

European general practitioners' attitudes towards person-centred care and factors that influence its implementation in everyday practice: The protocol of the cross-sectional PACE GP/FP study in 24 European countries


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RESEARCH ARTICLE



European general practitioners' attitudes towards person-centred care and factors that influence its implementation in everyday practice: The protocol of the cross-sectional PACE GP/FP study in 24 European countries

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ABSTRACT

Background: Person-centred care (PCC) is a fundamental principle in general practice, emphasising practices tailored to individual patient preferences, needs, and values. Despite the importance of PCC, general practitioners (GPs) face obstacles in effectively implementing it, with associated factors remaining unclear.

Objectives: The PACE GP/FP study aims to explore GPs' attitudes towards PCC and the factors facilitating or hindering its implementation in daily practice across European countries. This paper outlines the PACE GP/FP study protocol.

Methods: The cross-sectional design with data collection *via* an online survey distribution to GPs in 24 European countries. Study instruments include two validated questionnaires (Perceived Stress Scale (PSS) and Patient Physician Orientation Scale (PPOS)) and additional items covering general information about the doctor and their practice, as well as facilitators and barriers to PCC. These additional items were specifically developed for the study, translated using the forward-backward method, evaluated through cognitive debriefing, and integrated into the REDCap platform to create language and country-specific survey links. The STROBE checklist guides the reporting of the manuscript.

Conclusion: The PACE GP/FP study will provide a comprehensive exploration of GPs' attitudes towards PCC and the factors shaping its practice in Europe. The findings from the PACE GP/FP study will provide evidence for designing future implementation strategies and guide targeted interventions to promote PCC in primary care across Europe.

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Introduction

Person-centred care (PCC) is a key healthcare approach in providing high quality care that prioritises individual preferences, values, and experiences in decision-making and treatment planning [1]. Unlike the traditional biomedical model, PCC shifts the focus from disease to the person, emphasising a holistic, individualised approach. Recognised as a core value by the World Organisation of Family Doctors (WONCA), PCC extends beyond addressing medical needs to supporting a meaningful life, whereas patient-centred care focuses on achieving a functional life [2–5].

In aiming to explain how and why PCC in primary (PC) works, Ahmad A et al. highlighted key contextual factors influencing PCC implementation in PC including patient social support, healthcare professionals (HCPs) collaboration, patient education, sufficient consultation time, personalised care planning, and e-health integration [6,7]. Essential mechanisms for PCC success in PC involve effective communication, respect, empathy, shared decision-making, and self-management support. The resulting PCC outcomes include health improvements, increased patient involvement,

satisfaction, therapy adherence, self-management skills, and enhanced treatment approaches [6,7]. Other studies also note PCC benefits such as enhanced emotional well-being and empowerment, reduced malpractice claims and complaints, and increased physician satisfaction and consultation efficiency [4,8–11].

However, PCC integration is often hindered by several barriers, including educational and cultural challenges (dominance of the biomedical model, insufficient PCC training), organisational constraints (resistance to change within healthcare organisations, time pressures, high workloads), and attitudinal and systemic influences (professional norms, perceived feasibility, and lack of support) [12–14]. Rosengren K et al. revealed significant disparities in PCC adoption across Europe, with the UK, Sweden, and the Netherlands leading, while countries like Poland, Hungary, and Serbia lag behind. These differences stem from healthcare system structures, geographical variations, and professional resistance driven by time constraints, lack of training, and cultural barriers [15]. Emphasis is placed on involving all stakeholders in co-creating PCC models, alongside education and raising awareness about the PCC

health benefits [15–17]. Britten et al. highlight the crucial role of steering committees and HCPs as change agents, emphasising PCC education and teamwork as essential for benefiting patients, their families, and professionals [18].

In accordance with the above, physicians' beliefs and attitudes significantly impact patient-centred communication [19–22]. GPs' willingness to adopt patient-centred care is shaped by factors such as training, workload, and stress, with time constraints and managing multiple patient issues posing additional challenges [6,23]. Challenges have been further amplified by the rise of digital healthcare, accelerated by COVID-19, presents both opportunities and challenges, as virtual platforms can enhance or hinder communication, impacting the physician-patient relationship [24,25].

In this post-COVID era, the implementation of PCC requires a deeper understanding of the attitudes and practical challenges faced by GPs worldwide that hinder its integration. While previous studies have mainly focused on national contexts, with limited cross-country comparisons, the PACE GP/FP study aims to explore GPs' attitudes towards PCC and the factors that

facilitate or hinder its implementation in daily practice. The findings from the PACE GP/FP study will provide evidence for designing future implementation strategies and guide targeted interventions to promote PCC in primary care across Euro

Methods

Study design

Cross-sectional study, self-reported, online survey of GPs across 24 European countries (Figure 1) [26]. The cross-sectional design was chosen because it efficiently captures a snapshot of GPs' attitudes across European countries, enabling comparisons and identifying patterns to guide research and policy. However, it identifies associations rather than causation. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist will guide reporting [27].

Research consortium

The study stems from the Person-Centred Primary Care group, European Association of Quality and Safety in General Practice/Family Medicine (EQuiP), in

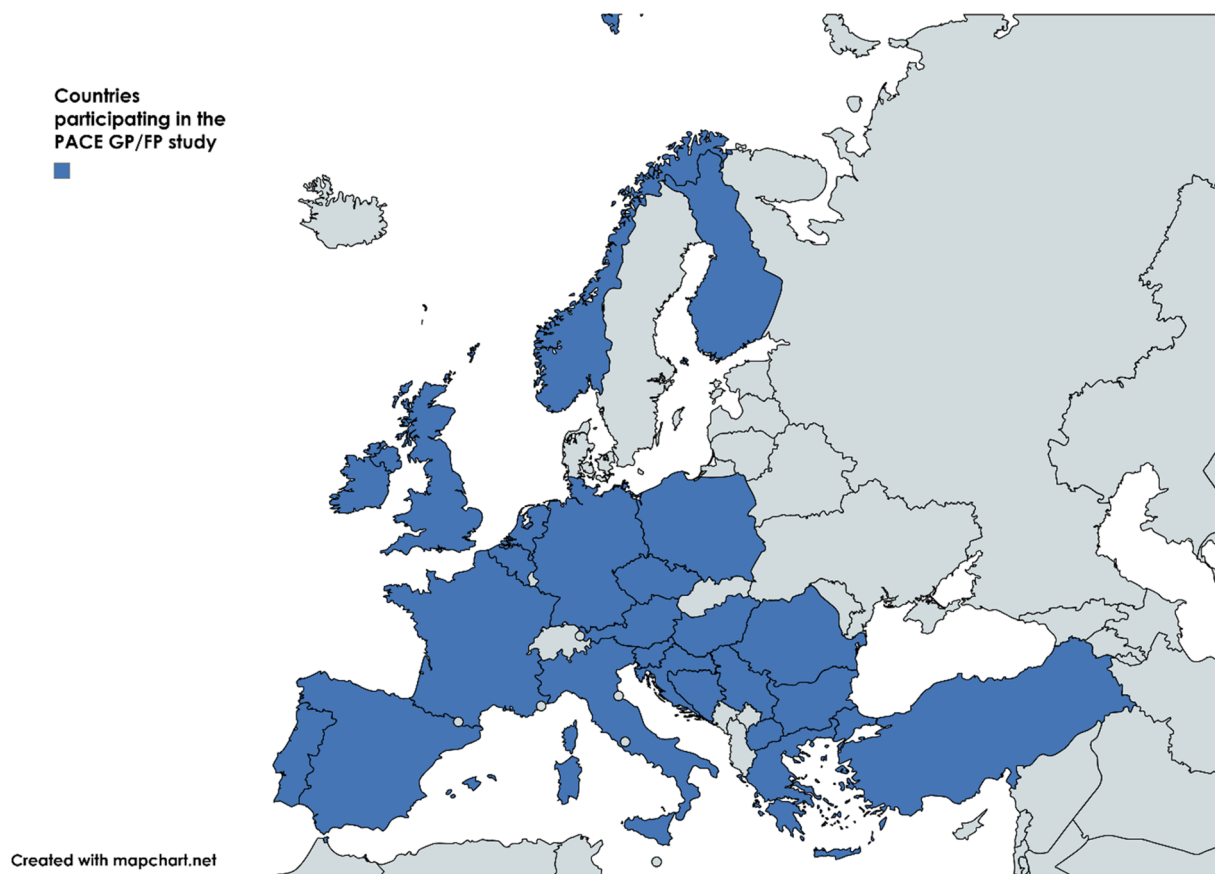


Figure 1. Overview of the participating countries in the PACE GP/FP study.

collaboration with EGPRN (European General Practice Research Network) conducted under a collaboration agreement.

Data management plan

Confidentiality, publication policy, liabilities, and protection of personal data in accordance with the General Data Protection Regulation (GDPR) are outlined in the collaboration agreement. Personal identifiable data will not be collected/retained. All consortium partners act as joint controllers in the study.

The Data Management Plan is regularly reviewed in collaboration with the data protection officer at Zagreb Medical School University (Croatia), and adjustments made as needed.

Ethics approval and funding

Approval from the Research Ethics Committee of Zagreb Medical School (Ref.No:380-59-10106-22-111/115 Class: 641-01/22-02/01). Each collaborating institution has obtained required ethical approvals (Additional file 1).

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Development of the study instrument

The set of survey instruments is divided into four parts: General information about the doctor and the doctor's office (1st part); Perceived Stress Scale (PSS) (2nd part); Patient Physician Orientation Scale (PPOS) (3rd part); and Facilitators and barriers to person-centred care in everyday practice (4th part) (Additional file 2). The 1st and 4th part were developed by a project group comprising EQUIP and EGPRN Primary Health Care (PHC) experts, a methodological specialist, and researchers from partnering institutions, all recognised international senior researchers in PHC. Initially, a narrative literature review informed the drafting of these two additional items based on the research objectives. Additionally, the last question of the 1st part was adapted from the PRICOV-19 study due to findings that GPs with more vulnerable patient populations were at a higher risk of distress. [28]. The core research team engaged in several EQUIP and EGPRN meetings to deliberate on the meaning of all items in the 1st and 4th parts, their applicability across different health-care systems and cultures, the length of the items, formulated suggestions for changes, and identified missing items. Subsequently, the Person-Centred Primary Care group conducted several individual and two group meetings, both online and in-person, to discuss and provide feedback. Changes to the initial

1st and 4th sections were implemented, and the survey underwent two rounds of circulation until a consensus was reached in November 2022. All comments were incorporated into a revised version, and feedback was provided by all researchers. Finally, an agreement was reached during the second round of discussions.

The 2nd part – the Perceived Stress Scale (PSS) – is the most widely used psychological instrument for measuring the perception of stress and is a standardised tool with moderate to high reliability (Cronbach's α 0.78 to 0.91) and confirmed validity [29]. It assesses the degree to which individuals perceive situations in their lives as stressful. The items were designed to gauge how unpredictable, uncontrollable, and overloaded respondents perceive their lives to be. The scale also includes direct queries about current levels of experienced stress. It consists of 10 items considered easy to understand, and the response options are simple to grasp. Questions in the PSS inquire about feelings and thoughts over the past month, with respondents indicating how often they experienced certain feelings. The questionnaire is freely available for non-profit purposes. In this study, the PSS was utilised to assess work-related stress.

The 3rd part – the Patient-Practitioner Orientation Scale (PPOS) – is a standardised instrument with moderate to high reliability (Cronbach's α 0.75 to 0.88) and confirmed validity [21]. Widely utilised and translated into various languages, this tool's reliability and validity have been extensively tested across several countries [30–34]. It comprises 18 statements concerning the doctor-patient relationship and assesses whether the respondent prefers a disease-oriented or patient-centred approach during clinical encounters. Responses are rated on a 6-point Likert Scale (ranging from strongly disagree to strongly agree from left to right, with strongly disagree scored as 6 and strongly agree as 1). Based on mean scores, respondents are categorised as patient-centred (>5.00), moderately patient-centred (4.57–5.00), or doctor-centred (<4.57). The statements can be further categorised into the dimensions of sharing and caring. The sharing subscale reflects the respondent's assumptions about the extent to which patients desire information and whether they should participate in the decision-making process. Conversely, the caring subscale measures the importance respondents assign to patients' expectations, emotions, and life circumstances [21]. One benefit of the PPOS is its ability to facilitate cross-population comparisons [34]. Permission was obtained from the author, Professor Edward Krupat, to utilise the scale.

All collaborators translated the final survey from English into 22 primary spoken language(s) using the

forward-backward method [35,36]. The comprehension of survey items was evaluated using the cognitive debriefing technique [34]. Consortium partners conducted five cognitive interviews with selected GPs from each country. If there were no ambiguous or incomprehensible words, the translated survey version was deemed suitable for the main survey with a large sample size. Finally, the research team inputted these translations into the Research Electronic Data Capture (REDCap) platform, generating language and/or country-specific links to the survey [37].

Sampling and recruitment

In each country, the consortium partner(s) will recruit GPs using a predefined recruitment procedure. A convenience sample will be used with various recruitment methods, primarily through email invitations *via* national professional associations, mailing lists, and targeted outreach to general practitioners (GPs). Each GP on these lists will receive an email invitation containing a link to an online survey. In each country, the consortium partner will send out at least one reminder. In most countries, the sample will be drawn from GPs nationwide, while in a few countries, data collection will be restricted to specific regions. The partners will meticulously document each step of the sampling process. The PACE GP/FP project representatives agreed on a minimum of 100 participants per country after conducting a power analysis and consultations [38]. While acknowledging potential limitations in analysis due to response rates, they prioritised the inclusivity of all countries and available data.

Data collection

Data will be collected online *via* the Red Cap survey application. Each invitation for participation will include a unique link to the survey tailored to the specific country. Participants will be requested to provide written informed consent on the initial page of the online survey, which will be a prerequisite for participation. The software will not gather respondents' IP addresses and will ensure complete anonymity and voluntariness. This will be followed by the database cleanup process. All data will be centrally stored on Zagreb University's server.

Statistical analysis

The Zagreb University research team will manage the entirety of data refinement. They will sift through data, discarding any flawed or corrupted entries, and will

transform variables as needed while generating new summary metrics. They will analyse the distribution of both numerical and categorical variables and will establish valid ranges for numerical variables specific to each country, in collaboration with their respective consortium partners. The partners will translate responses from string variables into English, which will be then converted into categorical variables to safeguard participant anonymity. Furthermore, relationships between variables at individual participants, practice characteristics, and work-related stress levels will be analysed. Multivariate analysis will identify factors independently associated with the outcome variable, starting with linear regression including predictors showing significance in univariate analysis. Variables may be added, removed, or grouped based on clinical relevance to optimise the model, minimising collinearity and overfitting. Statistical analysis will be performed using SPSS software from SPSS Inc., headquartered in Chicago, Illinois. The criterion for determining statistical significance (set at 0.05) follows a two-fold approach (p).

Discussion

Understanding GPs' attitudes towards PCC and the multifaceted factors influencing its implementation in everyday practice is critical for advancing healthcare quality and patient satisfaction. This is exactly the aim of the PACE GP/FP study, which hypothesises variability based on patient, physician, and practice characteristics. Through various analyses, several potential outcomes can be anticipated: Correlations between practitioners' characteristics such as age, gender, vocational training, working experience and attitudes towards PCC; challenges and facilitators in implementing PCC, considering practice characteristics like population size and involvement in medical education; the impact of workload on prioritising PCC, taking into account number of daily patient contacts and practice size; differences in attitudes based on practice structure and collaboration, influencing PCC implementation; associations between perceived work-related stress levels and attitudes towards PCC; and specific facilitators and barriers influencing PCC adoption, such as time constraints and organisational culture. These findings will contribute to a comprehensive understanding of GPs' attitudes towards PCC and inform targeted interventions to promote its implementation in everyday healthcare, influencing policy and practice across Europe. We believe the results of the PACE GP/FP study will fill a gap in the existing literature by

providing insights into GPs' attitudes towards PCC in the post-COVID era and by identifying common barriers and facilitators to its implementation across European countries. By understanding these factors, healthcare stakeholders can develop targeted interventions to promote the adoption of PCC principles in primary care settings, ultimately enhancing person-centred healthcare delivery.

Strengths and limitations

As far as we know, the PACE GP/FP study stands out as one of the most comprehensive investigations into GPs' attitudes towards PCC in Europe. This study is the result of a collaborative endeavour involving 38 health institutions and universities across 24 European countries. In addition to the EGPRN grant, which will primarily support data analysis and article publication costs, the PACE GP/FP consortium successfully set up the study and will recruit a large sample without any external investment.

A notable strength of this research lies in its carefully designed set of study instruments developed within the Person-Centred Primary Care group, incorporating two internationally recognised validated tools the PSS and PPOS. The research team placed emphasis on ensuring the survey's cross-cultural validity, striving to ensure that items and response options could be understood uniformly across different languages.

Nonetheless, there are a few limitations to bear in mind. Surveys will rely on self-selected participants, introducing volunteer bias, and potentially affecting reporting. While larger sample sizes can mitigate this bias, as we have here overall, the survey's cross-sectional design will prevent the direct assessment of causal relationships. Exact data on general practice populations and minimum sample size requirements will be unavailable due to the volunteer nature of the study, precluding country-level data presentation.

While randomisation will not be possible, strategies will be implemented to minimise biases in multi-center surveys. Other strengths will include the large, diverse sample size and comprehensive coverage of European primary care settings, making the findings more generalisable.

Conclusion

PCC has become central to modern healthcare, emphasising the importance of tailoring practices to individual patient preferences, needs, and values. GPs play a pivotal role in this approach as frontline providers with enduring patient relationships. Despite its significance,

GPs encounter barriers in implementing PCC effectively, many of which remain unclear. The PACE GP/FP study addresses this gap by examining GPs' attitudes towards person-centred care and the factors influencing its practical application across Europe. This critical examination is essential for navigating challenges and seizing opportunities to transition towards a healthcare system truly centred around patient needs, paving the way for a more effective and compassionate model of healthcare delivery.

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Authors' contributions

GP, ZKK, ZOA, VC, GV, EZ, SW, DT, TBE, DZ, DP, CC, KH, SAB, TF, HL, MU, CT, KS, RA, SB, BS, PT, JGL led the conceptualisation and design of the study. GP developed the funding application. GP lead the coordination of the study. GV and PH will clean the data. GP wrote the draft. GV, ZOA, VC, ZKK, EVP, JB, CC, SAB, EZ, SC, BH, JA, DP, MD, PH critically reviewed it and provided comments to improve the paper. Finally, all authors read and approved the final manuscript.








Disclosure statement

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

Funding

The PACE GP/FP study is primarily established and will be conducted without external funding, except for a modest grant from the European General Practice Research Network (EGPRN). Consequently, the study relies almost entirely on the goodwill, enthusiasm, and contribution of the collaborating institutions.

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Data availability statement

All data will be centrally stored on the Zagreb Medical School server (Croatia). All data will be anonymised at Zagreb Medical School, and all raw data that could lead to the identification of the participants will be permanently removed. Researchers from partnering institutions will be able to access non-identifiable data from their national database after data cleaning. A reasonable request will be required to access non-identifiable data by users who are external to the PACE GP/FP consortium. Access will be subject to a data transfer agreement and following approval from the principal investigator of the PACE GP/FP study.

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