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Estimating the Prevalence of Multimorbidity Among the Adult Population in Primary Care Settings in European Countries – A Systematic Review and Meta-Analysis

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Abstract

Background: *Multimorbidity, defined as having two or more chronic illnesses or long-term conditions, is a major concern in primary care and public health, particularly for the older population. There is a dearth of evidence regarding multimorbidity in primary care facilities, which are the initial point of contact for patients in most European nations. The objective of the current study is to estimate the prevalence of multimorbidity among the adult population in European primary care settings.*

Methods: *Six electronic databases (Embase, Medline, Global Health, PsycINFO, CINHAL, and Web of Science) were searched for possible papers for this study, which is based on PRISMA guidelines. RStudio and CMA were used for statistical analysis, and the NOS tool was used to evaluate the methodological quality.*

Results: *Twelve studies were included, with a cumulative of 2.9 million participants. The overall prevalence of multimorbidity in the adult population in European primary care settings was 39% (95% CI; 26%-54%). Subgroup analysis based on age showed a prevalence of 13% (95% CI; 7%-22%) and 83% (95% CI; 72%-89%) for the youngest and oldest age groups respectively. Similarly, based on gender, 41% (95% CI; 26%-58%) and 44% (95% CI; 29%-61%) for males and females, respectively, and prevalence based on the coding system was 43% (95% CI; 26%-62%) for ICD, 47% (95% CI; 24%-72%) for ICPC, and 21% (95% CI; 15%-28%) for read codes.*

Conclusion: *About 1 in 3 adults have multimorbidity with higher prevalence rates as age advances, highlighting the importance of developing appropriate clinical recommendations and healthcare policies to manage and support this rising patient population with multimorbidity.*

Keywords: Multimorbidity, Primary Care, Prevalence, Chronic Conditions, Europe

Abbreviations

- **CS:** Cohort Study
- **CSs:** Cross Sectional Study
- **EMR:** Electronic Medical Record
- **PC:** Primary Care
- **RS:** Retrospective Study
- **ICPC:** 2-International Classification of Primary Care 2nd edition
- **ns:** Not Specified
- **CPRD:** Clinical Practice Research Datalink
- **GPs:** General Practice
- **ICD:** 9-CM-International Classification of Diseases 9th Revision Clinical Modification
- **ICD:** 10-International Classification of Diseases 10th Revision
- **FMP:** Family Medicine Practices
- **RNFM:** Research Network Family Medicine

Introduction

Multimorbidity, the simultaneous presence of two or more chronic diseases in a person, poses complex problems that impact all facets of healthcare, from clinical practice to policy-making [1, 2]. Multimorbidity is commonly recognized as one of the most significant and impactful healthcare issues of the 21st century [3]. Particularly in industrialised regions like Europe, the conceptual change from addressing the complexity of multiple concurrent problems to concentrating on single chronic diseases shows a development in understanding contemporary health trends [4]. Patients with more than one chronic condition, particularly in Europe's ageing population, have become the norm rather than the exception [5]. Since multimorbidity is strongly predicted by age, the demographic trend in Europe highlights the importance of researching and addressing this issue [6].

In contrast to discrete medical disorders, a comprehensive and coordinated approach is required for multimorbidity, which sometimes calls for simplified diagnosis and treatment. The prevalence of multimorbidity in the recent literature has reported an overall pooled prevalence of 33.1% in a 2019 study and 37.2% in a 2023 study [7, 8]. These two studies were carried out in community care environments. By showing how socioeconomic and environmental factors can influence the occurrence of multimorbidity, community-based research illuminates possible disparities and avenues for action [9]. Given its focus on comprehensive, coordinated, and continuous care, primary care, which serves as the cornerstone of the healthcare system and patients' first point of contact, is well-positioned to manage and navigate the complexity of multimorbidity [10].

While multimorbidity has been the subject of numerous national research in different European nations, a complete synthesis that provides a pan-European viewpoint is noticeably lacking [11]. The difficulty in regional differences, making meaningful comparisons, and developing comprehensive policies that can address the problems caused by multimorbidity throughout Europe's primary care settings is hampered by the lack of integrated data [12]. Despite the topic's undeniable importance, there remains a gap in our understanding of how common multimorbidity is in primary care settings throughout Europe. The techniques, definitions of multimorbidity, and patient populations of separate studies from various nations vary widely. However, they contribute valuable insights,making it difficult to generalise findings and draw conclusions applicable to the European context [13]. Therefore, this study seeks to provide a comprehensive prevalence of multimorbidity among adults (≥18 years) registered in primary care settings throughout the countries of the European region by integrating the current, up-to-date evidence.

Methods and Materials

Design and Information Sources

Following the guidelines outlined by the PRISMA framework, the current study used a systematic review and meta-analysis design [14]. Searches for relevant papers were conducted in Web of Science, CINAHL, Ovid Interface for Medline, Embase, APA PsycINFO, and Global Health databases. The electronic databases were thoroughly searched to find articles examining the prevalence of multimorbidity in the adult population. The study's reliance on a secondary data search from published papers implied that permissions and ethical approval were unnecessary.

Eligibility Criteria

The following eligibility criteria were used to determine which papers were deemed suitable for inclusion in the current study. No language limit was applied for articles dating from 2000 to Dec 2024 (see Table 1).

Table 1: Eligibility criteria for determining suitable articles for inclusion.

Eligibility items	Inclusion criteria	Exclusion criteria
Topic relevance	Articles exploring incidence/prevalence rates of multimorbidity (≥2 chronic/long-term conditions)	No multimorbidity-associated prevalence addressed.
Sources of information	Primary research articles are available and published in peer-reviewed journals.	Secondary sources including webpages, blogs, magazines, and newspaper articles.
Study setting	Primary care and associated primary healthcare facilities in European countries	Community centres and hospitals in other regions and self-reported multimorbidity
Study design	Observational Studies include Cross-sectional, Cohort, and Longitudinal studies.	Non-evidenced abstracts, Case reports, non-referenced conferences, protocols, and other reviews.
Population	The adult population defined as ≥18 years.	Young population <18 Multimorbidity in patients with diabetes, hypertension, heart disease, Cancer, and HIV. Prisoners, homeless, minorities, and pilgrims.

Search Strategy

The electronic databases were searched for possible articles using a methodically customised approach to guarantee the highest level of robustness and inclusivity. The literature search was conducted without any language restrictions by employing the Boolean operators "OR" and "AND" were used to refine and ex-

pand the search results, which included Medical Subject Headings (MeSH) and text terms that had been adjusted for each database. The main relevant terms searched were "primary care," OR "primary healthcare, "OR "primary medical care," OR "first-line healthcare," AND "multimorbidity," OR "multimorbid," OR "multiple chronic conditions," OR "polymorbid," AND "prevalence," OR "incidence," OR "epidemiology. "Since multimorbidity was defined precisely, the term "comorbidity" and other terms of that nature were purposefully left out of the search strategy. The citations from each database search were exported into Reference Manager Software (Rayyan), supporting reference organization and duplicated removal [15]. After duplicate removal, initial titles and abstracts screening was conducted independently by one reviewer (SZ). This screening process aimed to identify articles that fulfil the inclusion criteria. The reference lists of the included studies were manually screened to find further papers.

Study Selection and Data Extraction

Using the eligibility criteria as a guide, two independent reviewers screened through the abstracts and titles of potential articles for inclusion. The full-text manuscripts from these potentially pertinent studies were assessed for inclusion in the current review and meta-analysis using preset inclusion criteria. Conflicts were settled by discussion or consultation with a third reviewer. Relevant data was collected and arranged into a research characteristics table, which included study specifics (authors, year, data source, design), location (country, settings, and length), patient demographics (size, age, and sex), and primary outcome (definition of multimorbidity, prevalence of multimorbidity) (see Table 2).

Table 2: Characteristics of the included studies

Study Details						Patient Demographics		Main Outcomes	
Study ID (Author, yr)	Design	Data source	Settings (Codes)	Duration	Country	Size (N)	Age (yrs)	Chronic conditions (N)	Multimorbidity (N (%))
Abad-Díez et al. 2014 [34]	RS	EMR	19 PC (ICPC-2)	ns	Spain	72815	≥64	32	49150 (67.5)
Cassell et al. 2018 [29]	RS	CPRD	GPs (read codes)	Jan 2012-April 2016	England	403985	≥18	36	109884 (27.2)
Glynn et al. 2011 [33]	RS	Patient records	3 PC (ICPC-2)	2 years	West of Ireland	3309	≥50	147	2189 (66.2)
Hauswaldt et al. 2022 [30]	RS	EMR	142 GPs (ICD-10)	1994-2007	Germany	236038	49 (mean)	ns	61842 (26)
Ledwaba-Chapman et al. 2021 [27]	RS-CSs	EMR	GPs (read codes)	April 2005-May 2020	England	816901	≥18	12	173,183 (21.2)
MacRae et al. 2023 [28]	CSs	CPRD Gold dataset	149 GPs (ICD-10)	Nov 2021-Feb 2022	United Kingdom	917148	≥20	80	461624 (50.3)
Prados-Torre et al. 2012 [11]	RS	EMR	19 PC (ICD-9-CM)	2008	Spain	154437	≥45	14	84710 (54.8)
Prazeres et al. 2015 [32]	CSs	Clinical data	PCs in 5 regions (ICPC-2)	Oct 2013-dec 2014	Portugal	1993	≥18	147	1448 (72.07)
Rizza et al. 2012 [31]	CS	EMR	PC (ICPC-2)	Jan 2009 to Jul 2011	Switzerland	66212	≥20	147	8607 (12.99)
Salisbury et al. 2011 [10]	RS	GPRD	182 GPs (read codes)	April 2005 to March 2008	England	99997	≥18	17	16030 (16)
Sinnige et al. 2015 [25]	RS	Clinical data	158 GPs (ICPC-2)	2002-2011	Netherlands	120480	≥55	24	74733 (62.02)
Vos et al. 2022 [26]	RS	RNFM	FMP (ICPC-2)	Jan 2000-Dec 2014	Netherlands	7068	≥25	88	1097 (15.52)

Critical Quality Appraisal

The methodological quality of the included articles was assessed using the modified version of the Newcastle-Ottawa Scale (NOS) to accommodate cross-sectional and single-arm cohort studies [16]. NOS is based on three domains of potential bias subdivided into eight components named as (I) selection (representativeness of the sample, sample size, ascertainment of screening, non-response rate), (II) comparability (based on study design, and analysis), and (III) outcome (assessment of outcome and statistical tests) [17]. The subjective scores reflect the papers' methodological rigour and clarity. The overall quality of the studies was de-

termined by the overall score set as very good (9–10 points), good (7–8 points), satisfactory (5–6 points), and unsatisfactory (0–4 points).

Statistical Data Analysis

Statistical analysis was done using RStudio and Comprehensive Meta-Analysis (CMA) Version 3.0 [18-20]. The data were extracted as events and totals, then pooled and reported as an event rate with a 95% confidence interval (CI) or risk ratio (RR) and the corresponding 95% CI. Heterogeneity was assessed using the I2-test statistic and Cochrane's Q test. Based on the I2 test statistic, heterogeneity was determined asnon-significant (0–40%), moderate (30–60%), substantial (50–90%), and considerable (75–100%)[21].Egger's and Begg's tests were applied to create funnel plots that investigated the publication bias of the papers included in the analysis. Statistical significance was reached at p-value < 0.05 (p < 0.05) [22, 23].

Results and Findings

Search Results

A total of 6135 records were initially retrieved from the six databases. These articles were then imported into a reference manager software, RAYYAN, where 2071 duplicate articles were removed both automatically and manually [15]. After removing the duplicates, the titles and abstracts of 4064 records were manually screened for eligibility criteria. Based on the eligibility criteria, 73 articles were selected for full-text screening. Out of those 73, only 12 studies met the inclusion and exclusion criteria in the full-text review stage, which were included in our study. A flowchart summarised in the PRISMA format showing a detailed process of search strategy results and study selection is shown below (see Figure 1).

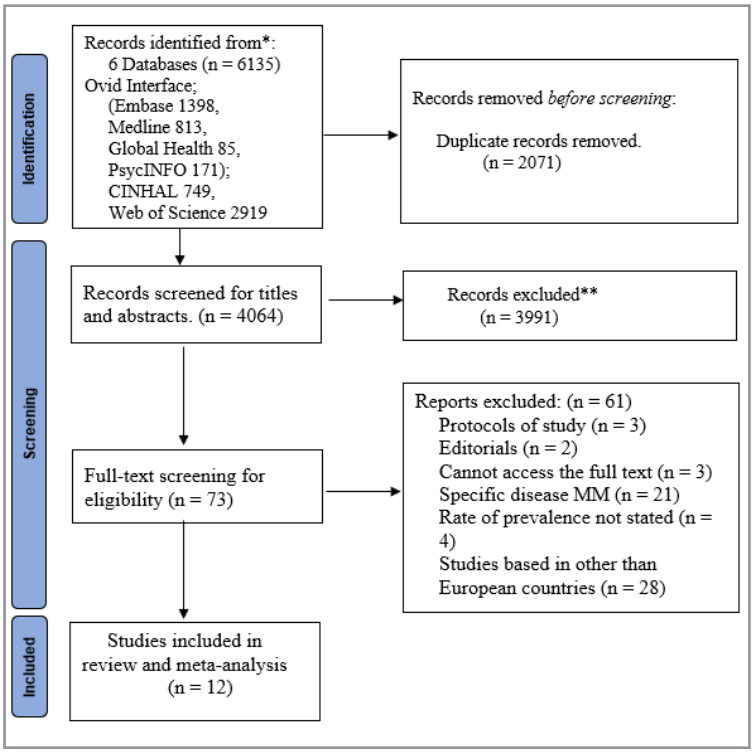

Figure 1: PRISMA flowchart showing a detailed process of search strategy and study selection results

Characteristics of Included Studies

Our analysis comprised twelve observational studies, including retrospective, cohort, and cross-sectional studies. The surveys were conducted in primary care settings throughout seven different European nations with a total sample size of 2,900,383 ranging from 1993 to 816901 participants. Two studies were carried out in Spain, two in the Netherland, four in the United Kingdom, and the remaining four in Germany, Switzerland, Portugal, and the West Indies [10, 11, 24-33]. The patients who were part of the trials ranged in age. Three studies only included patients at least 18 years old and another three included ≥ 50, ≥ 55, or ≥ 64 years old populace, while the bulk of the studies included patients at least 18 years old. Depending on the study, the number of conditions considered also varied from 12 to 147 conditions [27, 31]. The included investigations were conducted between 2000 and 2024, and the analysis was performed using patient medical records. Studies that defined multimorbidity as two or more chronic conditions were the only ones included (see Table 2).

Quality Appraisal

Based on their designs, the NOS tool was utilised for the critical quality appraisal of the 12 enrolled studies. Across the three domains of comparability, selection, and outcome, 9 articles were found to be of very good quality (with a score of 9 or 10), while three studies were rated good quality (with a score of 7 or 8) (see Figure 2) [10, 11, 25-34].

Newcastle-Ottawa Scale (adapted for cross-sectional studies)								
Study ID	Selection				Comparability	Outcome		Total
	Representativeness of the sample	*Sample size*	*Ascertainment of the screening/surveillance tool*	*Non-response rate*	*Comparability of Cohorts on the Basis of the Design or Analysis*	*Assessment of Outcome*	*Statistical test*	*Total number of stars*
Abad-Diez et al. 2014	+	+	++		++	++	+	9
Cassell et al. 2018	+	+	++	+	++	++	+	10
Glynn et al. 2011	+		++	+	++	++	+	9
Hauswaldt et al. 2022	+	+	++		++	++		8
Ledwaba-Chapman et al. 2021	+	+	++	+	++	++	+	10
MacRae et al. 2023	+	+	++		++	++	+	9
Prados-Torres et al. 2012	+	+	++	+	++	++		9
Prazeres et al. 2015	+		++		++	+	+	7
Rizza et al. 2010	+	+	++	+	++	++	+	10
Salisbury et al. 2011	+	+	++	+	++	++		9
Sinnige et al. 2015	+	+	++	+	++	++		9
Vos et al. 2022	+		++	+	++	++		8

Figure 2: NOS methodological quality appraisal for the included studies

Meta-Analysis

Prevalence of Multimorbidity

Twelve studies were included in the pooled prevalence analysis[10, 11, 25-34]. Across all included studies, multimorbidity prevalence rates varied from 13% to 73%. With an incidence rate of 39% (95% CI; 26% to 54%), the meta-analysis of these studies showed a statistically significant overall pooled prevalence of multimorbidity among the adult population in European countries using a random-effect model. Similarly, sensitivity analysis could not address the significant related heterogeneity across the studies (I2 = 100%, P < 0.00001). Prevalence estimates range greatly between situations and populations, as evidenced by the pooled prevalence's 95% prediction interval of 5%–88% (see Figure 3).

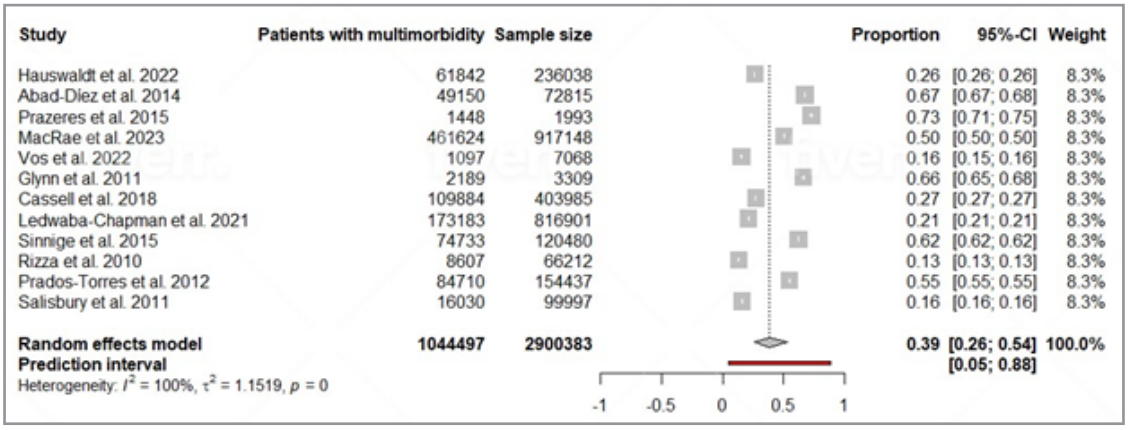

Figure 3: Forest plot showing the pooled prevalence of multimorbidity in the adult population

Prevalence of Multimorbidity Among Male and Female Population

Ten studies that reported the prevalence of multimorbidity by gender were selected from the twelve included papers[11, 25-27, 29-34], and a subgroup analysis was performed to estimate the prevalence of multimorbidity among male and female participants. The study revealed a pooled prevalence rate for multimorbidity of 44% (95% CI: 29% to 61%) in females and 41% (95% CI: 26% to 58%) in males (see Figure 4). The sensitivity analysis could not resolve the considerable heterogeneity in both categories (I2 = 100%, P < 0.00001). Additionally, a comparison of the multimorbidity prevalence in males and females showed that the frequency was significantly greater in females (RR = 1.09, 95% CI: 1.03, 1.16, P = 0.004) (see Figure 5). Sensitivity analysis could not address the significant heterogeneity (I2 = 99%, P < 0.01).

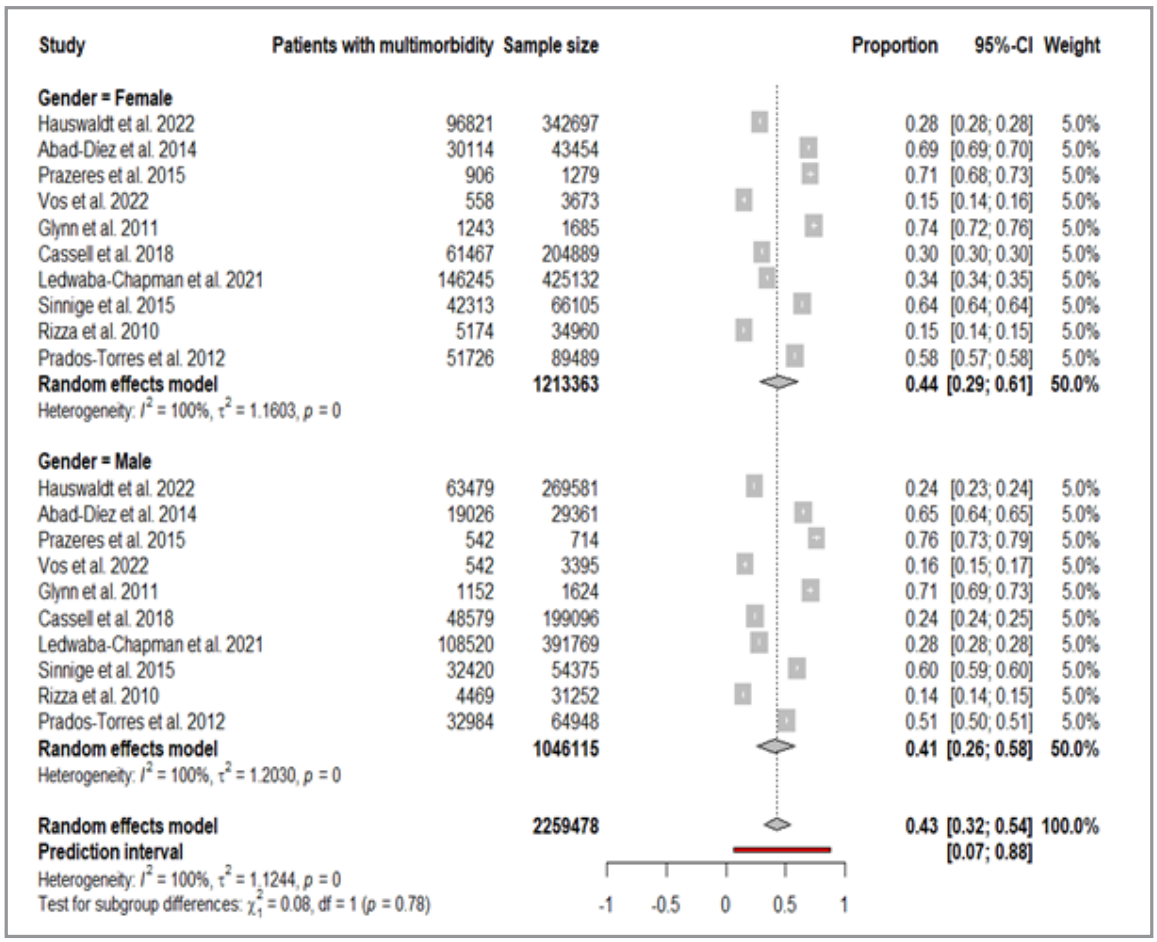

Figure 4: Multimorbidity prevalence among female and male subgroups

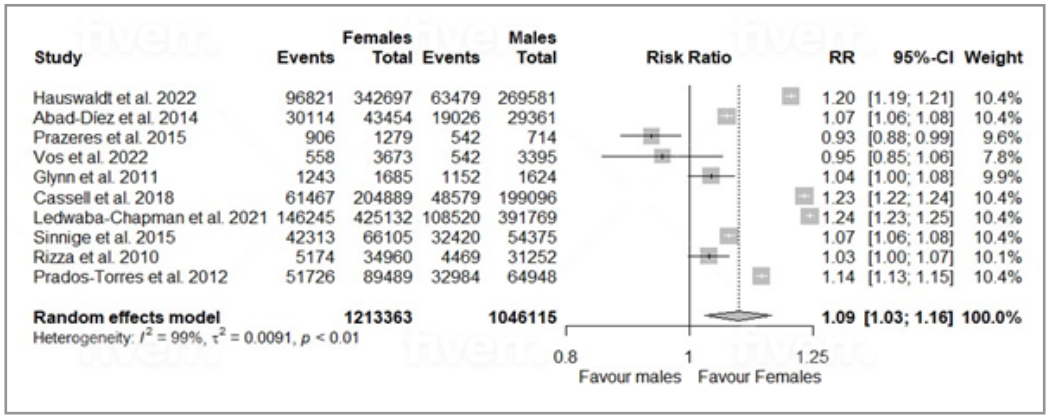

Figure 5: Multimorbidity Risk Ratio (RR) among female and male subgroups

Prevalence of Multimorbidity Among Different Age Groups

The prevalence of multimorbidity for various age groups was reported in nine research. According to the analysis, there was a strong correlation between age and the prevalence of multimorbidity, with higher frequency being linked to older age. The prevalence of multimorbidity was 13.0% (95% CI: 7% to 22%), 39% (95% CI: 26% to 54%), 66% (95% CI: 60% to 72%), and 83% (95% CI: 72% to 89%) in the adult, middle-age, old, and very old age groups, respectively. There was a statistically significant difference in the prevalence of multimorbidity across all age groups (P < 0.01). Similarly, the associated heterogeneity was significant across all age groups (I2 = 100%, P < 0.00001) (see Figure 6).

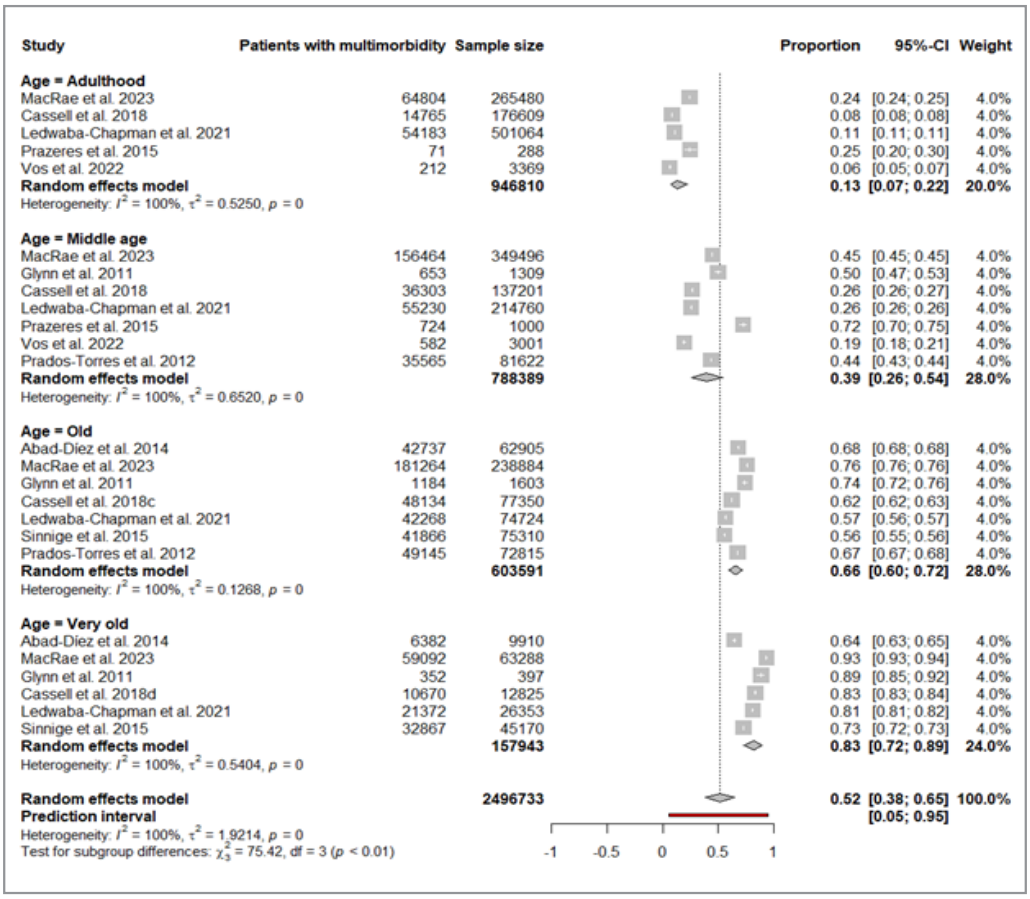

Figure 6: Multimorbidity prevalence among the different age groups

Prevalence of Multimorbidity Based on System Classification

The twelve studies reported the classification system they employed. Three studies used the International Classification System (ICD), three used the Read Codes, and six employed the International Classification of Primary Care (ICPC-2). The analysis found that studies employing ICD and ICPC systems had slightly similar multimorbidity prevalence of 43% (95% CI; 26% to 62%) and 47% (95% CI; 24% to 72%), respectively, whereas those using Read Codes had a lower prevalence of 21% (95% CI; 15% to 28%). The difference between ICD and ICPC was not significant (P = 0.76), while between ICD and Read Codes, and ICPC and Read Codes, the differences in the prevalence of multimorbidity were significant (P = 0.006) and (P = 0.004), respectively. All subgroups showed significant heterogeneity (I2 = 100%, P < 0.00001) (see Figure 7).

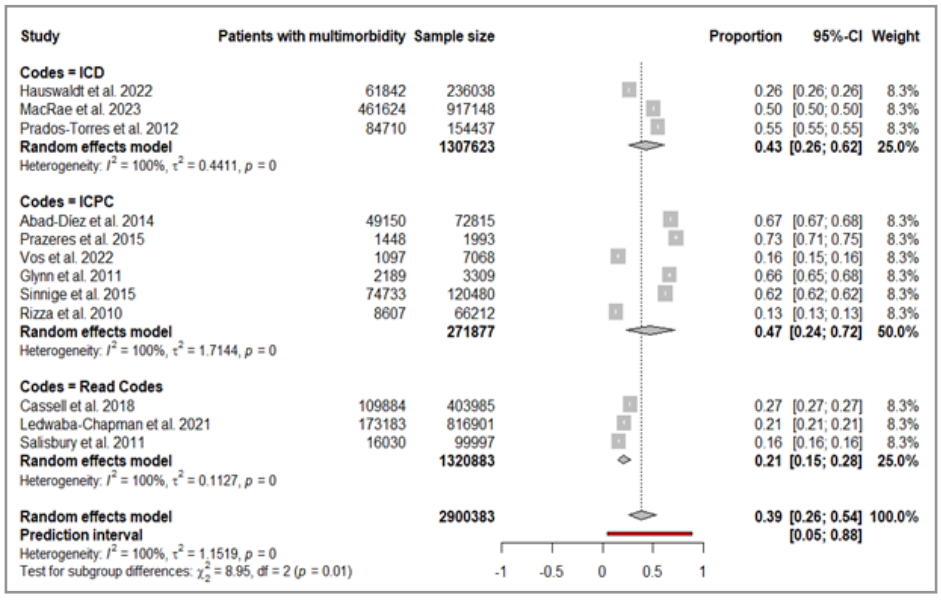

Figure 7: Multimorbidity prevalence based on the classification system

Publication Bias

The funnel plot was symmetrical, which indicates the absence of publication bias in our meta-analysis. The visual assessment was further supported by statistical tests designed to detect publication bias using Egger's and Begg's tests, which produced a P value of 0.89 and 0.68, respectively [23]. These tests suggest no significant publication bias in the studies included in the meta-analysis. The symmetry of the funnel plot and the non-significant P values for both Egger's and Begg's tests support the credibility and generalizability of our study findings (see Figure 8).

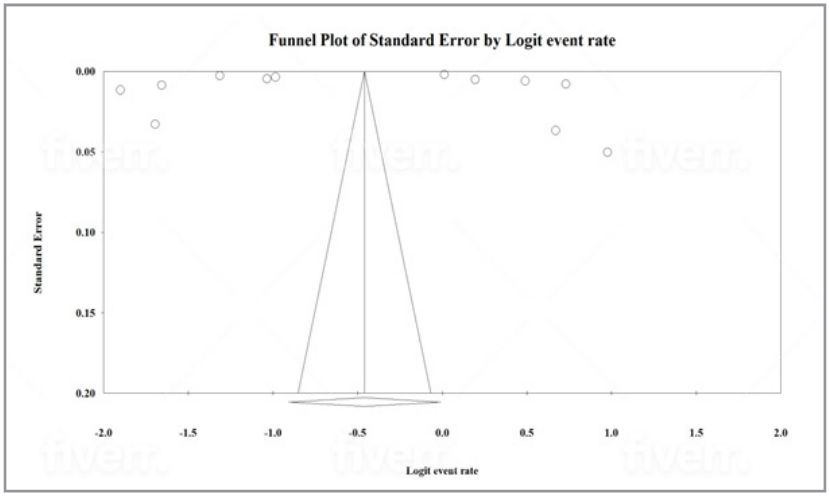

Figure 8: Publication Bias

Discussion

Multimorbidity is associated with adverse health outcomes and an increase in the average cost of medical care. It is also associated with higher rates of hospitalisations and higher utilisation of healthcare services [35-37]. The primary goal of the current study was to conduct a meta-analysis to provide a comprehensive and current picture of the incidence of multimorbidity in primary care settings throughout Europe. Additionally, we looked into the prevalence of multimorbidity in males, females, and various age groups and the correlation between these variables and multimorbidity prevalence. Our findings demonstrated that prevalence estimates differed significantly by age, gender, and the classification scheme used in various primary care settings. Likewise, findings revealed a pooled overall prevalence of multimorbidity at 39% across the seven European nations analysed. When comparing the prevalence of multimorbidity in males and females, it was found that the frequency was much higher in the females than in male gender. Similarly, the prevalence of multimorbidity was strongly correlated with age, with older age being associated with a higher incidence rate of multimorbidity.

The current findings are consistent with two previous cross-sectional studies conducted in the United States and Canada on the prevalence of multimorbidity [38, 39]. The 39% incidence rate of multimorbidity observed in the seven European countries analysed in our study concurs with that of the United States cross-sectional survey in the adult population, which was determined as 38% [38]. Similarly, using data from 14 main chronic diseases, Geda et al. found that the prevalence of multimorbidity in the general Canadian population was 33% [39]. The similarity in multimorbidity prevalence between Europe and the Western world (US and Canada) can be attributed to comparable healthcare access, chronic disease burden, similar lifestyles, and an ageing populace in these developed nations [40, 41]. Furthermore, the overall pooled prevalence of multimorbidity was 33.1%, according to a previous meta-analysis that used a sample from 70 community-based settings (sample sizes ranged from 264 to 162464) [7].

On the other hand, another systematic review that comprised 70057611 patients from 12 different countries found that the prevalence of multimorbidity varied between 12 and 95% [42]. Similar findings within the same region as our study are further supported by Chowdhury et al., who found that 39.2% of Europeans suffer from multimorbidity in communal settings [8]. Furthermore, Nguyen et al. calculated that 37.9% of high-income countries, standard in Europe, have multimorbidity in community settings. These articles' consistent findings imply that management techniques are transferable and applicable in primary care and community settings [7].

According to our subgroup analysis, the age of the sample under investigation impacted the prevalence of multimorbidity, with the youngest patients having the lowest prevalence and older patients having the highest. In their comprehensive review, Marengoni et al. discovered that the prevalence of multimorbidity in the senior population varied from 55% to 98% [43]. Our analysis showed that the prevalence of multimorbidity in populations varieswith age;for ≥ 65 years,it ranged from 66% to 82.5%. In agreement with our findings, Violan et al. found a significant positive correlation between multimorbidity and age in all included articles (OR, 1.26 to 227.46) [42]. Furthermore, there was a correlation between the prevalence and the sample's gender, with a significantly higher prevalence rate for females than males [38, 42]. Prazeres et al., on the other hand, discovered an inverse association, with males having a significantly higher prevalence of multimorbidity than females; however, after adjusting for all sociodemographic variables, the association

did not hold [32]. Therefore, our findings support that age and female gender are among the main determinants of the prevalence of multimorbidity.

The difference in the prevalence of multimorbidity among the included studies may be attributed to other factors, such as the definition of multimorbidity and the classification system. However, we included only the results if multimorbidity is defined as the presence of two or more chronic diseases. Furthermore, we performed subgroup analysis based on the coding system used, and no statistical significance was found between ICD and ICPC. However, using Read Codes yielded a lower prevalence than ICD and ICPC. The lower prevalence with Read Codes can be attributed to the fact that ICD and ICPC cover a larger range of diagnostic codes, accommodating more comorbid conditions, whereas Read Codes focus on condition-specific data, restricting broader categorization [44-46]. Other possible determinants that may influence the prevalence and explain the high heterogeneity observed in all our findings include the region of the country, the number of conditions used, and multimorbidity patterns. A study found that Central European countries and Spain showed increased prevalence, while stability was observed in northern and eastern European countries [47]. Furthermore, there were differences in the number of eligible conditions in the included studies. Salisbury et al. examined the prevalence of only 17 chronic conditions, which revealed a prevalence of only 16% [10]. In comparison, Prazeres et al. and Glynn et al. 2011 examined the prevalence of 147 chronic conditions, which revealed prevalences of 72% and 66%, respectively[32, 33]. Although Rizza et al. examined 147 chronic conditions, they reported a low prevalence of 13% [31]. However, they noted that there was significant under-coding of chronic health conditions, which was the main reason behind such a low prevalence. Therefore, the number of chronic conditions examined may be correlated with the prevalence estimate.

Our research indicates that one in three individuals suffers from multimorbidity, a condition that is far more common among the elderly, with 6 to 8 out of 10 senior individuals having multimorbidity. The WHO has consistently highlighted the rising global burden of non-communicable diseases—often the cause of multimorbidity—notably reiterates this implication [48]. However, considering the strain it places on healthcare systems typically centred on treating a single condition, the high frequency in primary care settings is especially worrisome [49]. Besides, the National Institute for Health and Care Excellence (NICE) claims that most current recommendations are based on treating single conditions and may not be directly relevant to those with multiple disorders [50]. As our analysis indicates, this creates a significant gap in the healthcare system and provides persuasive evidence in favour of a more comprehensive, evidence-based strategy for managing multimorbidity.

Therefore, the focus of healthcare professionals should change from treating isolated conditions to identifying and managing the risk factors that lead to multimorbidity, minimizing needless medical interventions [51]. The WHO highlights the significance of lifestyle factors, including smoking, physical inactivity, and poor diet, as risk factors for chronic conditions that frequently cluster into multimorbidity [52]. Identifying these risk factors could be crucial in targeted interventions, guaranteeing customized therapies that emphasize holistic health management rather than fragmented care for individual disorders, improving outcomes, and lowering healthcare expenditures [53]. NICE emphasised that complexity rises with the presence of multiple conditions. Thus, healthcare professionals should consider the treatment burden and make sure the recommended treatment plans are coordinated and manageable [50]. Our study confirms this, emphasising that future recommendations and policies must consider multimorbidity's complexity and patterns, particularly in elderly populations.

Limitations

However, it is critical to recognise that our study had limitations. The significant heterogeneity among all studies we considered in our analysis posed a challenge. Our discussion explored possible explanations for the observed variability to lessen this problem. As a result, it was easier to analyse the findings more nuancedly and to get insight into the variables that might have led to the disparate results of the various research. Furthermore, our investigation was limited by data availability constraints; because of the precise multimorbidity definition used for this study we could not conduct an in-depth investigation of potential determinants that may influence the prevalence of multimorbidity. The included studies do not address the impact of social determinants, emphasizing the need for additional studies to fully understand the complex interactions between these variables and the prevalence of multimorbidity.

Conclusion

Our study highlights the high prevalence of multimorbidity, especially in higher age groups, in the primary care setting in European countries, emphasising the need for effective interventions and healthcare strategies to manage multiple chronic conditions. The findings of our study echo with urgency, forcing healthcare organisations to adjust and adapt to provide the best care possible to people navigating this challenging healthcare environment. It emphasizes the cumulative burden of chronic illnesses, which frequently worsen as people age. These difficulties converge in the primary care setting, often patients' first point of contact. The patterns of prevalence highlight the urgent need for specialised healthcare interventions that consider the difficulties in managing various chronic conditions in older people.

Ethical Approval

Ethical committee approval was unnecessary because our study strategy is based on publicly accessible literature and secondary data sources from published articles.

Acknowledgment

Not applicable

Declaration of Conflict of Interest

The authors of this work have nothing to disclose.

Funding Source

None.

Data Sharing Statement

Not applicable

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