

“Assessing health status & the quality of healthcare services – The cancer patients’ perspective”

LabHEM | LABORATORY OF HEALTH
ECONOMICS & MANAGEMENT
UNIVERSITY OF PIRAEUS
Decision-making effectiveness for Health Leaders



ΕΛΛΗΝΙΚΗ ΟΜΟΣΠΟΝΔΙΑ ΚΑΡΚΙΝΟΥ
10 ΕΛΛΟΚ
ΧΡΟΝΙΑ

March 31, 2026, Athens

At the webinar, the results of a study conducted by **All.Can Greece**, in collaboration with **ELLOK** and the **Laboratory of Health Economics and Management (LabHEM)**, will be presented. The study aims to evaluate the state of healthcare and the quality of services provided, from the perspective of cancer patients in Greece.





The aim of the study was, by using the **PROMs (Patient-Reported Outcome Measures)** and **PREMs (Patient-Reported Experience Measures)**, to explore

- **The self-reported health status of patients**
- **Their experience with the healthcare services provided**
- **The factors that influence patient experience**
- **Ways in which these tools can be effectively integrated into the healthcare system**



Theoretical Background

Beyond traditional clinical outcomes, recent years have seen a shift in focus toward assessment tools that **place greater emphasis on the patient's perspective.**

The **patient's perception** is important in evaluating the quality of healthcare.



In this context, **tools that capture patient experience and patient-reported outcomes** play a crucial role in shaping a more **patient-centered and holistic approach to care.**

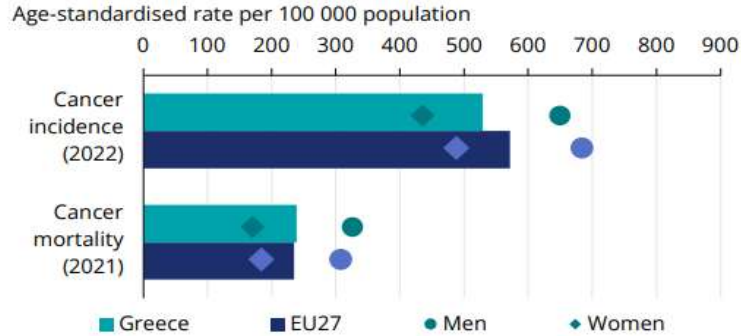
Theoretical Background

Patient-reported measures have become increasingly important in evaluating healthcare, and there are **two main categories**:

Patient-Reported Outcome Measures (PROMs) are used to assess the outcomes of healthcare services from the patients' perspective.

Patient-Reported Experience Measures (PREMs) capture patients' opinions regarding their experience with the healthcare services they receive and the extent to which their needs are met.

Epidemiological Data



Age-standardised incidence rate per 100 000 population, estimates, 2022



The Use of PREMs and PROMs

Most OECD member countries, including Australia, France, Ireland, Japan, the Netherlands, New Zealand, Norway, Singapore, Sweden, and the United Kingdom, have conducted national surveys examining both patient experience and patient-reported outcomes.

In contrast, countries such as Greece, Hungary, Latvia, Slovenia, the Slovak Republic, and Turkey have not yet undertaken similar national initiatives.



Methodology



Literature
Review



Use of Questionnaires



IBM SPSS
Statistics



Missing Values → Single imputation

Questionnaire

Part 1 of the questionnaire → Demographic and clinical characteristics

Part 2 of the questionnaire → PROMIS Global Health-10

Part 3 of the questionnaire → PaRIS Health Survey (Patient-Reported Indicator Survey)



orthotoolkit

Patient Name: _____ Patient ID#: _____

Gender: _____

Please respond to each question or statement by marking an X in the box.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. In general, would you say your health is:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. In general, would you say your physical ability is:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. In general, how would you rate your physical health?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. In general, how would you rate your mental health, including your mood and your ability to think?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. In general, how would you rate your satisfaction with your social activities and relationships?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. In general, how would you rate your satisfaction with your social activities and role (This includes participation in home, at work and in your community, and responsibilities as a parent, child, spouse, volunteer, friend, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Functioned	Walked	Walked some	A little	Struggled
7. To what extent are you able to take on your walking-related activities such as walking, climbing stairs, carrying groceries, or pushing a chair?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	None	Slightly	Moderate	Severe	Very Severe
8. How often have you been bothered by shortness of breath such as feeling breathless, dependent on a chair?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	None	Slight	Moderate	Severe	Very Severe
9. How would you rate your fatigue or tiredness?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. How would you rate your pain or aching?


	No pain	Worst pain imaginable								
11. How would you rate your pain or aching?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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PROMIS Global Health-10

Score / Index	Items Included	Calculation Method	Score Range / Notes
Global-10 Total Sum	Global01, Global02, Global03, Global04, Global05, Global06, Global07r, Global08r, Global09, Global10r	Global 1+ Global 2+Global 3+Global 4+ Global 5+Global 6+ Global 7r+ Global 8r+ Global 9+ Global 10r	Range: 10–50
Global Physical Health Score	Global03, Global06, Global07r, Global08r	Global03 + Global06 + Global07 (rescored) + Global08 (rescored)	Range: 4–20
Global Mental Health Score	Global02, Global04, Global05, Global10r	Global02 + Global04 + Global05 + Global10 (rescored)	Range: 4–20
Estimated EQ-5D Index	Global02, Global03, Global04, Global06, Global07r, Global08r, Global09, Global10r	$0.19123 + (0.00672 * \text{Global02}) + (0.00527 * \text{Global03}) + (0.00830 * \text{Global04}) + (0.04550 * \text{Global06}) + (0.02713 * \text{Global07r}) + (0.01305 * \text{Global08r}) + (0.00613 * \text{Global09}) + (0.02502 * \text{Global10r})$	Derived utility index



PROMIS Global-10 Score
 Patient Name: _____ Patient MRN: _____
 Date: _____

Please respond to each question or statement by marking on how per row.

	Excellent	Very Good	Good	Fair	Poor
1. In general, would you say your health is:	<input type="checkbox"/> +5	<input type="checkbox"/> +4	<input type="checkbox"/> +3	<input type="checkbox"/> +2	<input type="checkbox"/> +1
2. In general, would you say your quality of life is:	<input type="checkbox"/> +5	<input type="checkbox"/> +4	<input type="checkbox"/> +3	<input type="checkbox"/> +2	<input type="checkbox"/> +1
3. In general, how would you rate your physical health?	<input type="checkbox"/> +5	<input type="checkbox"/> +4	<input type="checkbox"/> +3	<input type="checkbox"/> +2	<input type="checkbox"/> +1
4. In general, how would you rate your mental health, including your mood and your ability to think?	<input type="checkbox"/> +5	<input type="checkbox"/> +4	<input type="checkbox"/> +3	<input type="checkbox"/> +2	<input type="checkbox"/> +1
5. In general, how would you rate your satisfaction with your social activities and relationships?	<input type="checkbox"/> +5	<input type="checkbox"/> +4	<input type="checkbox"/> +3	<input type="checkbox"/> +2	<input type="checkbox"/> +1
6. In general, please rate how well you carry out your usual social activities and roles. (This includes activities at home, at work and in your community, and responsibilities as a parent, child, spouse, employer, friend, etc.)	<input type="checkbox"/> +5	<input type="checkbox"/> +4	<input type="checkbox"/> +3	<input type="checkbox"/> +2	<input type="checkbox"/> +1

	Completely	Mostly	Moderately	A little	Not at all
6. To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair?	<input type="checkbox"/> +5	<input type="checkbox"/> +4	<input type="checkbox"/> +3	<input type="checkbox"/> +2	<input type="checkbox"/> +1

	Never	Rarely	Sometimes	Often	Always
10r. How often have you been bothered by emotional problems such as feeling anxious, depressed or irritable?	<input type="checkbox"/> +5	<input type="checkbox"/> +4	<input type="checkbox"/> +3	<input type="checkbox"/> +2	<input type="checkbox"/> +1

	None	Mild	Moderate	Severe	Very Severe
8r. How would you rate your fatigue on average?	<input type="checkbox"/> +5	<input type="checkbox"/> +4	<input type="checkbox"/> +3	<input type="checkbox"/> +2	<input type="checkbox"/> +1

	No pain			Worst pain imaginable							
7r. How would you rate your pain on average?	<input type="checkbox"/> +6	<input type="checkbox"/> +1	<input type="checkbox"/> +2	<input type="checkbox"/> +3	<input type="checkbox"/> +4	<input type="checkbox"/> +5	<input type="checkbox"/> +6	<input type="checkbox"/> +7	<input type="checkbox"/> +8	<input type="checkbox"/> +9	<input type="checkbox"/> +10

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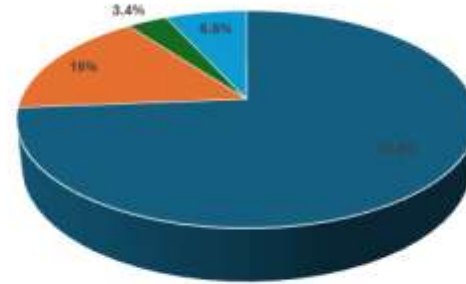
Results

Table 1. Demographic and Social Characteristics of the Participants

Gender	%	N
Men	19%	39
Women	80%	166
Age		
18-39	5.8%	12
40-49	17%	35
50-59	40.9%	84
60-69	27.8%	57
Above to 70	8.2%	17
Region/Place of residence*		
Eastern Macedonia and Thrace	21.4%	44
Attica	19.5%	40
North Aegean	1.9%	4
Western Greece	14.6%	30
Central Greece	1.9%	4
Western Macedonia	2.9%	6
Epirus	0.4%	1
Thessaly	7.3%	15
Ionian Islands	0.4%	1
Central Macedonia	18.5%	38
Crete	1.9%	4
South Aegean	0.4%	1
Peloponnese	3.4%	7
Western Europe	0.4%	1
No answer*	4.3%	9
Education level		
Primary Education	7.3%	15
Secondary Education	39.5%	81
Tertiary Education	27.8	57
Postgraduate studies	19.5%	40
Doctoral studies	5.8%	12
Marital status		
Single	10.7%	22
Divorced	14.6%	30
Married	69.2%	142
Widowers	5.3%	11
Employment status		
Unemployed	11.7%	24
Self-employed	10.7%	22
Not economically active	1.9%	4
Employee	39.5%	81
Contributing Family Member in a Family Business	1.4%	3
Retired	34.6%	71

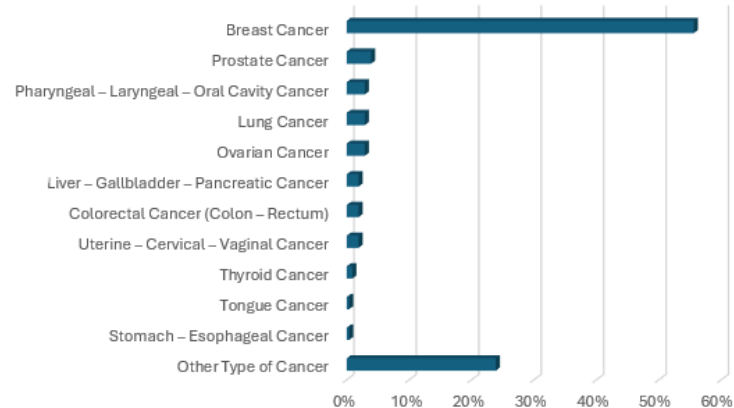
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*Missing values



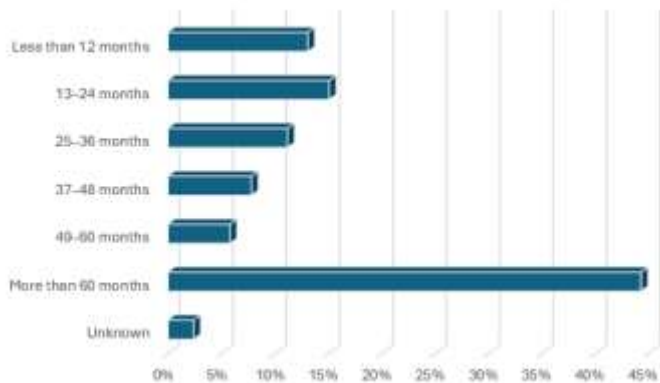
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Primary Diagnosis



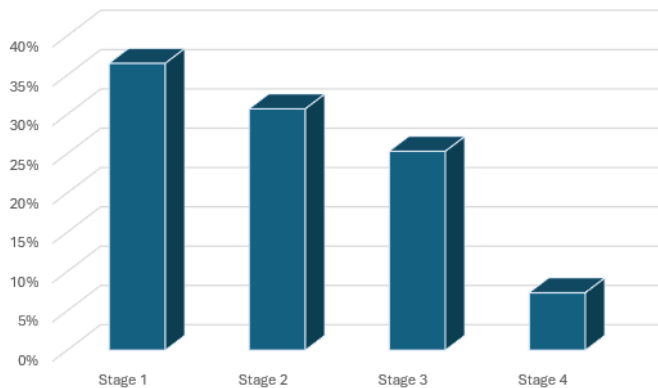
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Time Since Diagnosis



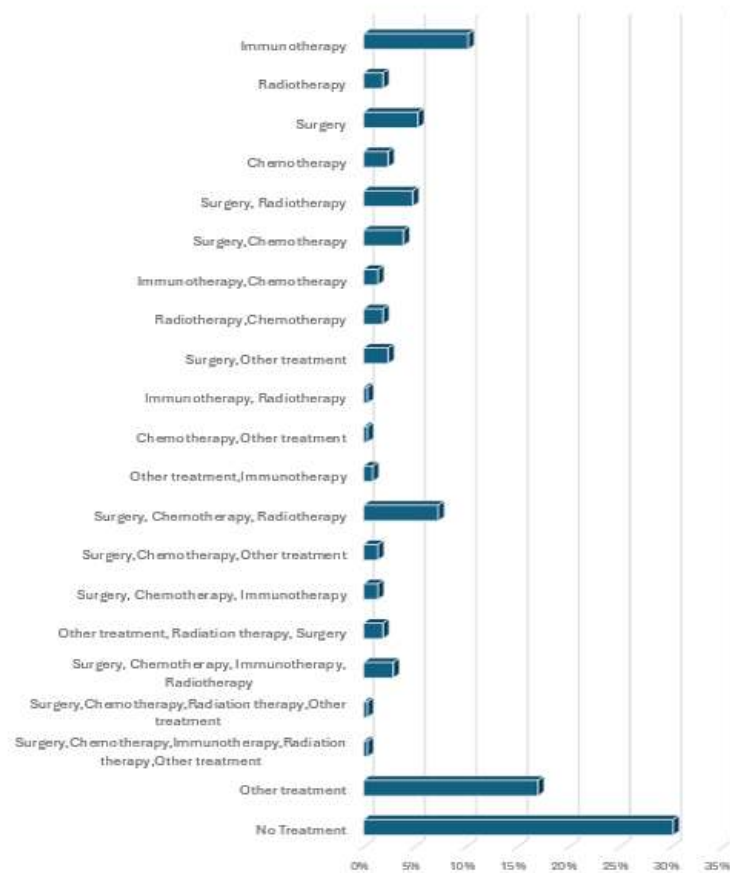
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Cancer Stage

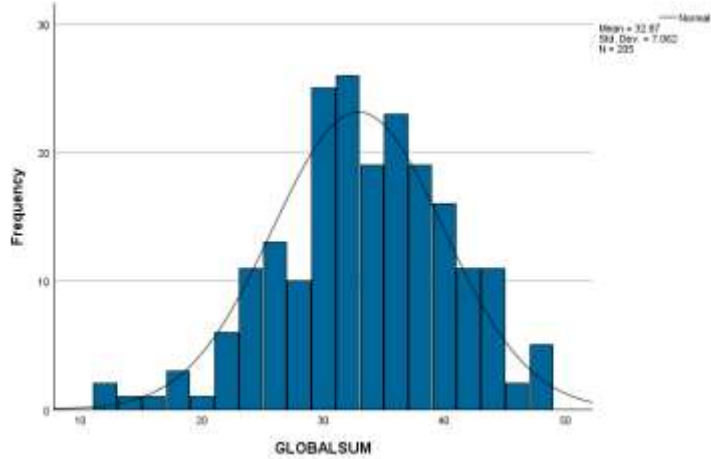


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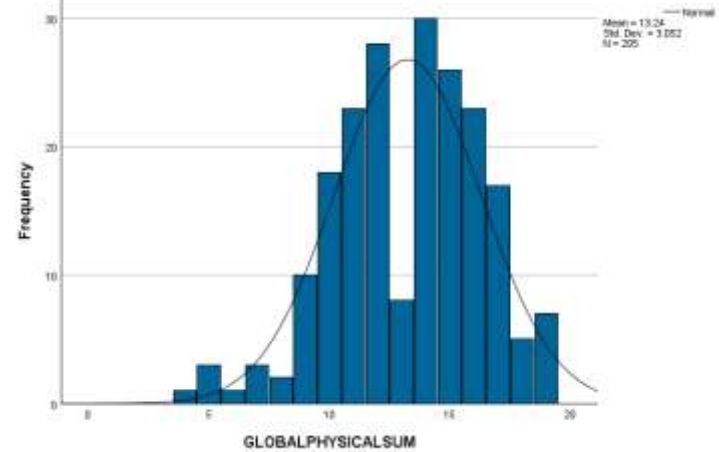
Type of Treatment in the Last 6 Months



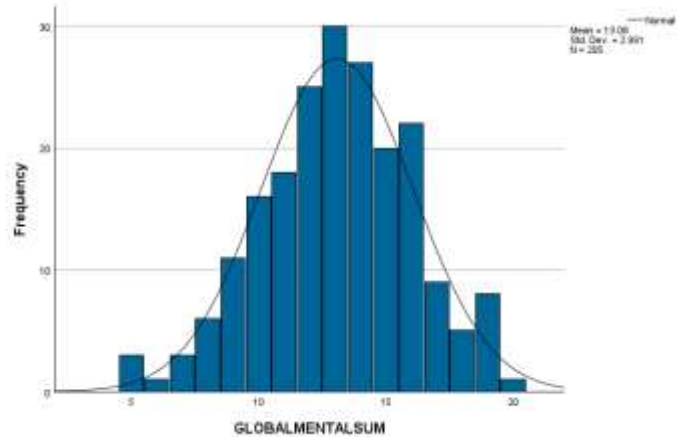
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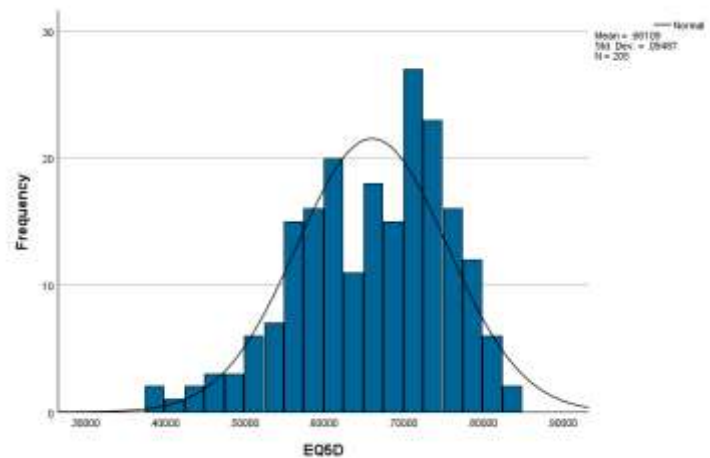
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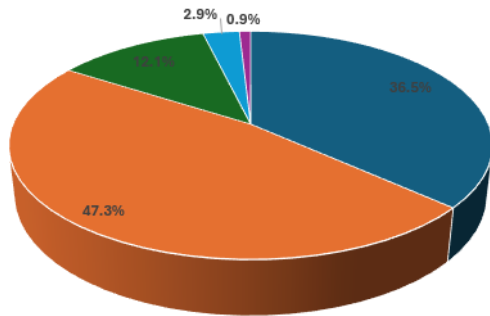


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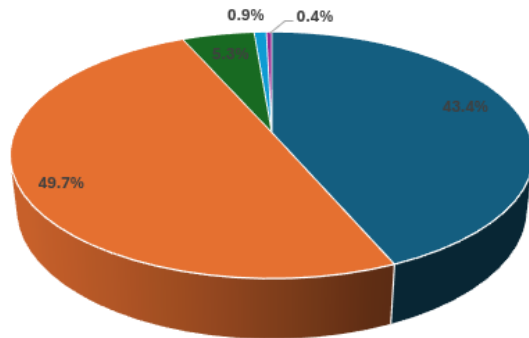
I rely on health care professionals to tell me everything I need to know to manage my health



Strongly agree Agree Neither agree nor disagree Disagree Strongly disagree

N=205

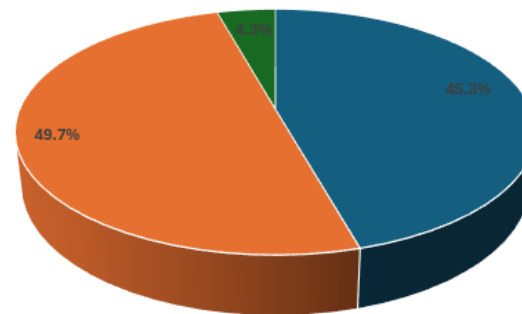
My health care professionals and I work together to manage my health



Strongly agree Agree Neither agree nor disagree Disagree Strongly disagree

N=205

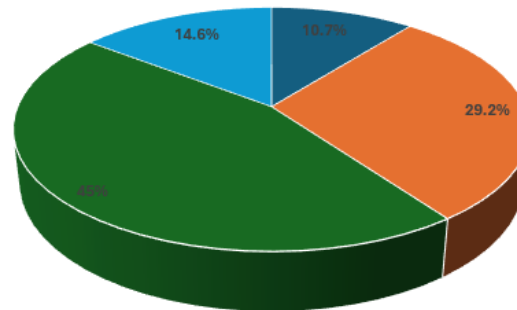
I need to know about health issues so I can keep myself and my family healthy



Strongly agree Agree Neither agree nor disagree

N=205

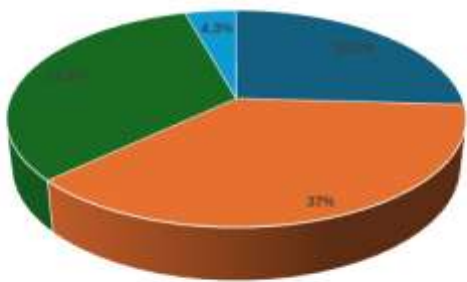
How confident are you that you can manage your own health and wellbeing?



Very confident Confident/somewhat Somewhat confident Not confident at all

N=205

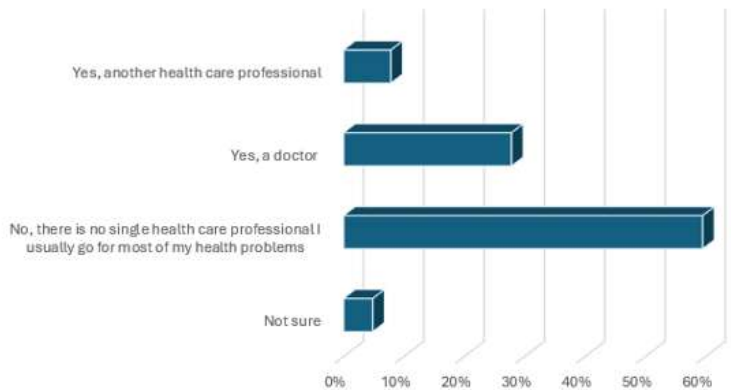
How confident are you that you can follow instructions from health care professionals about how you should care for yourself at home and how to change your habits or lifestyle?



Very confident Confident Somewhat confident Not confident at all

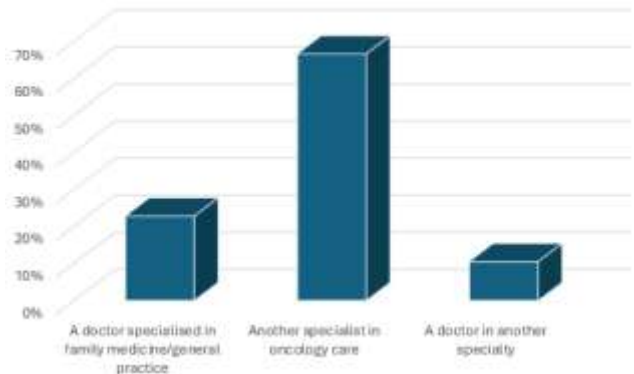
N=205

Is there one single professional you usually go to for most of your health problems?



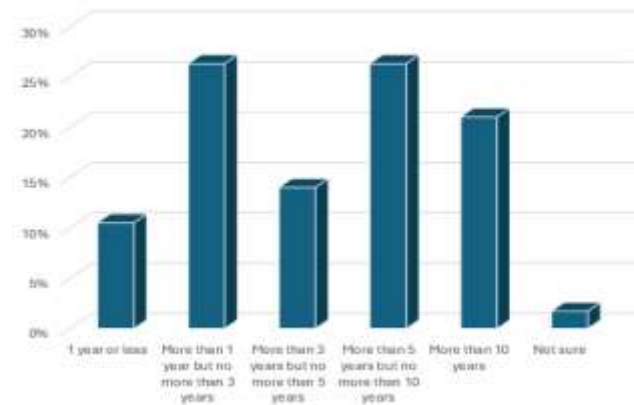
N=205

Who is this doctor?



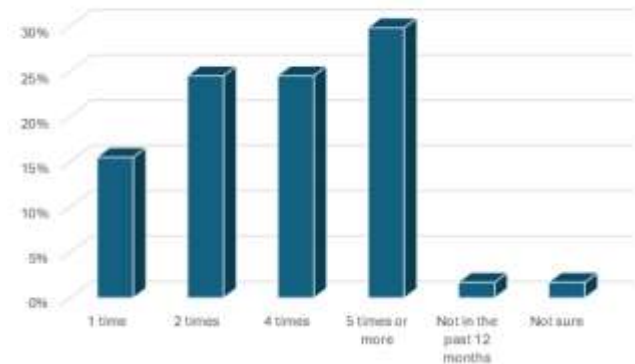
N=57

How long have you been seeing this doctor?



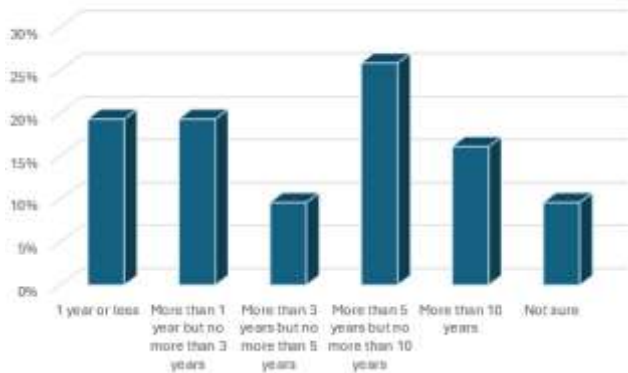
N=57

How many times have you seen this doctor in the past 12 months? This could be in person, on the phone, by video call or online messaging.



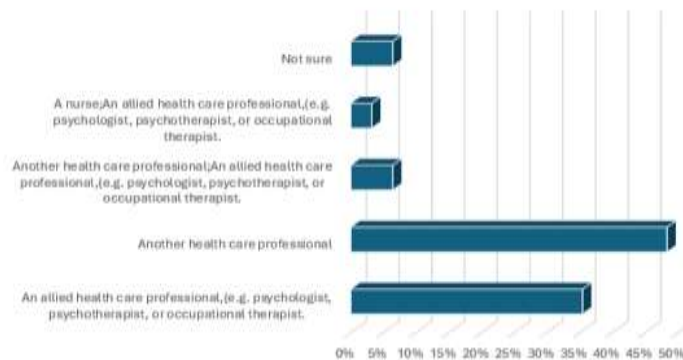
N=57

How long have you been seeing this doctor?



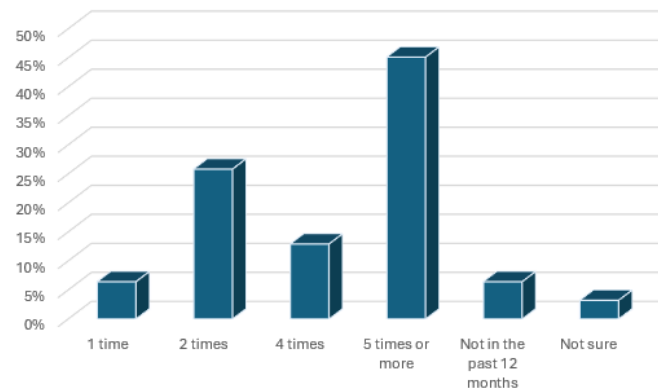
N=31

Who is this health care professional?



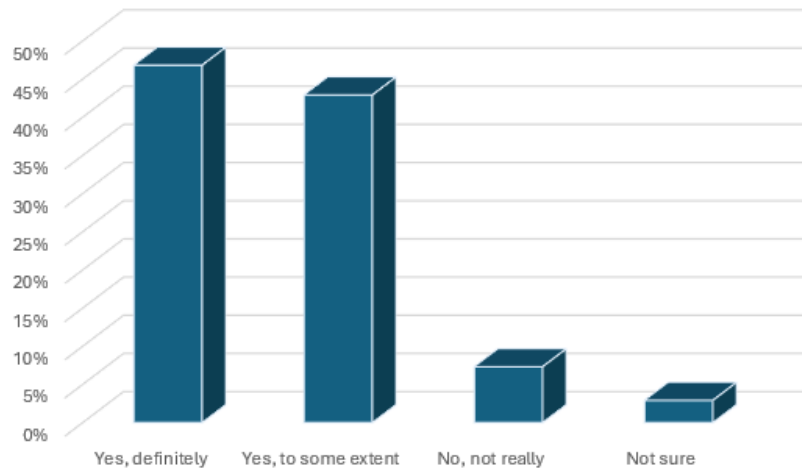
N=31

How many times have you seen this health care professional in the past 12 months? This could be in person, on the phone, by video call or online messaging.



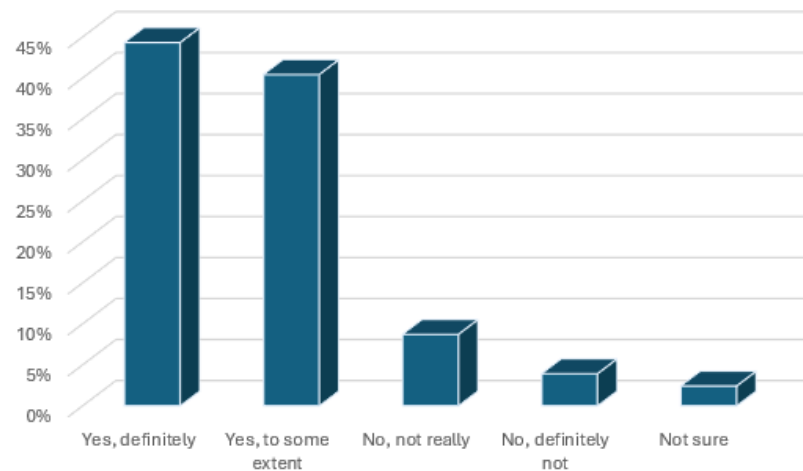
N=31

Are you involved as much as you want to be in decisions about your care?



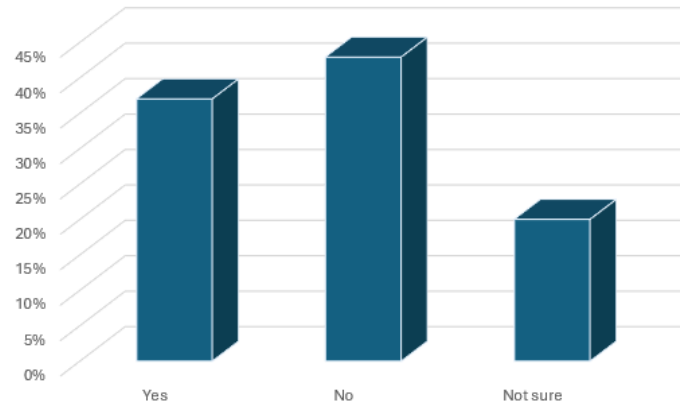
N=205

Do your healthcare professionals consider you as a 'whole person' rather than just a disease/condition in relation to your care?



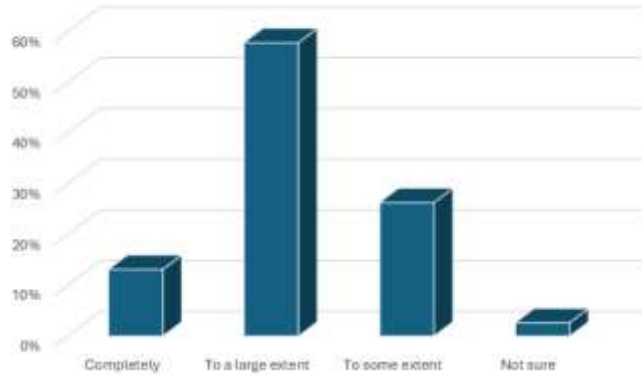
N=205

Do you have a care plan that takes into account all your health and wellbeing needs?



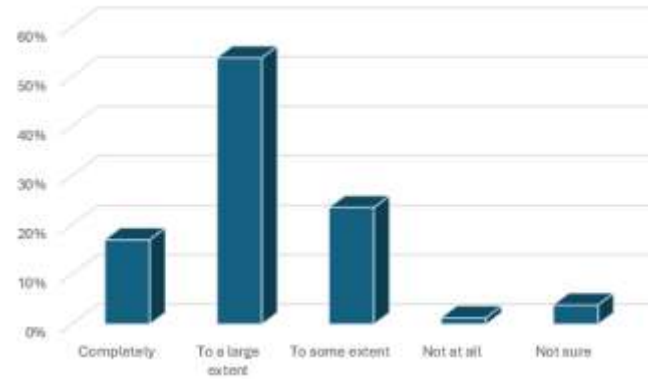
N=205

To what extent have you found your care plan useful for you to manage your health and wellbeing?



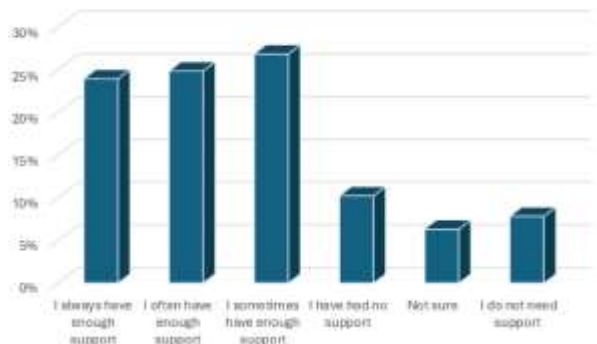
N=76

To what extent do all the professionals involved in your care appear to be following the same care plan?



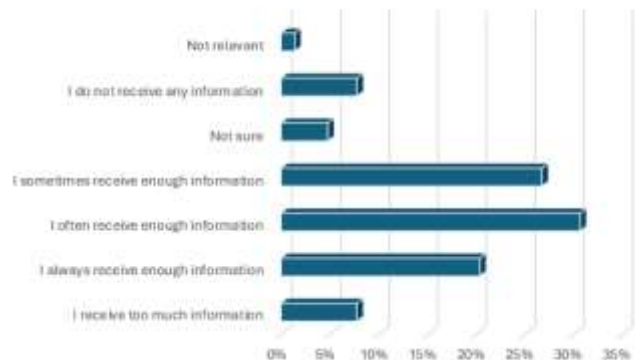
N=76

Do you have enough support from your health care professionals to help you manage your own health and wellbeing?



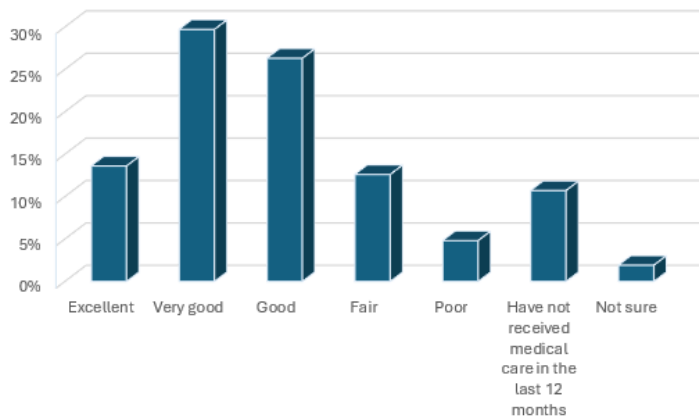
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To what extent do you receive useful information at the time you need it to help you manage your health and wellbeing?



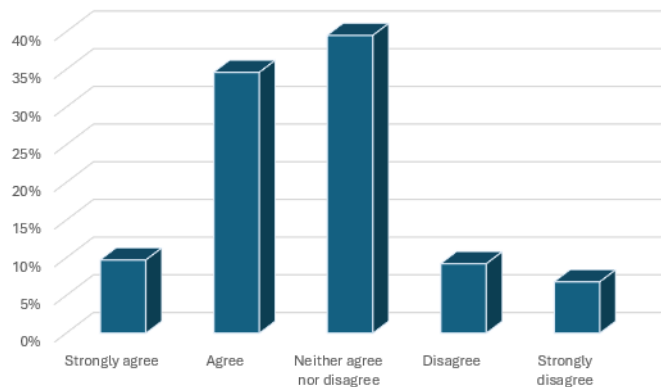
N=205

Overall, how do you rate the medical care that you have received in the past 12 months from your primary care centre?



N=205

Based on your experience, how strongly do you agree or disagree that the health care system can be trusted?



N=205

Regression Analysis

Table 2. Global 10 Sum Correlations

Variable	Spearman rho (p)	p-value
Collaboration with healthcare professionals	0.165	0.018
Self-confidence in managing health & well-being	0.437	<0.001
Ability to follow instructions from healthcare professionals	0.288	<0.001
Participation in care decisions	0.229	<0.001
Treating as a "whole person"	0.240	<0.001
Existence of a comprehensive care plan	0.153	0.029
Effectiveness of care plan	0.382	<0.001
Support from health professionals	0.138	0.048
Get useful information when needed	0.149	0.033
Overall medical care evaluation (12 months)	0.218	0.022
Trust in the healthcare system	0.222	0.001

Table 3. Global Physical Sum Correlations

Variable	Spearman rho (p)	p-value
I need to know about health issues to keep myself and my family healthy.	0.146	0.037
Self-confidence in managing health and well-being	0.436	<0.001
Ability to follow instructions from healthcare professionals	0.247	<0.001
Participation in care decisions	0.159	0.023
Treating as a "whole person"	0.251	<0.001
Effectiveness of care plan	0.304	0.008
Overall medical care evaluation (12 months)	0.201	0.004
Trust in the healthcare system	0.229	<0.001

Table 4. Global Mental Health Correlations

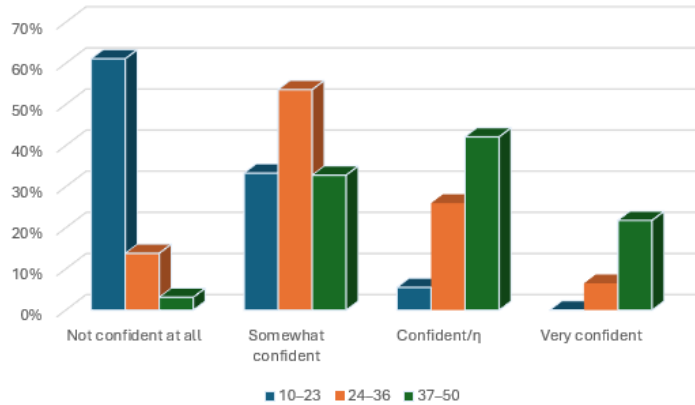
Variable	Spearman rho (p)	p-value
I need to know about health issues to keep myself and my family healthy.	0.139	0.046
Collaboration with healthcare professionals for health management	0.276	<0.001
Self-confidence in managing health and well-being	0.345	<0.001
Ability to follow instructions from healthcare professionals	0.232	<0.001
Duration of visit to a healthcare professional	0.331	0.012
Number of visits in the last 12 months	-0.394	0.028
Treating as a "whole person"	0.235	<0.001
Existence of a comprehensive care plan	0.142	0.043
Effectiveness of care plan	0.304	0.008
Support from health professionals	0.189	0.007
Get useful information when needed	0.200	0.004
Overall medical care evaluation (12 months)	0.232	<0.001
Trust in the healthcare system	0.180	0.010

Table 5. EQ5D Correlations

Variable	Spearman rho (p)	p-value
I need to know about health issues to keep myself and my family healthy.	0.156	0.026
Collaboration with healthcare professionals for health management	0.214	0.002
Self-confidence in managing health and well-being	0.373	<0.001
Ability to follow instructions from healthcare professionals	0.214	0.002
Participation in care decisions	0.241	<0.001
Treating as a "whole person"	0.153	0.029
Effectiveness of care plan	0.297	0.009
Get useful information when needed	0.191	0.006
Trust in the healthcare system	0.192	0.006

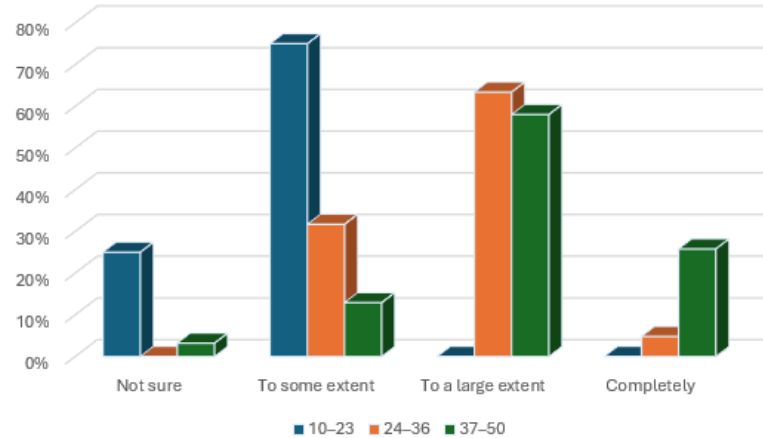
Crosstabs

Percentage distribution of the variable “How confident are you that you can manage your own health and wellbeing?” by category Global 10 Sum



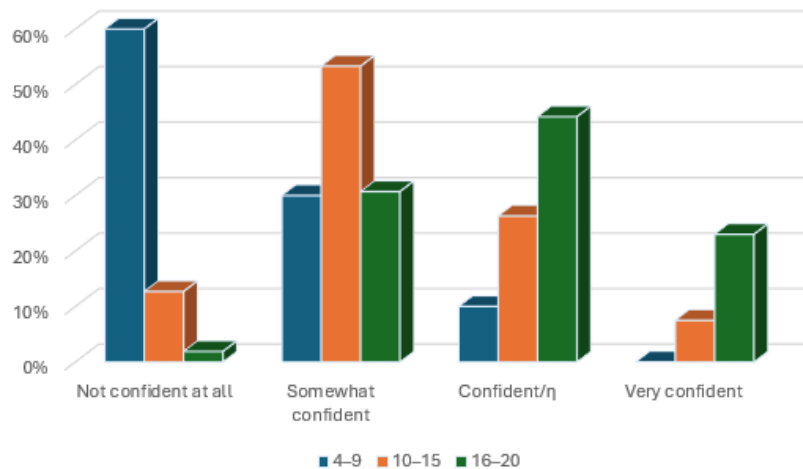
N=205

Percentage distribution of the variable “To what extent have you found your care plan useful for you to manage your health and wellbeing?” by category Global 10 Sum



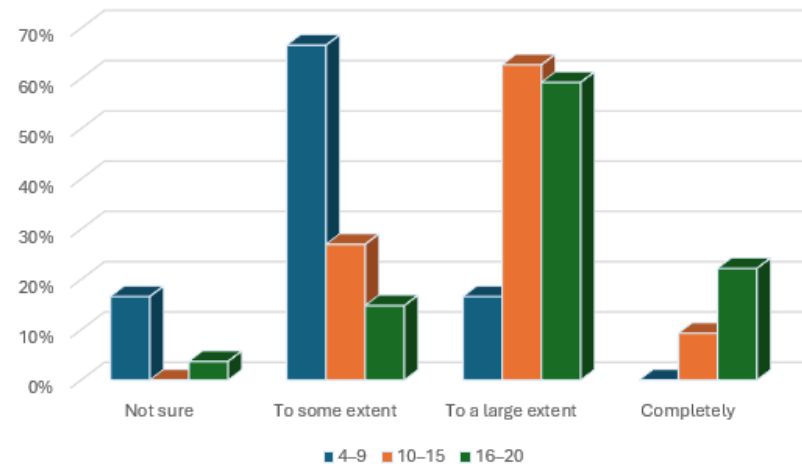
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Percentage distribution of the variable “How confident are you that you can manage your own health and wellbeing?” by Global Physical Sum category



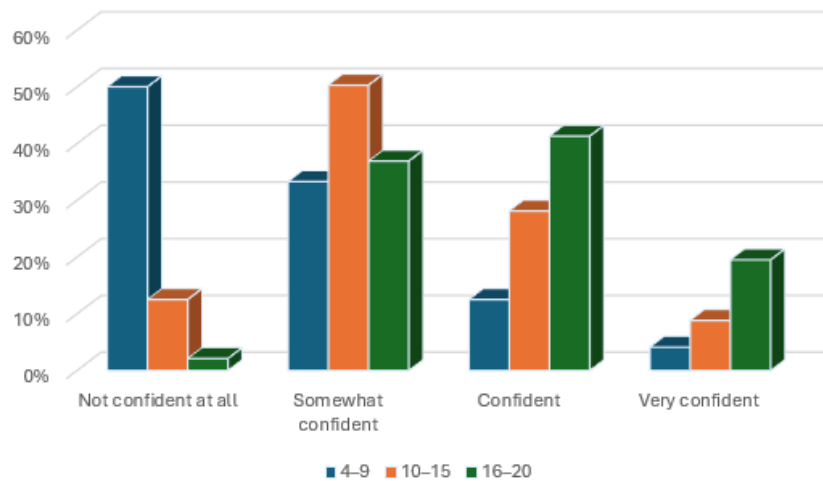
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Percentage distribution of the variable “To what extent have you found your care plan useful for you to manage your health and wellbeing?” by category Global Physical Sum



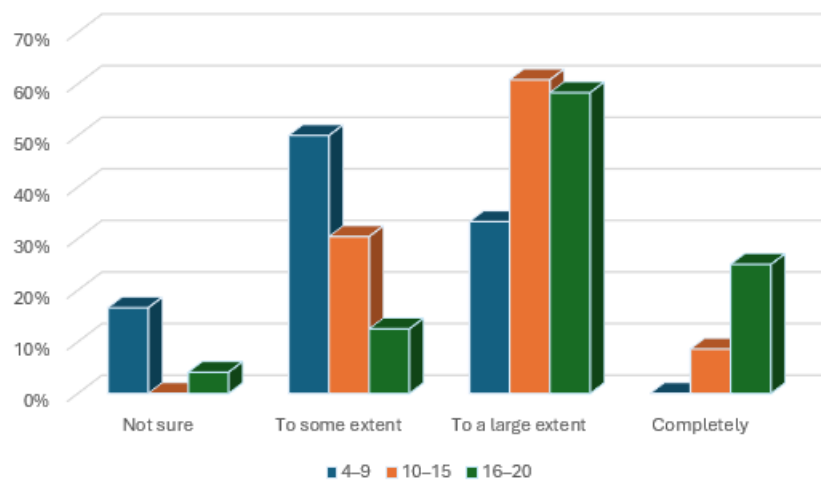
N=76

Percentage distribution of the variable “How confident are you that you can manage your own health and wellbeing?” by Global Mental Sum category



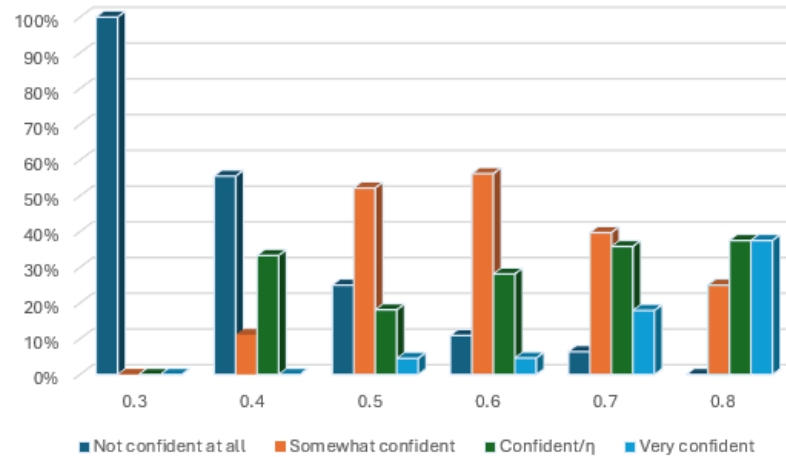
N=205

Percentage distribution of the variable “To what extent have you found your care plan useful for you to manage your health and wellbeing?” by category Global Mental Sum



N=76

Percentage distribution of the variable "How confident are you that you can manage your own health and wellbeing?" by EQ5D category.




N=205

Conclusions

The Spearman correlation analysis revealed **statistically significant positive associations between quality of life indices** (Global 10 Sum, Global Physical Sum, Global Mental Sum, EQ5D) **and variables related to active patient engagement and empowerment.**

Regarding **Global 10 Sum**, correlations ranged from weak to moderate ($r \approx 0.21-0.35$), indicating that as **patient participation and trust increase, overall perceived quality of life also improves.**

Regarding **Global Physical Sum**, the findings suggest that the **physical dimension of quality of life is particularly associated with the patient's ability to actively manage their health.**




As for the **Global Mental Sum**, the results indicate that the **mental dimension of quality of life is significantly influenced by the quality of the relationship with healthcare professionals and the perceived level of support.**

Regarding **EQ5D**, the findings suggest **a link between patient empowerment and improved perceived health status.**

Therefore, **positive correlations are observed between patient experience (Patient-Reported Experience Measures – PREMs) and both self-reported and objectively measured health outcomes (Patient-Reported Outcome Measures – PROMs).**

These findings reinforce the view that patient experience constitutes a fundamental pillar of quality in healthcare.






Furthermore, the **PREMs and PROMs** in the present study confirms that these two types of indicators **do not operate independently, but rather complement one another**. Their integration into clinical practice can provide **a more comprehensive picture of care quality, supporting the transition toward a more value-based and patient-centered healthcare model**.

The findings highlight the **need to shift the evaluation of healthcare beyond purely clinical outcomes and toward the lived experience of the patient**.

The results of our study suggest that **the systematic assessment of patient experience can make a substantial contribution to improving the quality and effectiveness of the care provided**.

Therefore, the findings of the present study not only confirm the theoretical link between patient experience and health outcomes, but also provide empirical evidence supporting the need to integrate PREMs and PROMs into health policy design and the development of interventions aimed at enhancing patient empowerment.



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Thank you!