Education and training programs on prevention	
Suicide prevention	
Fall prevention	
Reduction in antibiotic resistance	
Increase in well-being/quality of life	
Preventing hospital admissions/ care dependence	
Environment, climate change and health	
Bone health/ prevention of fractures	
Workplace health promotion in general practices/ practice management/ occupational health and safety	
Relaxation/ stress management	

volume of studies included in this review, we are confident to have thoroughly scoped the targeted research area and to have identified the vast majority of research into potential community collaboration and enabling resources. Overall, the volume of research on preventive activities in German general practice is similar to the volume of research identified in a UK scoping review. However, the UK review was undertaken for the years 1990–2012 (Peckham et al., 2015),

TABLE 4 (Continued)

Thematic area of prevention	Number of papers
Genetic counselling	1–4
Sexual health	
Routine check-ups in children and adolescents	
Healthy vision and hearing	
Increasing participation/ maintaining independence	
Sepsis prevention	
Social prescribing	
Parenthood/ families/ early childhood interventions	
Workplace prevention	
Supporting (family) caregiver health	
Hygiene	
Drug use	
Organ donor card/ living will	
Accident prevention	
Oral health	
Allergy prevention	
Media consumption	
Healthy sleep	
Others	

which possibly supports the findings of Weber and colleagues that research on health promotion in Germany remains below the European average (Weber et al., 2018).

4.2 | Collaboration both in- and outside general practice teams

When implementing preventive and health-promoting activities, general practice teams generally collaborated with other healthcare partners and settings. Cooperation with partners and settings outside the healthcare system, such as self-help groups, kindergartens and companies was less often described in the research. Even if infrequently, GPs did, however, collaborate in less formal settings, such as families, (sports) clubs, the media, politics and industry. This shows that general practices are able to provide an important link to settings with different degrees of formalisation within the community and thus to help promote the health of individuals.

Although consultations of preventive services by healthcare assistants are generally well accepted by patients (Mergenthal et al., 2016), only about one eighth of the publications described cooperation within the practice team, such as between GPs and healthcare assistants. This indicates a gap in research and raises the question whether scientific literature overlooks the role played by healthcare assistants as partners in the implementation of preventive and health-promoting activities.

4.3 | Areas of prevention

Overall, a substantial range of preventive and health-promoting activities performed in general practices in Germany are described

TABLE 5 Information on risk factors and pre-existing conditions in target groups for preventive and health-promoting activities in descending order of the number of mentions (multiple assignments permitted)

Risk factors	Number of papers
Cardiovascular risk factors/ history of cardiovascular disease	61
Age	57
Smoking status	9-20
Polypharmacy	
Chronic disease	
Mental health status	
Overweight/ obesity	
Care dependence/ frailty	
Risk factors for diabetes	5-8
Genetic risk factors/ intrauterine risk exposure	
Alcohol consumption	
Socio-economic status	
Surgery/ invasive testing	
Infection	
Workplace exposure	
Risk factors	Number of papers
Family/social problems; crime	1-4
Mild cognitive impairment	
Risk factors for cancer	
Risk of fractures	
Difficulty accessing care	
Nursing home residents	
Men/ boys	
Immunosuppression	
Anticoagulation	
Attempted suicide	
Sexual orientation/ sexual behaviour	
Impairment of hearing and vision	
Dyslipidaemia	
German as a foreign language/ migration background	
Social isolation	
History of inflammatory-rheumatic diseases	
Pregnancy	
Back pain	
Refugee status	
Drug dependence	
Accident/ adverse life events	
Hospital stay	
Low educational status	
Incontinence	
Functional impairment	
Health literacy	
Self-efficacy/ motivation/ adherence	
Culture/ values/ norms/ attitudes	
Self-reported health problems	
Environment (toxins)/climate change	
Travel	
Physical inactivity	
Family caregiver	
Change of medication	
Menopause	

TABLE 5 (Continued)

Pre-existing condition	Number of papers
Cardiovascular diseases	62
Metabolic disorders	38
Mental and behavioral disorders	36
Musculoskeletal disorders	21
Respiratory system disorders	5-14
Nervous system disorders	
Chronic diseases - general	
Multiple illnesses/ multimorbidity	
Cancer	
Obesity/overweight	
Rheumatic diseases	1-4
Acute infections	
Digestive system disorders	
Injuries/ accidents/ wounds	
Infectious diseases	
Autoimmune diseases	
Others	

TABLE 6 Information on sources of patient information in descending order of how often they were mentioned (multiple answers permitted)

Sources of patient information	Number of papers
GP consultations/ personal counselling and education	77
Printed information materials	54
Digital tools and websites	26
Training courses	21
Other	13
(Telephone) support/ reminders	6
Self-tests	2

TABLE 7 Enabling resources for the practice team in descending order of the number of mentions (multiple answers possible)

Resources available to support general practice teams	Number of papers
Training events	82
Guidelines/evidence-based recommendations	42
Printed information materials	40
Digital tools	36
Screening tools	35
Structural enabling factors	31
Discussion among colleagues/ medical reports	22
Quality circles	13
Telephone counseling	6
Announcements/ reminders/ circulars	4
Quality evaluation	2
Hospitation	2
Membership of a medical association	1
Specialisation	1

in the literature. Around 15%–20% of all research papers dealt with 'early detection', 'information and dissemination' or 'cardiovascular prevention', respectively. The latter included classic health-promoting activities such as 'exercise', 'healthy nutrition' and 'smoking prevention'. A focus on this particular topic was also revealed in UK research (Peckham et al., 2015). The higher number of articles and protocols in the field of secondary prevention illustrates the key role played by early diagnosis and screening for risk factors, thus confirming that general practices attach considerable importance to the prevention of disease and its progression. Primary prevention also represents a relevant, though less well researched field of the work performed by GPs. However, compared with research in the United Kingdom, primary prevention in Germany plays a minor role in scientific discourse (Peckham et al., 2015). The second most frequently mentioned topics were 'vaccination protection', 'drug prevention' and 'drug safety'. Preventing patients from taking too much or too little medicine is gaining in importance with recently raising publication numbers. However, research in quaternary prevention is currently less than in the other three areas of prevention.

The majority of health-promoting and preventive activities involved the provision of advice to individual patients. Less research was conducted into efforts to redesign the structure of general practices and adapt their workflows, communication and culture to focus more on prevention and health promotion in their own workplace. The way GP teams organise their practice and workflows impact on the type of preventive activity they provide (Delpech et al., 2021). Consequently, promoting one type of practice management may improve one type of health-promoting activities but may impede another. This is a research gap that should be addressed in future research.

Despite the wide range of subjects covered by research, important topics such as climate change, healthy sleep, healthy practice management or social prescribing received little attention in scientific literature, with about half the topics having been discussed in fewer than 10 publications in the past 20 years. With regard to the small number of studies dealing with social prescribing, we assume that either social prescribing has not yet gained as much research or political momentum in Germany compared with countries like the United Kingdom (Herrmann et al., 2021) or that 'the evidence base for social prescribing approaches lags behind practice and roll-out' (Husk et al., 2020).

4.4 | Patient populations

The majority of published papers on preventive and health-promoting activities in general practices in Germany targeted individuals with cardiovascular risk factors and cardiovascular diseases. Populations with metabolic diseases and mental and behavioural disorders were also relatively frequently researched. Research also focused on risk factors for potentially complex care trajectories due to, for example, chronic illness, polypharmacy, mental and emotional

stress or the (imminent) need of long-term care, but such research was described in the literature to a significantly lesser extent. Little research has been conducted into patient populations with social risk factors, such as low household income, occupational exposure to health hazards, social isolation or sexual orientation.

Overall, the studies provided information on particular patient populations for reasons of methodological documentation and did not specifically target vulnerable populations as part of their research objective. A survey study suggested that family medicine plays an important role in German general practice, although infants and children only play a minor role in routine care, especially in urban areas (V. Kalitzkus et al., 2020). At the same time, only 22 papers addressed children and adolescents as a target group for preventive and health-promoting activities in general practice, although the potential benefits of health promotion are considerable and long-lasting in this age group. This contrasts with results from the UK scoping review, which found that about one third of all published papers focused on children, adolescents and families (Peckham et al., 2015). A recent publication investigated the preferences of the German population on the opportunity of general practices to providing care to other family members and concluded that half of the patients would be in favour of a stronger focus on families in general practice. The authors also conclude that structural problems such as missing networks of GPs with other community stakeholders, insufficient remuneration practices or a lack in low-threshold consultation hours suitable for families still impede the delivery of family-centred medicine in Germany (Vera Kalitzkus et al., 2021).

4.5 | Communication and dissemination of information on preventive activities in general practices

Besides printed information materials, personal interaction was the most frequently mentioned means of communicating information on preventive and health-promoting activities in general practices in Germany. In the literature, digital tools for the evaluation of risk, for the critical assessment of the value of early diagnostic activities, and for the assessment of the probability of developing cardiovascular diseases were also described. The recently published German health literacy survey concludes that health literacy on health promotion and prevention was lower compared with health literacy on curative treatments (Schaeffer et al., 2021). Against this background, there is a clear need for interventions to improve communication and dissemination of health information on preventive activities in general practice with a strong involvement of GP teams as well as patients at risk for low health literacy.

4.6 | Implementation in practice

About one third of published articles and protocols described preventive and health-promoting activities implemented in routine care

by GPs in Germany. These were studies with interventional designs, cohort studies, pilot studies or feasibility studies. However, no conclusions could be drawn on the quality and sustainability of the implemented activities. Because secondary data analyses accounted for a large proportion of the subjects covered in the included papers, it is not surprising that the majority of studies did not describe activities that had been implemented.

4.7 | Resources to support general practice teams engaging in preventive and health-promoting activities

The scientific literature mostly describes education and training events that support GPs and their teams in implementing preventive and health-promoting activities. Guidelines, printed information materials, digital tools, screening instruments and discussions among colleagues and quality circles were also described as empowering GPs. There were 35 studies reporting that discussion among colleagues and quality circles enabled GPs and their teams to deliver health promotion and prevention. A mix of skills between different medical specialities as well as between other health and non-health professions were perceived to support general practice teams to successfully engage in preventive and health-promoting activities (Bahrs & Heim, 2005; Heddaeus et al., 2015).

Resources that support general practice teams and to focus their activities on the promotion of health generally concerned the time involved and the remuneration of preventive and health-promoting activities, as well as practice management, the individual health behaviours of practice staff, and the existence of local networks to promote community health.

We have not synthesised data derived on enabling resources with regard to the effectiveness of the different approaches. Individual studies, however, were designed to prove effectiveness of specific resources available to GP teams such as the adherence to guidelines and its association with patient health outcomes (Klement A. et al., 2015), subjectively perceived support from quality circles (Heddaeus et al., 2015) or the feasibility to integrate digital tools and printed health information for patient counselling (Tinsel et al., 2017).

5 | LIMITATIONS

Some limitations should be considered when interpreting the results presented above. The two searched databases provide a valid scope of the current state of literature. However, some journals that publish German language studies on prevention were not indexed in them. This review, therefore, provides a comprehensive but not an exhaustive scope of research. Specifically, searching two databases with a medical focus may have restricted identifying evidence from non-medical disciplines that report on preventing activities in the community linked with general practice teams. However, because the high number of studies included ($n = 530$) and with the setting

of general practice at the heart of our investigation, we think that, in synthesis, our results represent the evidence landscape around preventive activities provided by general practice teams in Germany and that we reached data saturation. It was due to this reason that additional hand searches were not performed.

As 530 papers were included, we could not separately tabulate data for each individual study. However, the authors of this review can provide detailed information on the included individual studies upon request.

We pointed out that health promotion, preventive medicine and family medicine are all areas in which different medical and non-medical professions work together. Still, we did not involve different stakeholders throughout the review process or in defining the research question. However, this scoping review is only the first step of a wider research project in which stakeholders will be involved to explore the views of patients and general practice teams on providing preventive activities via telephone interviews and a workshop with the patient advisory board of our practice-based research network. Moreover, the results of this scoping review were incorporated in a patient-friendly booklet and disseminated to the funder—a non-profit foundation concerned with producing independent health information to encourage people to become co-creators of their own health.

The above results are only valid in a German context. A geographic focus on Germany was necessary because the range of preventive and health-promoting activities, as well as potential collaboration between providers, may differ considerably between healthcare systems. We, therefore, hope to encourage comparable scoping reviews to be conducted in other countries to spot the gaps of research into preventive and health-promoting activities taken by GPs working in different healthcare systems.

With regard to the COVID-19 pandemic, we expect research to prioritise different types of preventive activities and community cooperation by general practice teams in the future. For instance, we might see more research funded and carried out for preventive activities concerning mental and psychosocial health not only in primary care patients but especially in GP practices' health workforce. Other areas where a shift in research can be expected may include investigations of cooperation between general practice teams and public health authorities as well as studies on digital tools to provide health-promoting and preventive services to people in the community. As we included published articles up to November 2020, our results may be limited to the pre-pandemic situation. An updated search to identify a probable shift in research foci due to the pandemic is encouraged with a time interval appropriate to the pace of research funding and publication.

6 | CONCLUSIONS

This review identifies priorities and gaps in research into preventive and health-promoting activities of GP teams employed across general practices in Germany.

6.1 | Research priorities

The results of this scoping review reveal the considerable volume and range of published literature on health promotion and prevention in the general practice setting in Germany ($n = 530$), in which papers on secondary and tertiary prevention activities are predominant. The literature indicates that preventive and health-promoting activities adopted by GPs focus on the individual rather than the environment and especially on individuals with risk factors and pre-existing conditions.

6.2 | Research gaps

Hardly any papers differentiated between genders or provided information on activities recommended for children and adolescents. Activities tailored to include people with a migration background, with inadequate housing, or with a specific educational background, were barely researched at all, although these groups are particularly relevant if social inequality in prevention and health promotion is to be avoided. Despite the thematic range, important topics received little attention. Over the past 20 years, about half the topics were discussed in fewer than 10 of all included papers. A fair number of studies included reports on preventive and health-promoting activities that GPs implement in their daily work. However, formal and informal collaboration between general practices and non-medical community settings are rarely described.

6.2.1 | Recommendation for future research

Future research on collaboration both within the practice team and with the wider community is required to explore how general practices are transforming themselves into environments focused on sustainably promoting the health of individuals and communities. Based on these results, qualitative research should address some of these gaps.

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CONFLICT OF INTEREST

None to declare.

AUTHOR CONTRIBUTION

Ask and je were involved in the conceptualization of this work and the formulation of overarching research goals. Je and md defined research questions and specified methodology. Pilot searches were run by md. Study selection was performed by ds, mg, je and md and data was extracted by ds and md. Md analysed and visualized data and prepared the initial draft of the manuscript, which all authors reviewed and commented. Ask acquired funding for the project and

je supervised and managed research activity of the project leading to this publication. All authors read and approved the final version of the manuscript.

DATA AVAILABILITY STATEMENT

The data that supports the findings of this study are either available in the supplementary material of this article or can be requested from the authors.

ORCID

Mirjam Dieckelmann  <https://orcid.org/0000-0002-5243-7840>

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