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**Physicians on Guard: Findings from a National Survey of Over
3,200 Iranian Physicians' Practices and Attitudes in the
Landscape of Defensive Medicine**

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Presenting a Comprehensive Definition of Unnecessary Healthcare Services and Their Drivers: A Systematic Review and Meta-synthesis

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Abstract

Background: Providing unnecessary healthcare services is a major common problem in every health system. The scope and cause of healthcare services must be identified in order to be managed and controlled. Finding the most complete definition of the problem and its causes are the goals of this meta-synthesis.

Methods: A comprehensive search strategy was performed using a wide range of keywords and databases. Based on the defined inclusion and exclusion criteria, 22 articles were selected for content analysis and meta-synthesis. The Graneheim and Lundman method was used for content analysis. The MAXQDA software Version 18.2.0 was used for the first round of content analysis. Content analysis and meta-synthesis were used to comprehensively define the term “unnecessary healthcare services” and find the etiologic factors driving healthcare providers to unnecessary healthcare services.

Results: The term “unnecessary healthcare services” is defined as “overproviding healthcare services that could be harmful, low-value, insufficient, and inappropriate.” The etiologic pattern of unnecessary healthcare services shows intrinsic and extrinsic factors as a driving force for unnecessary healthcare services.

Conclusion: A multilayer strategy for efficient management and prevention of unnecessary healthcare services is appropriate due to the multifaceted character of these services. This approach consists of the modification of the intrinsic factors and extrinsic drivers.

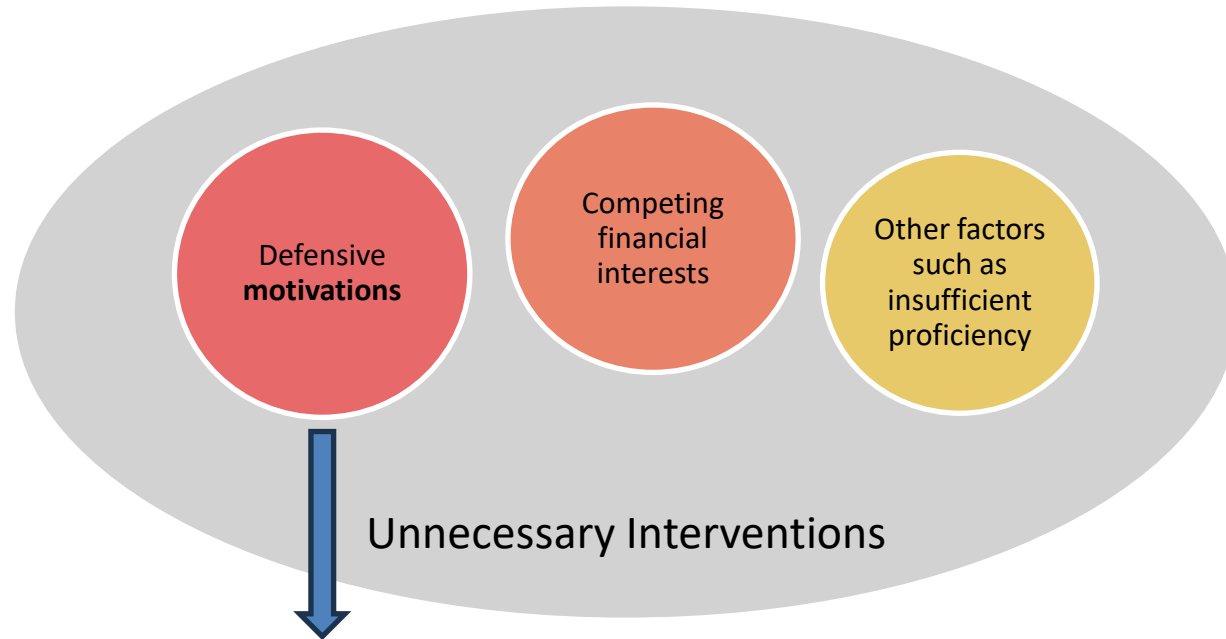
Keywords: Unnecessary Healthcare, Pharmaceuticalization, Ethics, Overdiagnosis, Overtreatment

DM: A Driver for Unnecessary Health Services



Table 4. The etiologic factors of unnecessary healthcare services

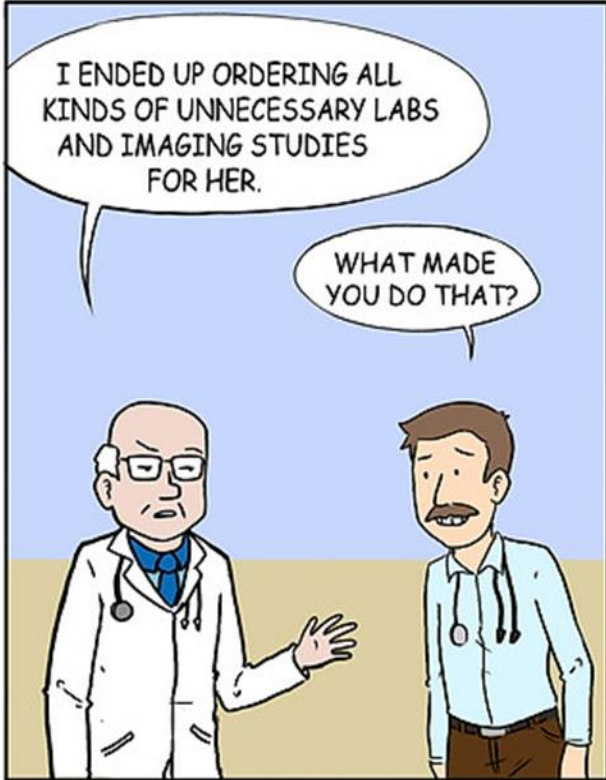
Intrinsic	Extrinsic
<p>Provider driven</p> <p>Induced demand</p> <ul style="list-style-type: none"> • Imbalance of knowledge and power between physician and patient <p>Conflict of interest</p> <ul style="list-style-type: none"> • Financial incentives (self-referral, fee-splitting) • Positional competition • Fear of losing patients • Desire for fame and reputation <p>Personal and professional characteristics</p> <ul style="list-style-type: none"> • Desire to minimize regret • Oversight failure • Poor problem solving • Ambition • Mental illness • Carelessness • Substance abuse • Stress • Retaliation • Achieve high patient satisfaction • Reassurance • Rely on investigations <p>Poor communication skills</p> <p>Non-adherence to evidence-based medicine</p> <ul style="list-style-type: none"> • Limited knowledge • Uncertainty of the diagnosis and management • Absence, misuse, or misunderstanding of evidence-based medicine • Prescribing without indication <p>Defensive medicine:</p> <ul style="list-style-type: none"> • Fear of litigation • Fear of malpractice <p>Patient driven:</p> <ul style="list-style-type: none"> • Parents' expectations or pressure • Patients' "Jealousy" consumption behavior • Patients vulnerability 	<p>Provider driven</p> <p>Induced demand</p> <ul style="list-style-type: none"> • Supplier-induced demand • Patient insurance coverage • Medical culture <p>Payment mechanisms</p> <ul style="list-style-type: none"> • Fee-for-service • Case-based • Per diem payment systems <p>Development of new technologies</p> <ul style="list-style-type: none"> • Overwhelmingly adopting new technology • Inflationary increases in investment in technology • Increased availability and access to the latest technologies <p>Industries</p> <ul style="list-style-type: none"> • Increased utilization by industries • Healthcare marketing • Advertising by pharmaceutical companies <p>Practice guidelines or norms</p> <ul style="list-style-type: none"> • Ambiguous practice guidelines or norms • Unavoidable uncertainty and variations in practice • Realization of the patients' rights • Medicalization • Widening disease definitions • Screening programs <p>Corruption of moral and professional climate</p> <p>Documentation</p> <ul style="list-style-type: none"> • Difficulty in accessing prior medical records • Incomplete healthcare documentation • Increased demand for documentation <p>Systems of practice</p> <ul style="list-style-type: none"> • Inadequate time • Physicians' dual practice (public and private sectors) • Competing organizational priorities • Pressures from other healthcare professionals • Medical culture <p>Patient driven</p> <ul style="list-style-type: none"> • Patient's fascination for technological innovations (Public culture)



Positive DM: actions taken by physicians that lack medical necessity and offer no meaningful benefits to the patient



Negative DM: abstaining from usually high-risk procedures that are medically warranted and could benefit the patient



Qualitative Study



Eftekhari et al. *BMC Medical Ethics* (2023) 24:82
<https://doi.org/10.1186/s12910-023-00949-2>

BMC Medical Ethics

RESEARCH

Open Access



Exploring defensive medicine: examples, underlying and contextual factors, and potential strategies - a qualitative study

Mohammad Hossein Eftekhari¹, Alireza Parsapoor^{1*}, Ayat Ahmadi², Neda Yavari³, Bagher Larijani⁴ and Ehsan Shamsi Gooshki^{1,5*}

Examples

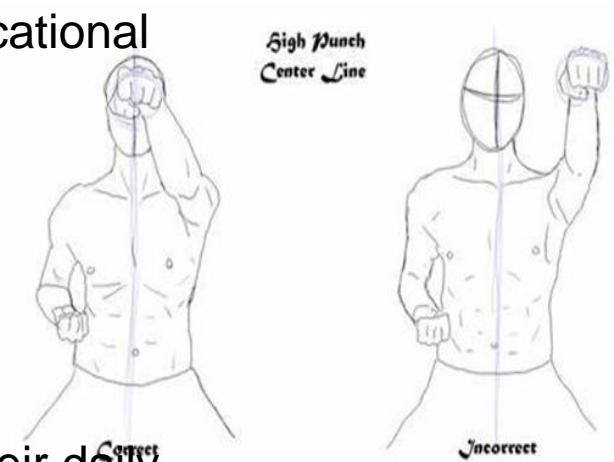
Underlying
factors

Potential
solutions

Main findings of qualitative study



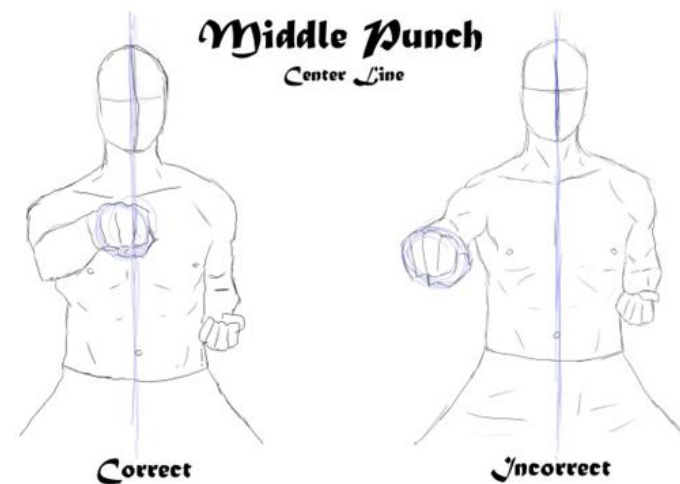
- ❖ Motivations and drivers of defensive behaviours are beyond fear of legal litigations (avowing colleagues' blame, patients' violence or damage to reputations).
- ❖ Penetration of defensive considerations even in educational material, guidelines and textbooks.
- ❖ Defensive practices becoming a routine
- ❖ A defensive approach impacts physicians beyond their daily practice and their decisions on the field and type of practice. (Selecting less-challenging specialties and shifting the field of practice toward less challenging interventions)



In addition to infamous examples such as unnecessary imaging and lab tests:



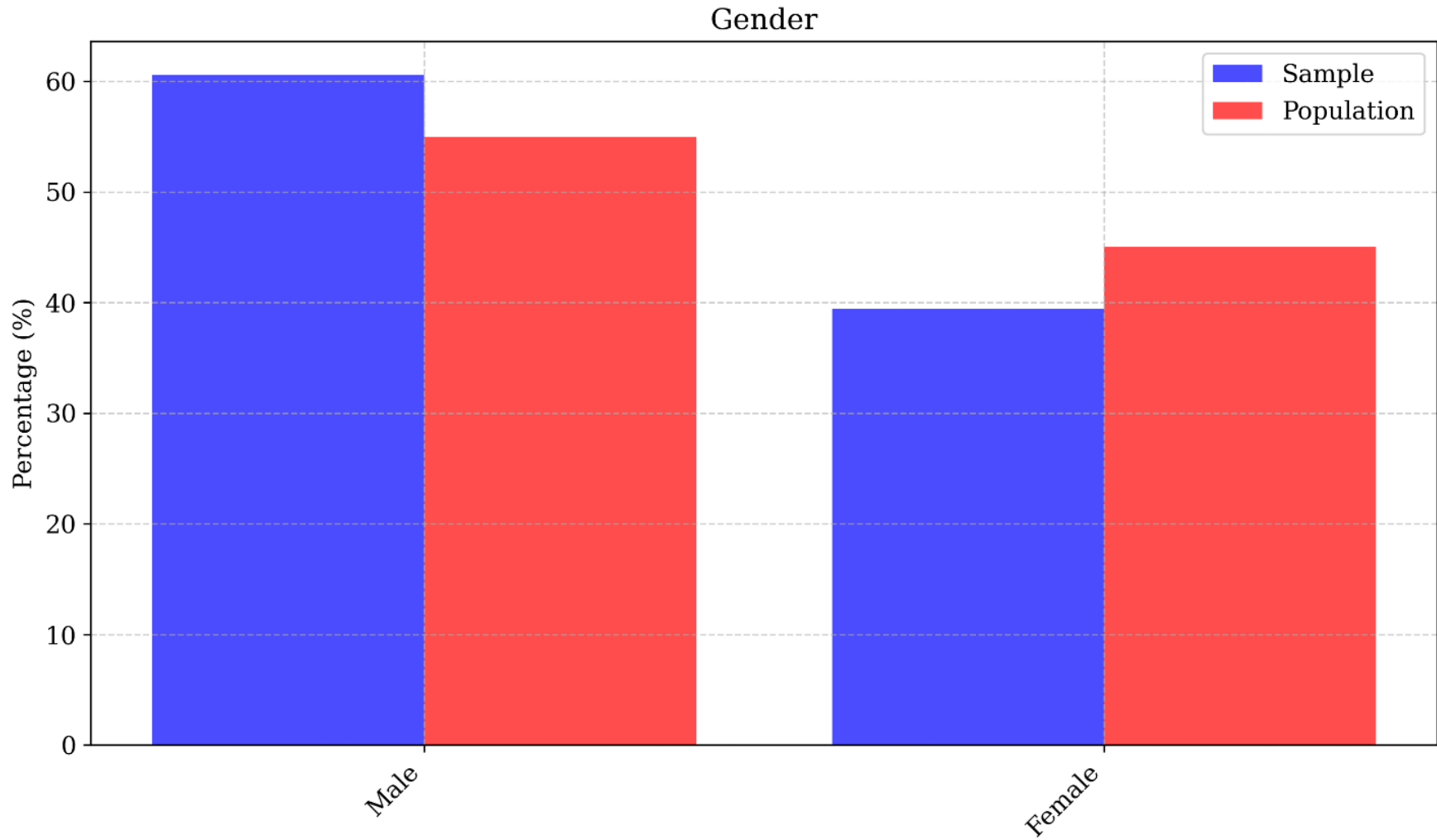
- ❖ Exaggerating about the seriousness of patients' health conditions to manage expectations
- ❖ Avoiding patients with a higher risk of litigations such as celebrities, lawyers
- ❖ Unnecessary ICU admissions
- ❖ Requesting multiple consultations as a kind of negative DM while in literature it is more reported as a positive defensive practice



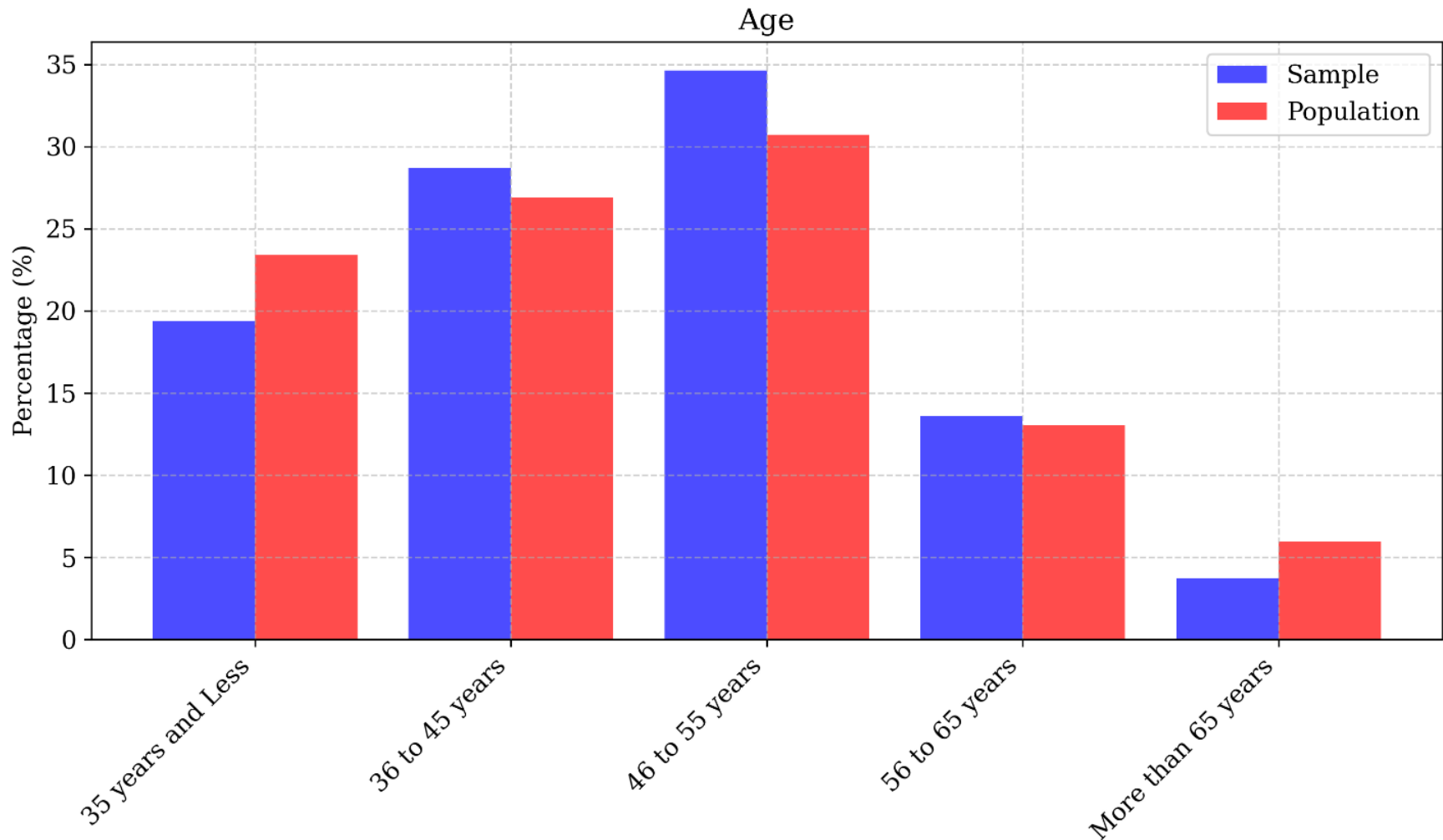


The National Survey

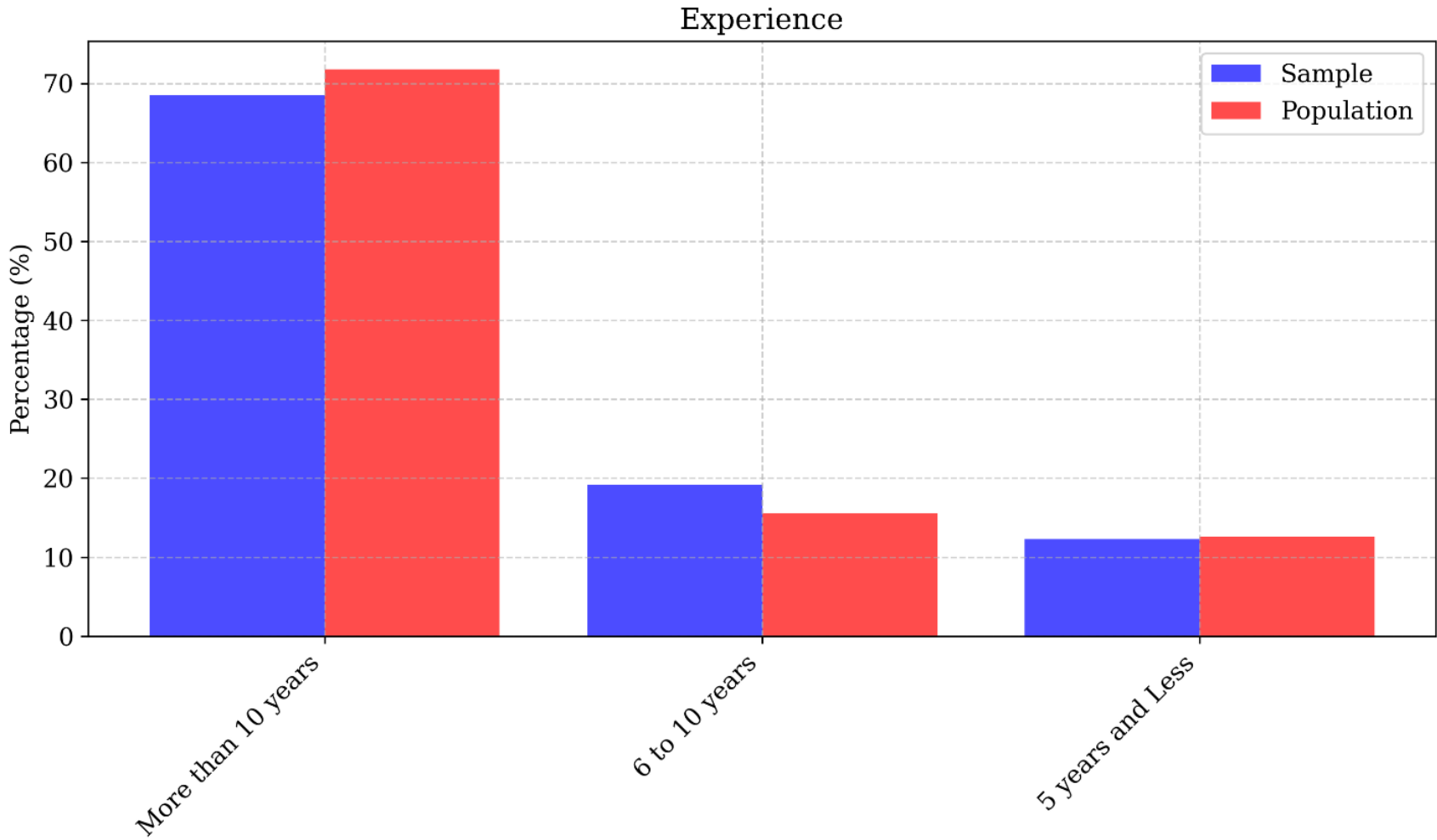
Sample representativeness test: sex



Sample representativeness test: age distribution



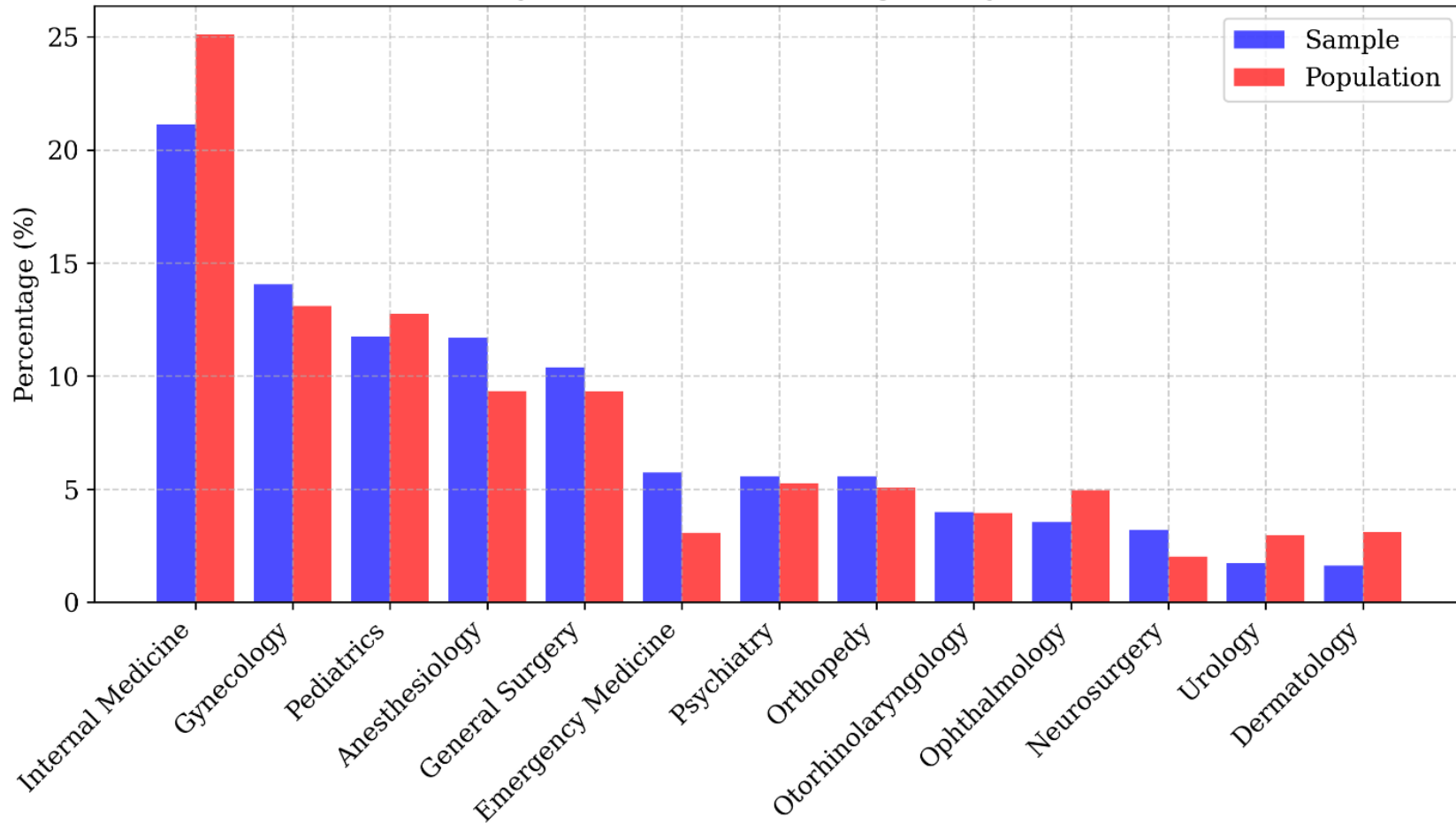
Sample representativeness test: years of practice

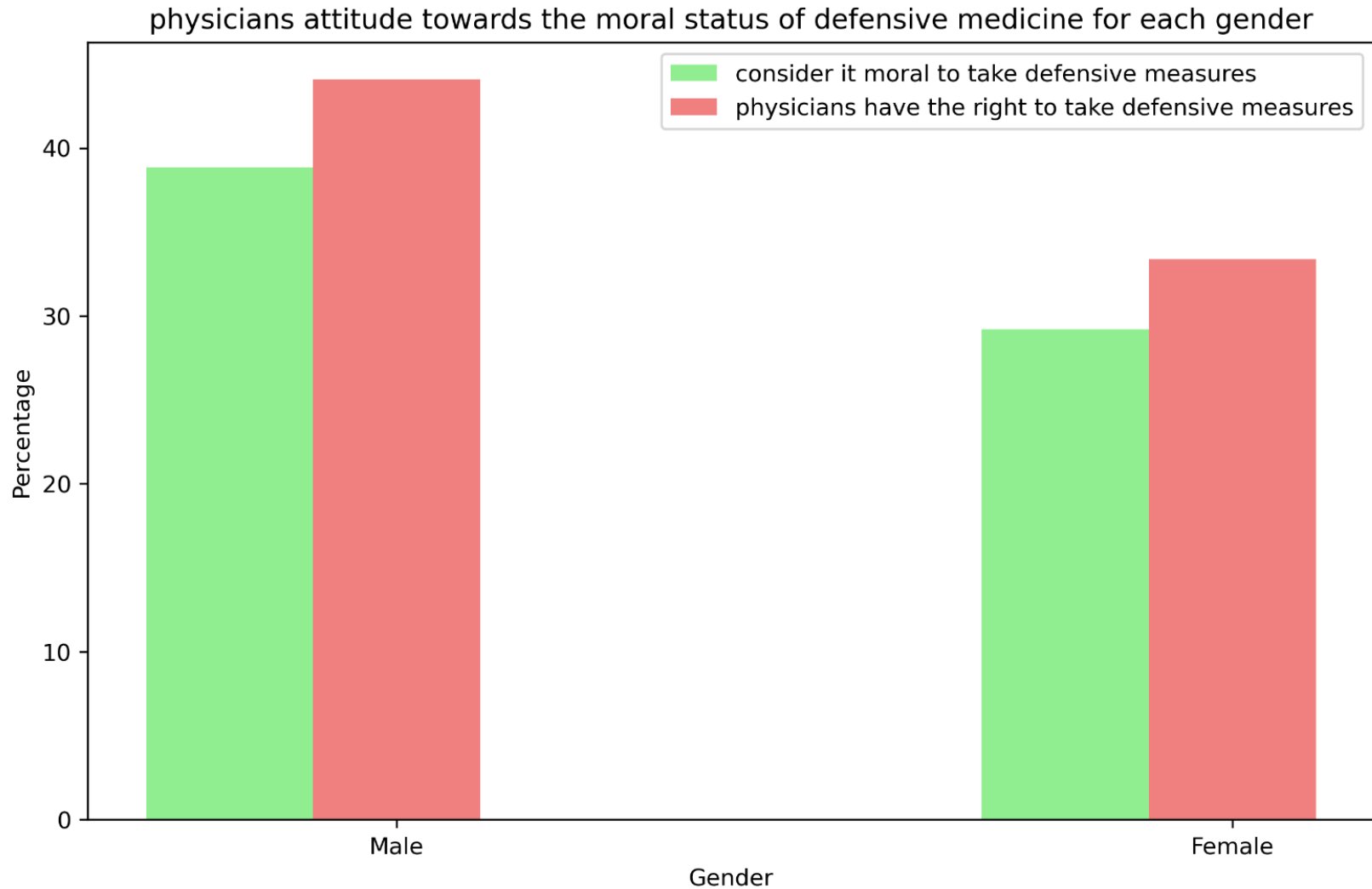


Sample representativeness test: specialty



Specialty Distribution (Excluding Family Medicine)

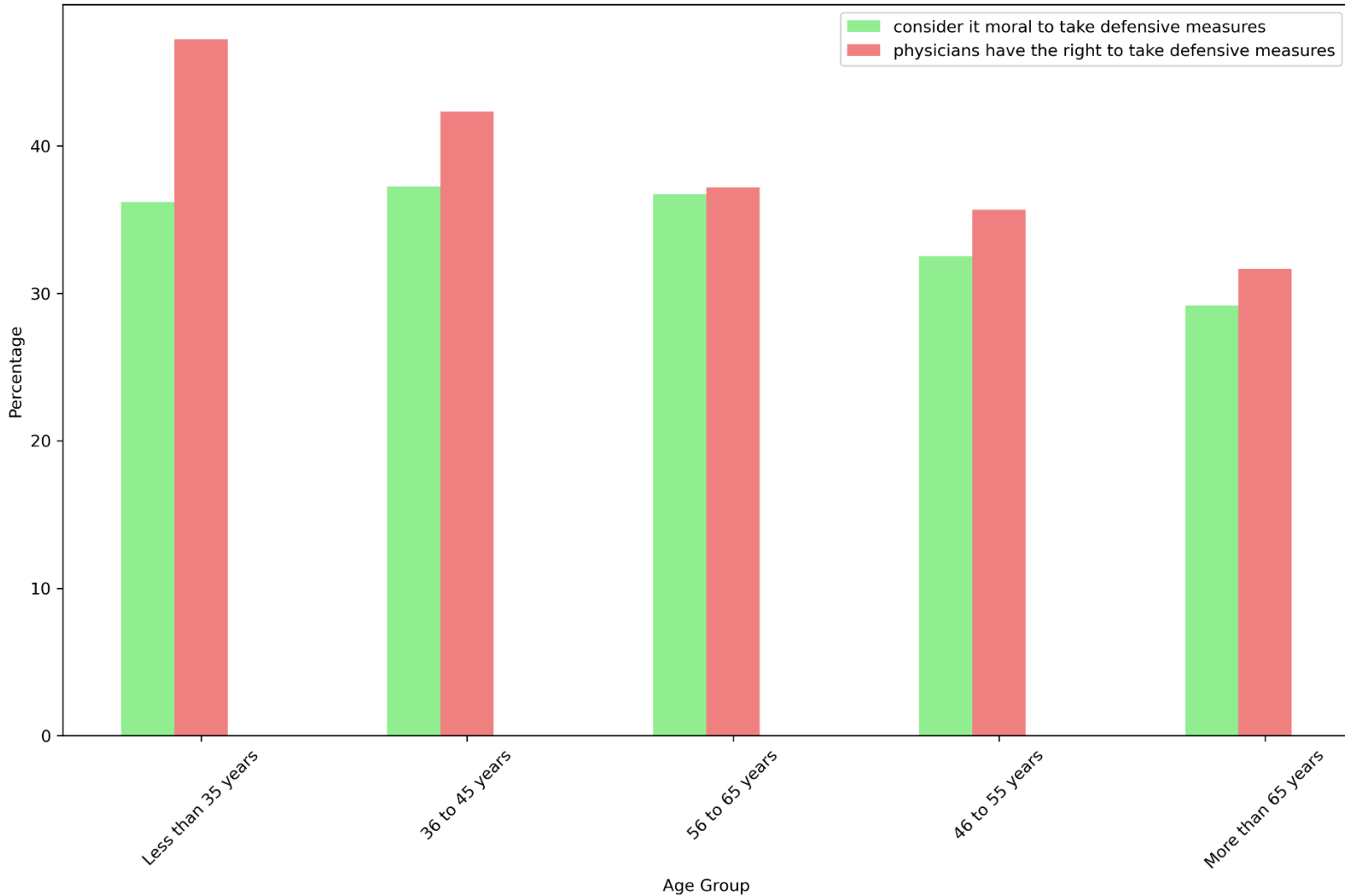




Is DM moral/right? answers by age



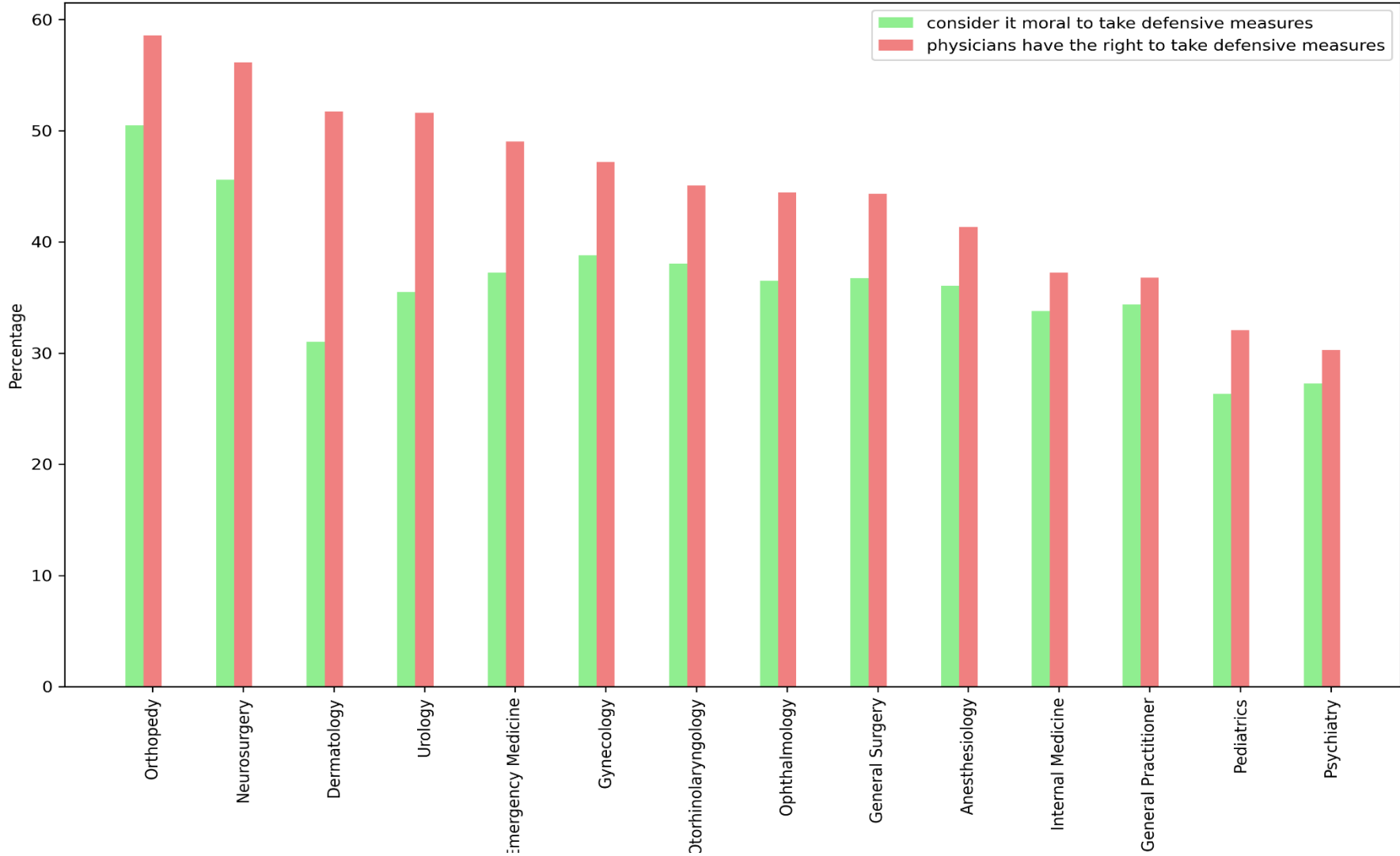
physicians attitude towards the moral status of defensive medicine among different age groups



Is DM moral/right? answers by specialty

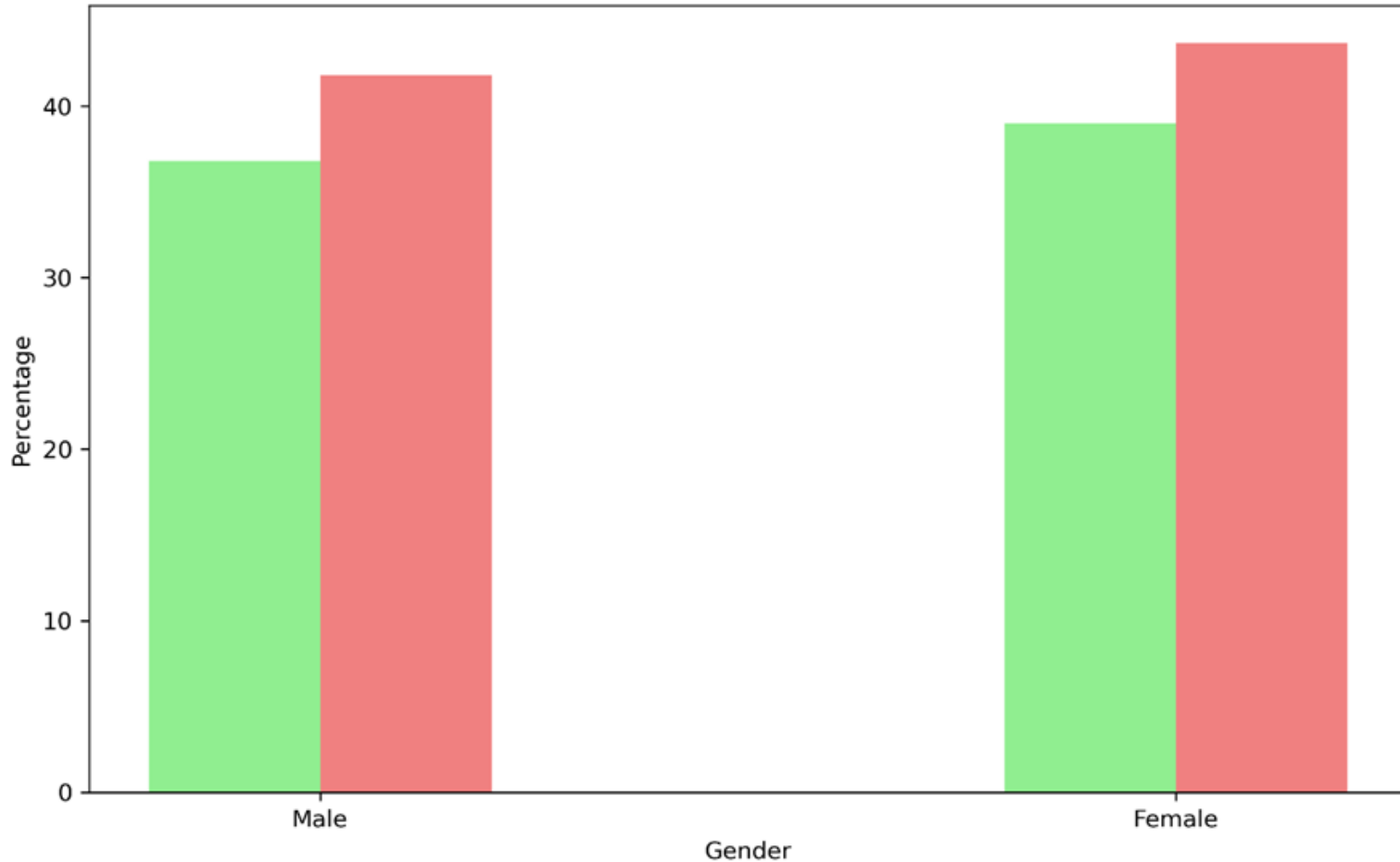


physicians attitude towards the moral status of defensive medicine among different specialties





Physicians' Attitudes Towards Defensive Medicine by Gender

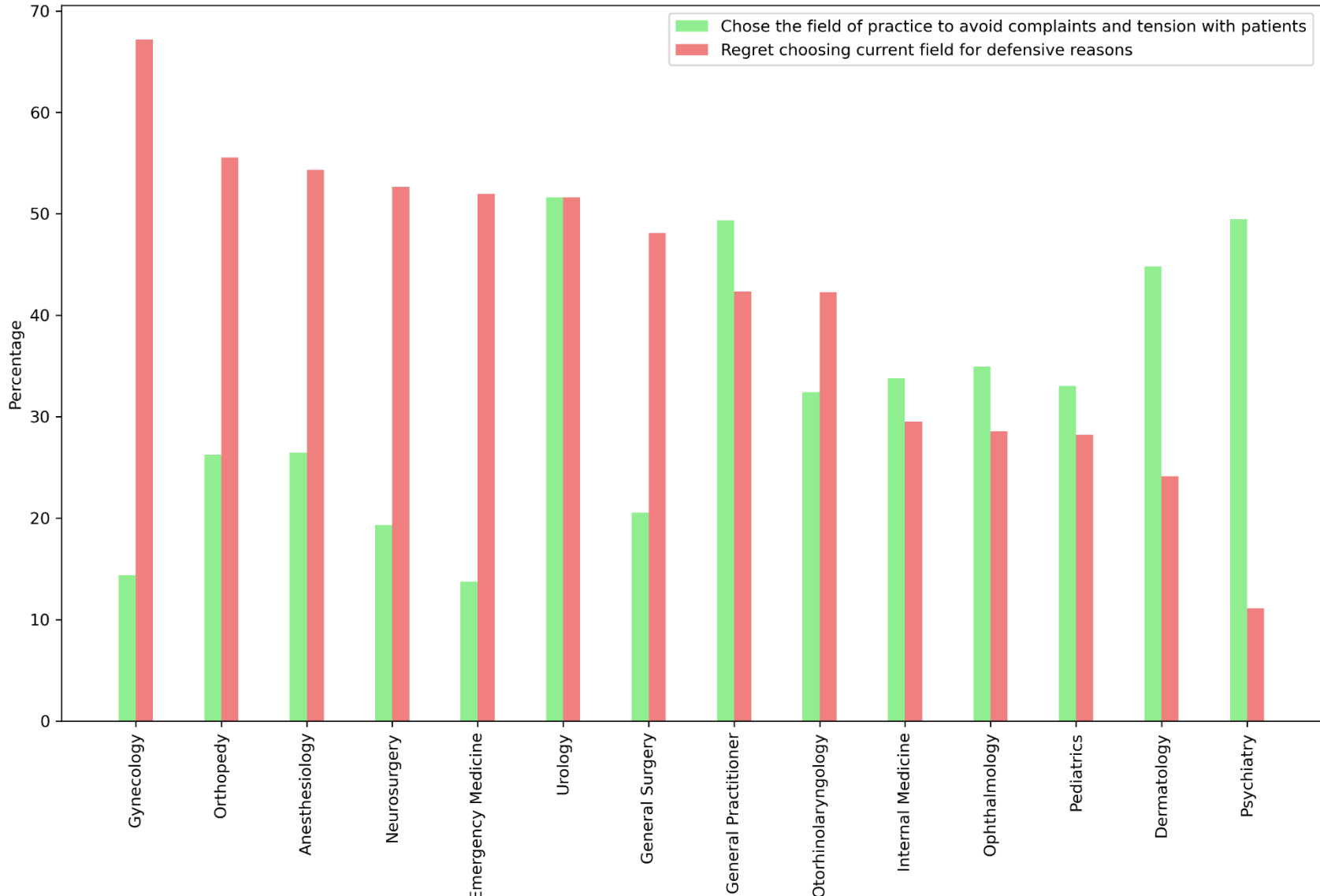


Chose the field of practice to avoid complaints and tension with patients Regret choosing current field for defensive reasons

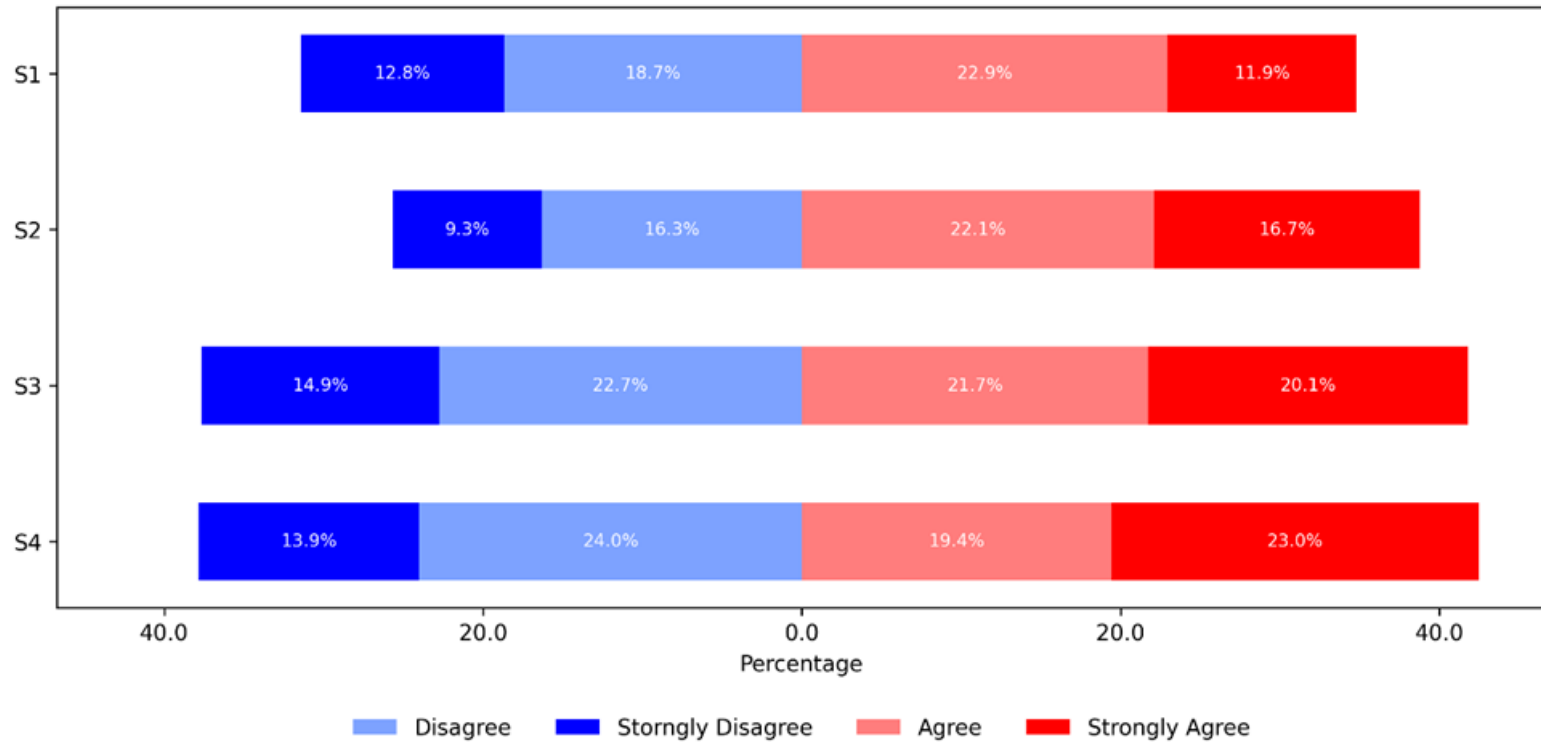
Attitude toward defensive medicine: specialty



Physicians' Attitudes Towards Defensive Medicine Among Different Specialties



Attitude toward defensive medicine: comparison



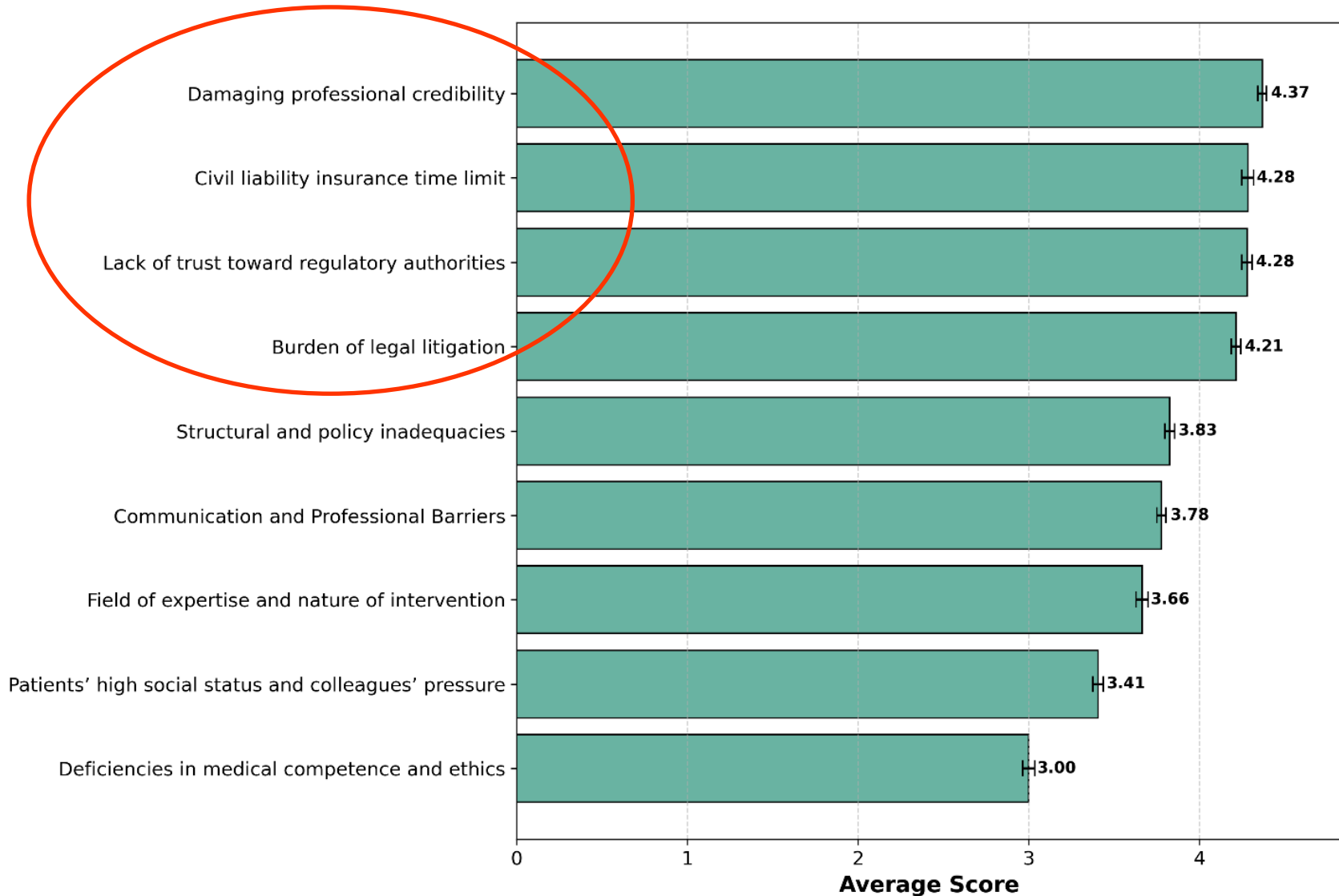
S1. I consider it moral to take defensive measures.

S2. Physicians have the right to take defensive measures.

S3. One of my criteria for selecting the field was avoiding complaints and tensions.

S4. If I were to select my field again, I would select another field for defensive reasons

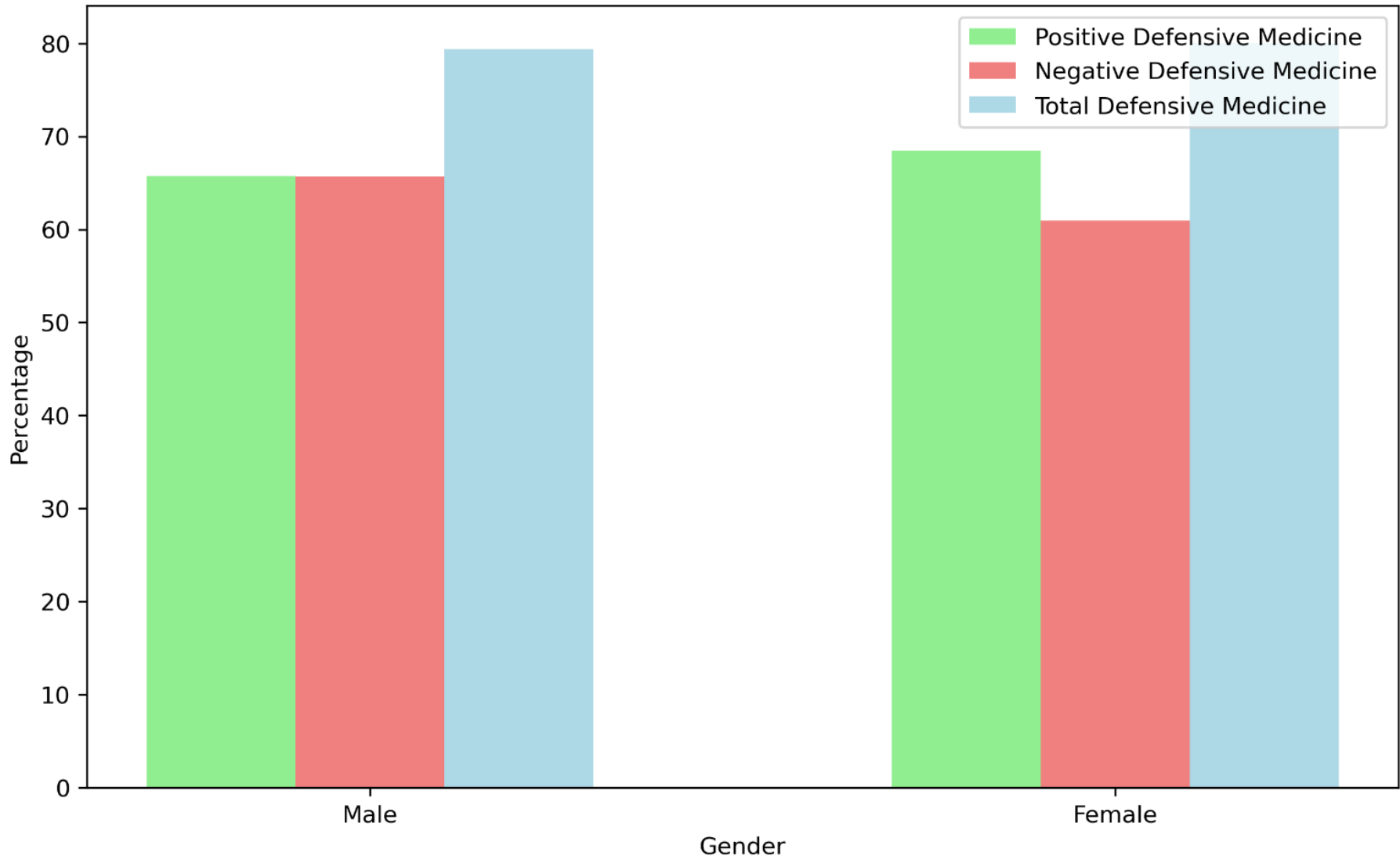
Motivations and drivers for defensive practice



Practising defensive medicine in recent 12 months



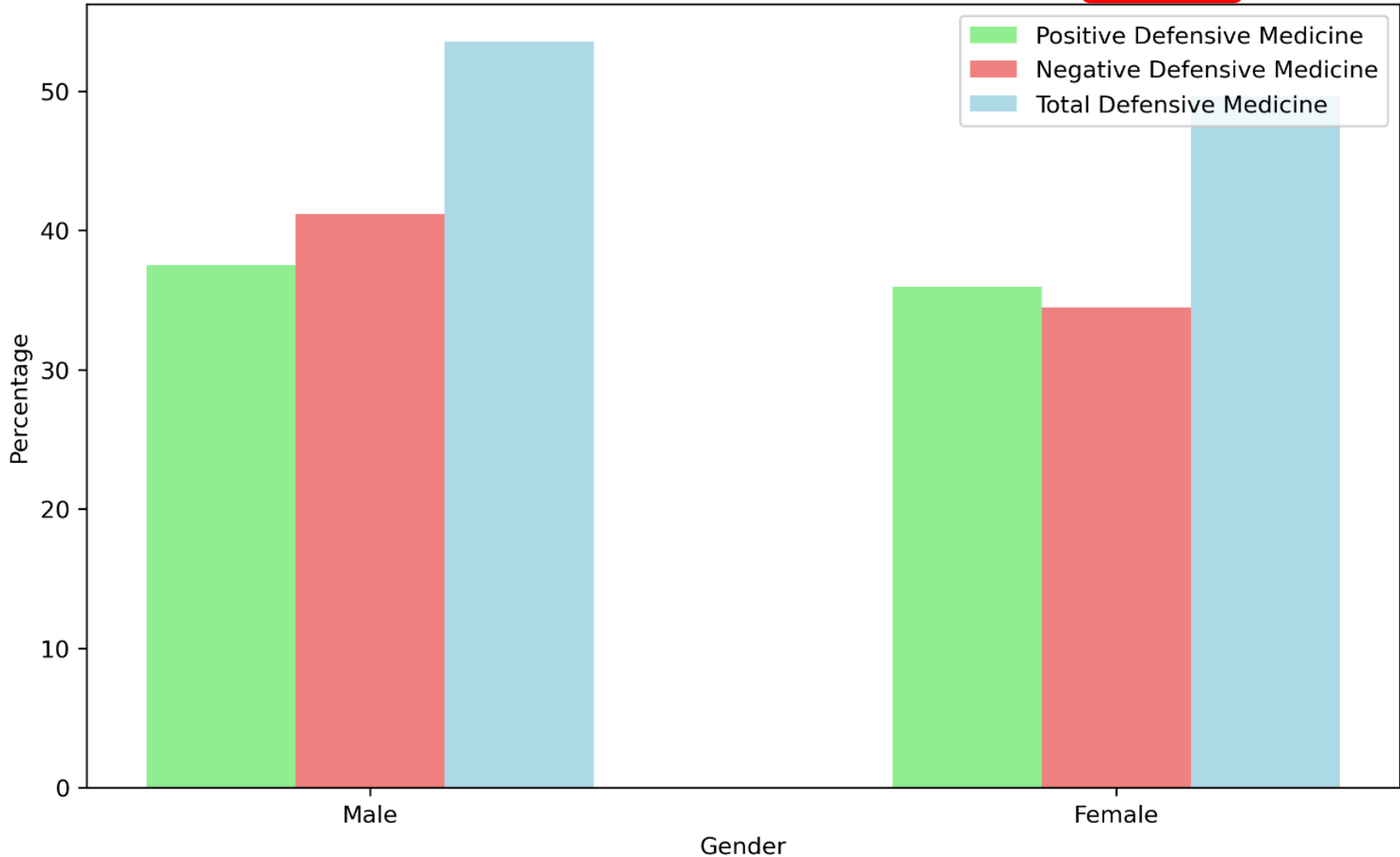
Percentage of Each Gender Practicing Defensive Medicine



Frequent practice of DM in recent 12 months



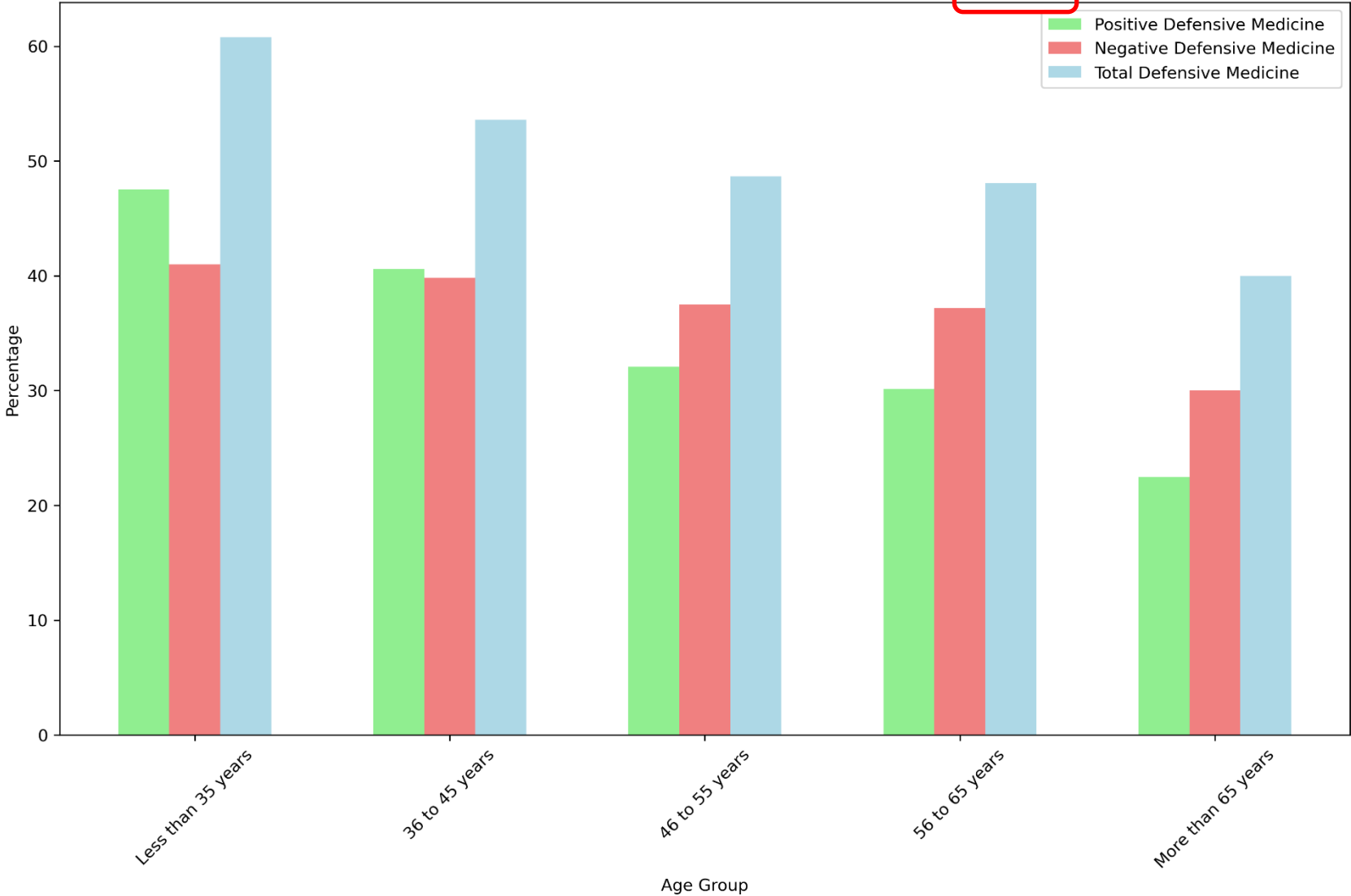
Percentage of Each Gender Practicing Defensive Medicine **Frequently**



Practice of defensive medicine: age



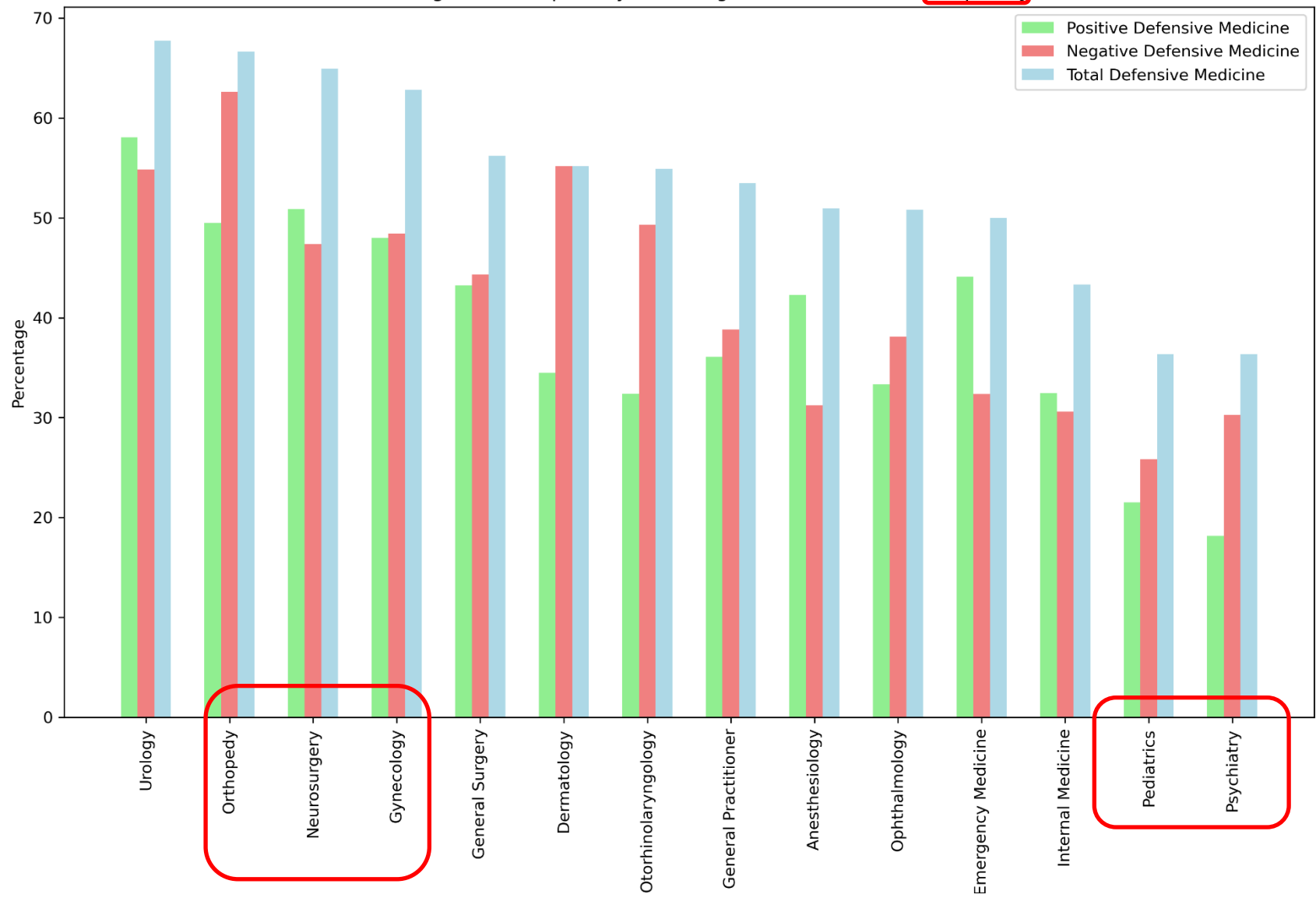
Percentage of Each Age Group Practicing Defensive Medicine Frequently



Frequent defensive practice: specialty



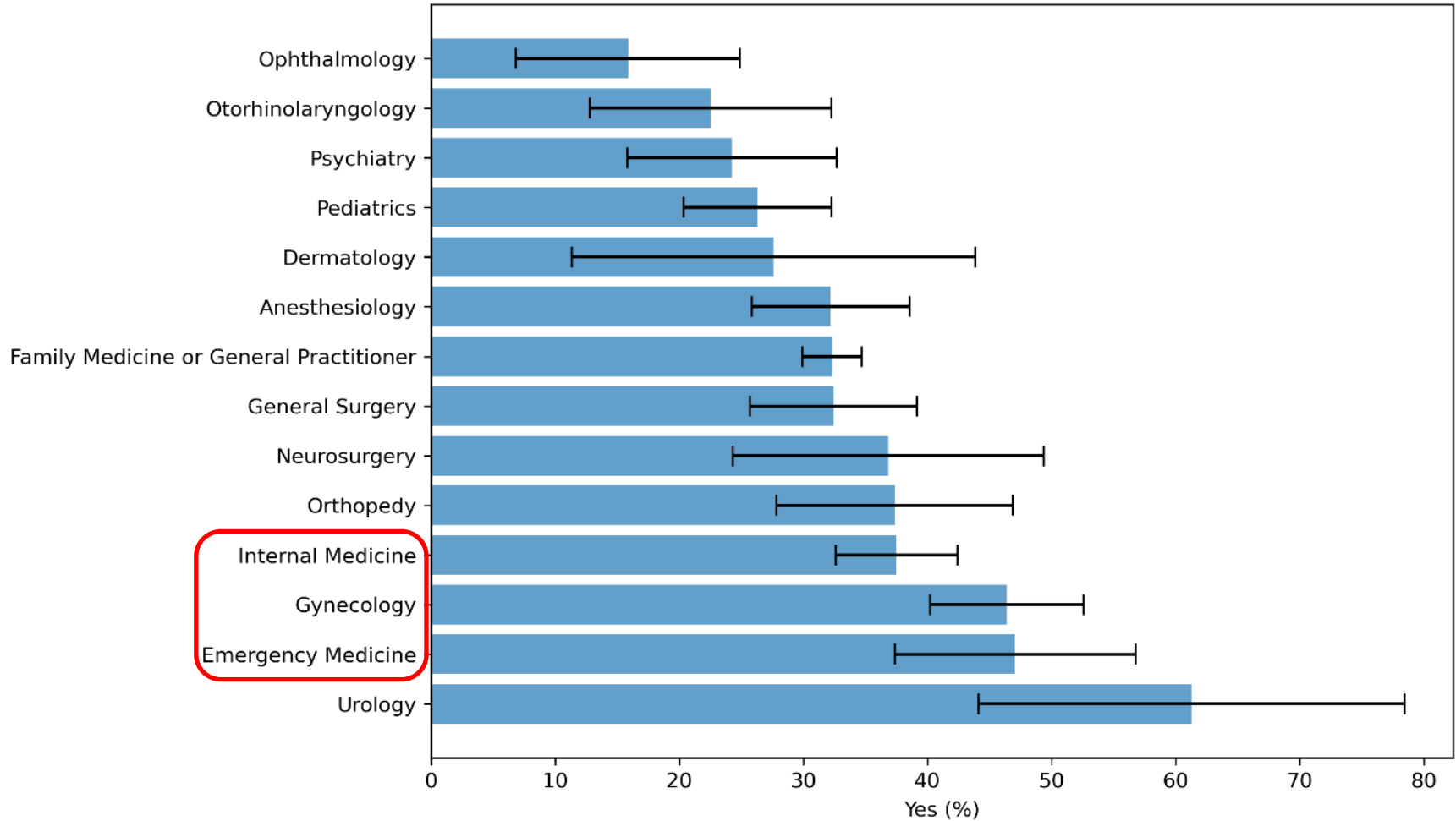
Percentage of Each Specialty Practicing Defensive Medicine **Frequently**



Defensive practice: referral for lab tests



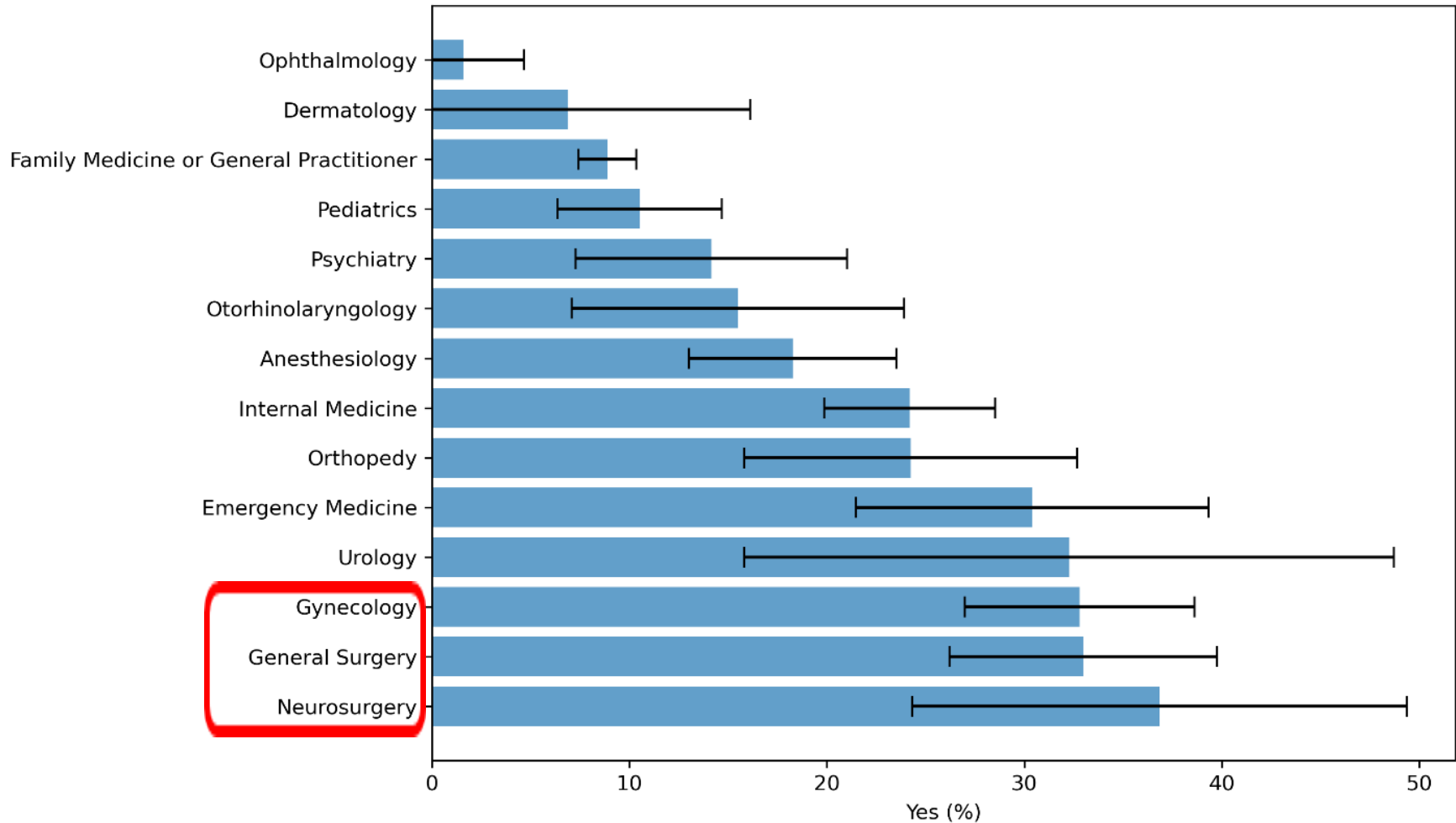
Positive Responses for "Prescribing unnecessary tests for patients" by Specialty



Defensive practice: prolonging hospitalization



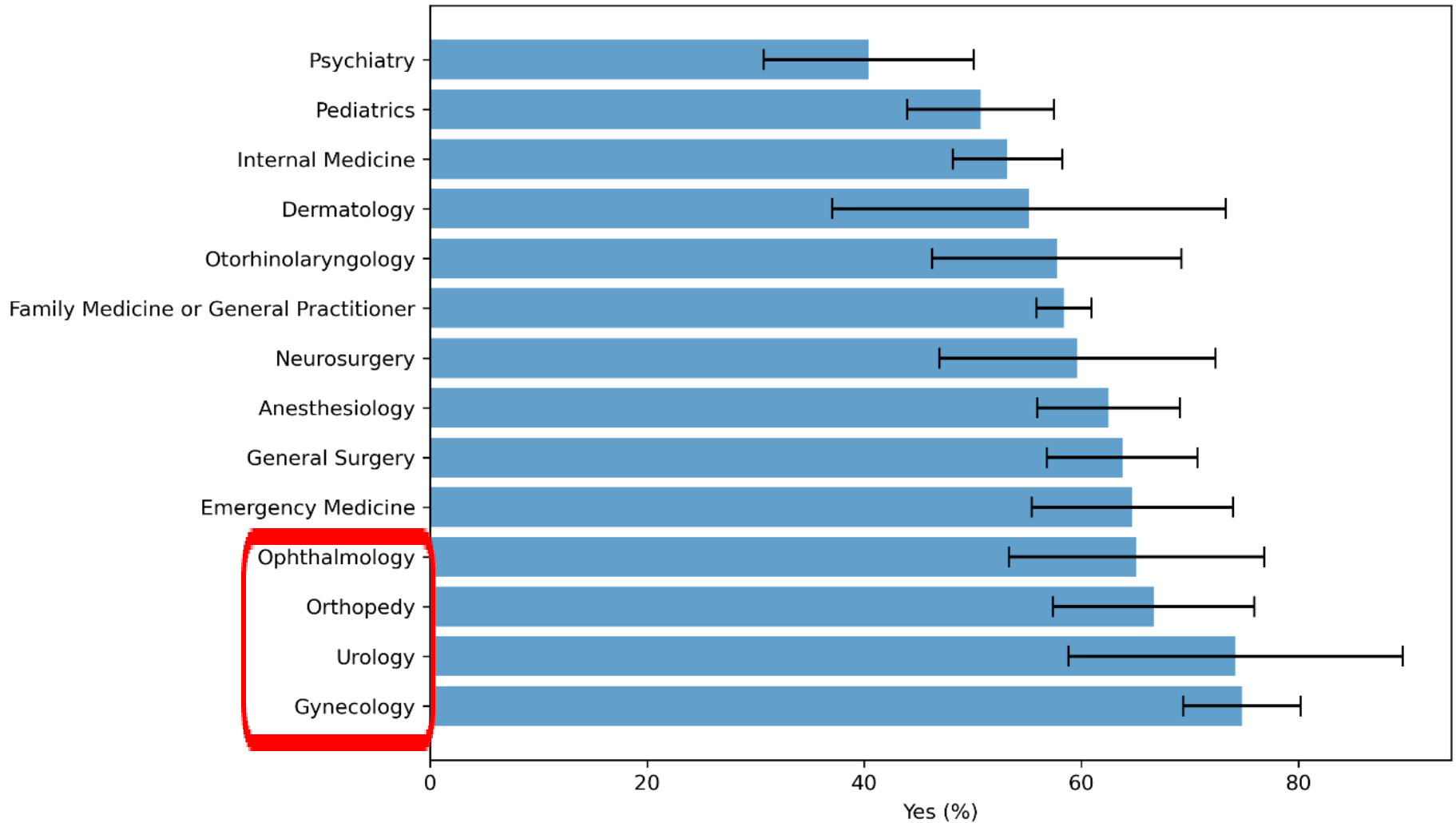
Positive Responses for "Prolonging the hospitalization of patients" by Specialty



Defensive practice: referral for consultation



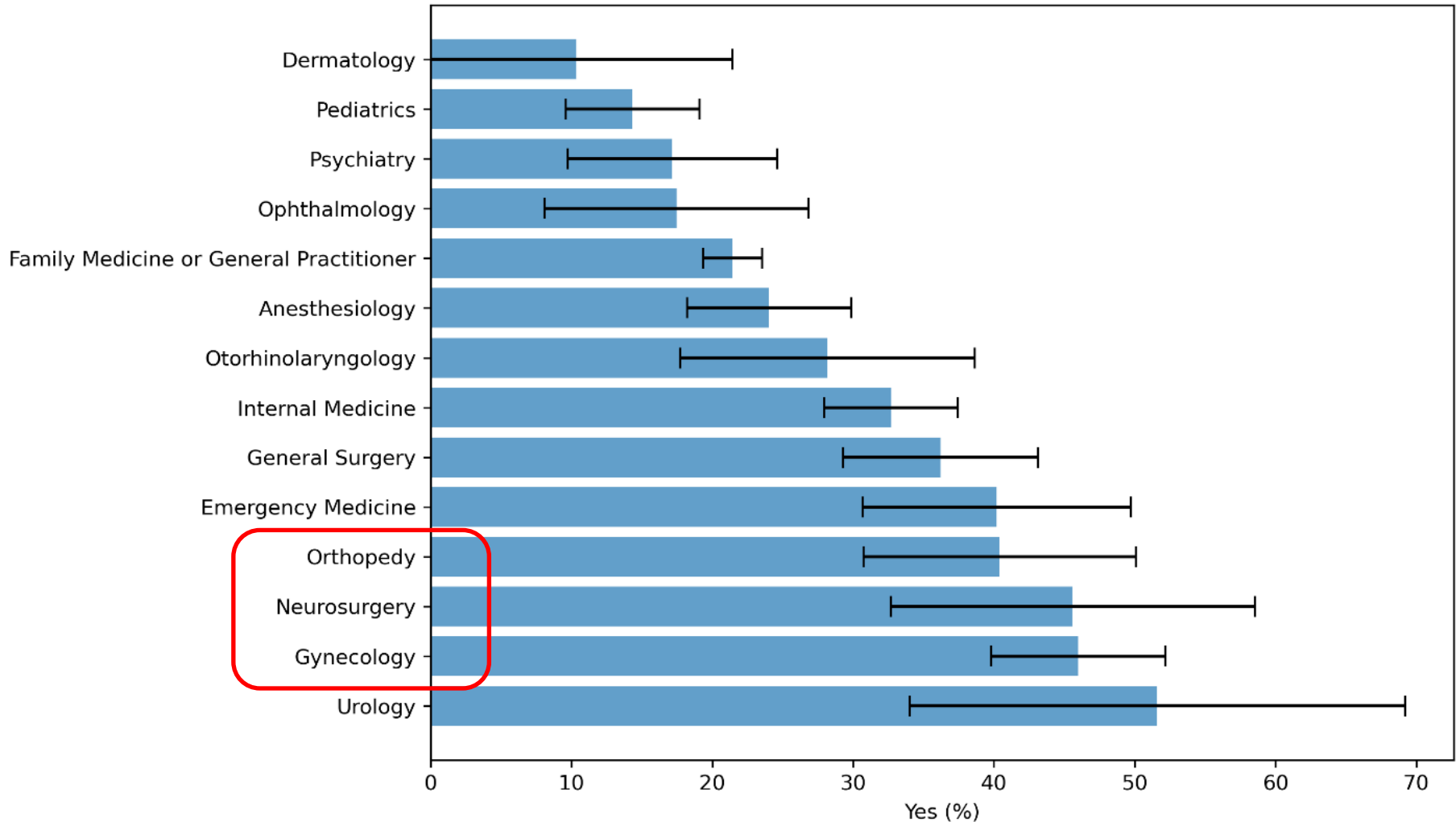
Positive Responses for "Referral for consultation with other colleagues" by Specialty



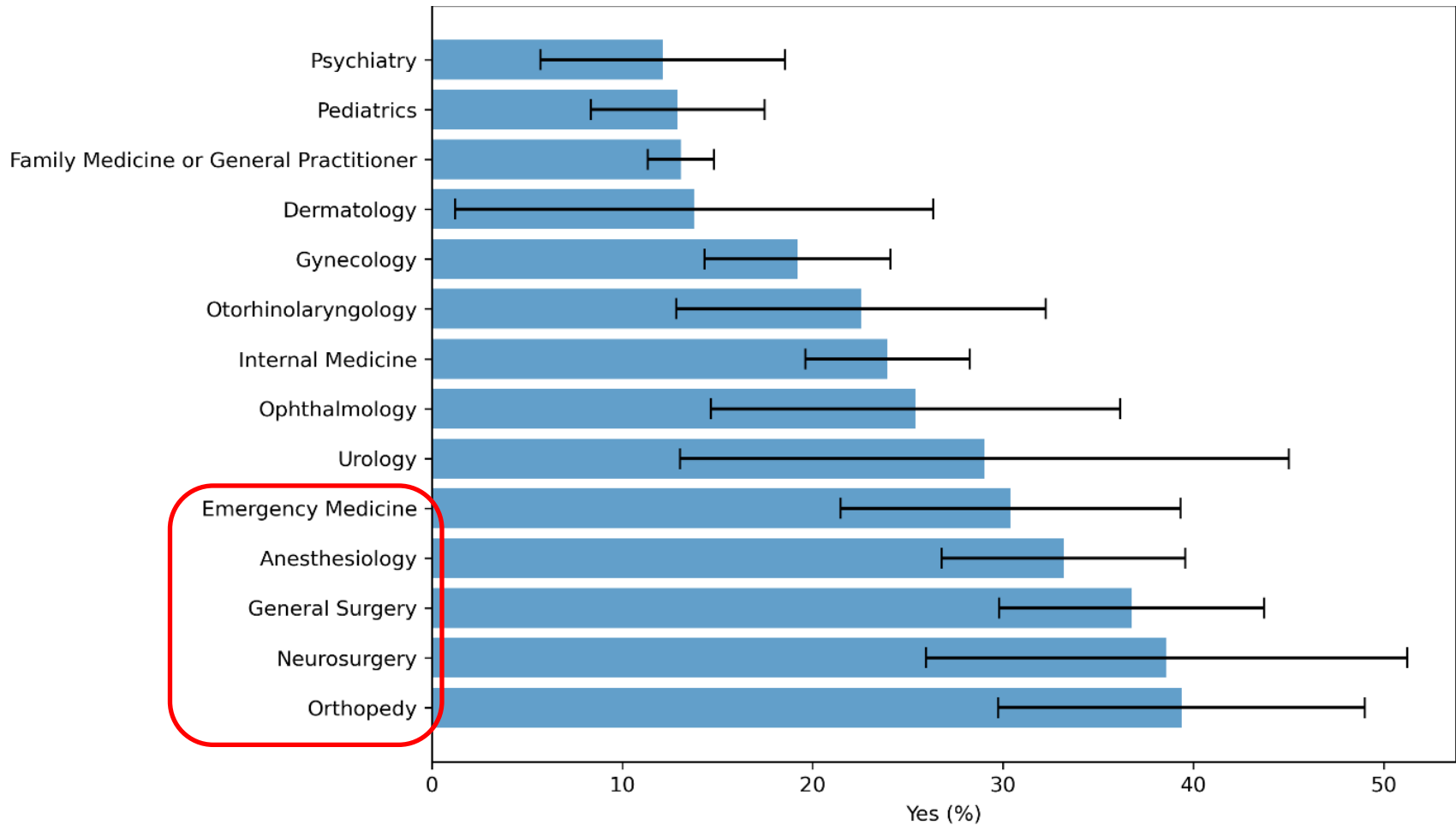
Defensive practice: referral for imaging



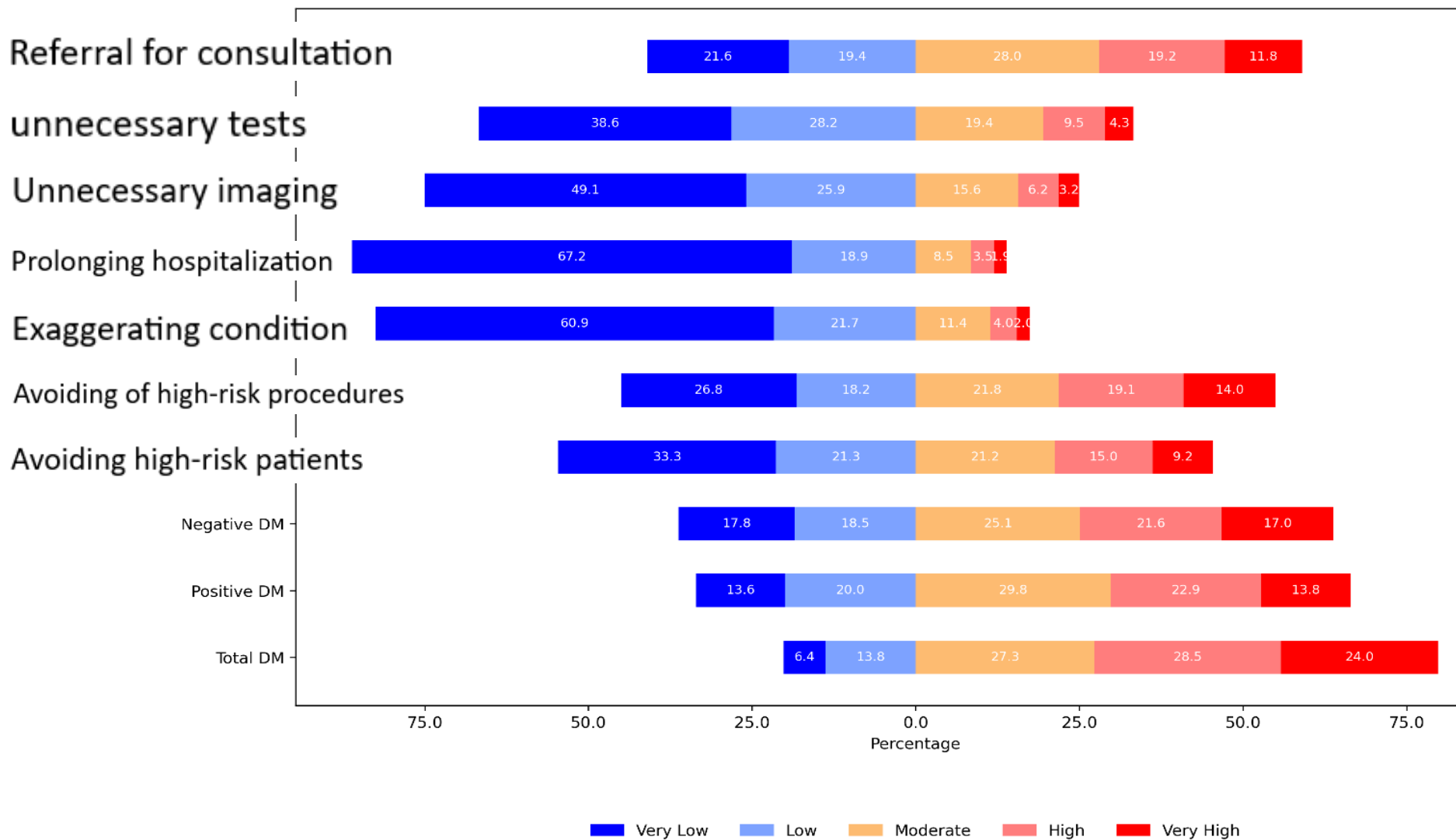
Positive Responses for "Unnecessary imaging for patients" by Specialty



Defensive practice: Exaggerating condition



Defensive practice: Comparison





- ❖ High prevalence of defensive behaviours
- ❖ High prevalence of negative DM which could be morally more contentious because it could impose direct harm to patients.
- ❖ Physicians' attitude on the moral justifiability of DM even in the case of negative.
- ❖ Correlation between attitude and practice of DM.

Iranian Medical Professionals' Bill of Rights: 2021



The right for legal support by the Medical Council



The right to a respectful litigation process



The right to a timely litigation and evaluation process



The right to be culturally prepared sensitivities for mandatory service



The right to quality ME & CME



The IMC' commitment for publishing analytical report of frequent medical errors



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Original Article

Policy brief for management and prevention of defensive medicine in the Iranian health system

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