Patient Satisfaction with Remote Consultation at a Chronic Pain Unit

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Presenter's resume

- PhD in Technologies and Information Systems, from the University of Minho, Portugal.
- Director of the bachelor’s degree in Digital Games Development Engineering, at the Polytechnic Institute of Cávado and Ave (IPCA).
- Director of the Intelligent and Creative Cyber-Physical Systems Department, at IPCA.
- Member of the steering committee of the International Conference on Serious Games and Applications for Health (SeGAH).
- Integrated member of the 2Ai – Applied Artificial Intelligence Laboratory.

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Research Interest and Current Projects

- **GreenHealth** – *Digital and biological asset-based strategies to improve well-being and promote green health*

  The GreenHealth project is focused on digital and biological technologies and their interaction with human health, environmental sustainability and economic development, based on assets in the territory. This multidisciplinary and interdisciplinary approach will allow the design and implementation of a long-term strategy, centered on man, and focused on the (eco) sustainability of the Northern Region.

- **SmartHealth** – *Artificial Intelligence for lifelong Personalized Patient Care*

  In the SmartHealth project, we intend to create new efficient and intelligent technologies to support different stages of the medical treatment, namely the prevention, diagnosis, surgical treatment, rehabilitation and patient follow-up.

Background

The COVID-19 pandemic represented and unprecedent global health crisis, forcing the reorganization of healthcare systems worldwide.

Therefore, all outpatient and elective interventional procedures have been reduced or interrupted to reduce the risk of viral spread.

The Centro Hospitalar de Entre o Douro e Vouga (CHEDV) Chronic Pain Unit (CPU), confronted with cancellations of all consultations and procedures, considered as non-essential or urgent decided to start teleconsultation.

Until March 2020, the CPU appointments were carried out on a face-to-face basis.

Background

During the first State of Emergency declared in Portugal due to COVID-19 Pandemic, all scheduled patients of this medical unit were offered the opportunity to have a **teleconsultation with a senior physician or pain nurse**, as a means of maintaining continuity of care.

While this new mode of consultation may be convenient for some patients, the lack of direct observation during the interaction could potentially have a negative **impact on their level of satisfaction**.

Background

Patient satisfaction can be defined as the degree of congruence between expectation and experience. The quality of the service delivery experienced is defined as the gap between the expectation and the actual experience of costumers.

The level of patient satisfaction in the CHEDV chronic pain consultation had never been analyzed. Methodologies to assess patient satisfaction in telemedicine are unspecific, and the comparison and interpretation of results can be a problem.

Aim of the Study

Measure	Understand	Envision
Measure patient satisfaction with teleconsultation during the pandemic.	Understand the influence of sociodemographic variables on satisfaction.	Envision possible improvements in healthcare services.

Methods

- Population and Study Design:
  - A retrospective, descriptive, cross-sectional cohort survey, with a 5-point Likert-type scale.
  - Approved by the Ethics Committee of the Entre o Douro e Vouga Hospital Center.
  - Population: all the patients that were submitted to a teleconsultation during the first state of emergency due to Covid-19 Pandemic, declared in Portugal between March 22 and May 2, 2020.
  - After informed consent and meeting the inclusion criteria, a questionnaire was conducted to the patient by telephone.

1.TECHNICAL PROBLEMS (Techn probl)
I had no technical problems in performing the consultation.
2. OBTAINING A PRESCRIPTION (Obt Presc)
I had no difficulty in obtaining a prescription.
3. UNDERSTANDING THE PRESCRIPTION (Underst Presc)
I had no trouble understanding the changes in the prescription.
4. THE IMPORTANCE OF PAIN (Pain import)
I felt that my pain was valorized by my doctor.
5. CONSULTATION DURATION (Time)
During the consultation I had the time I needed to express my symptoms.
6. SAFETY AND CONFIDENTIALITY (Safety)
During the consultation I felt my confidentiality was not threatened.
7. COMMUNICATION (Communication)
I clearly understood the explanations given to me.
8. CONFIDENCE (Confidence)
I am confident that my doctor was able to assess my symptoms during the phone consultation.
9. LACK OF PHSYCAL CONTACT (Physcontact)
I think the lack of physical contact was not a problem for the course of the consultation.
10. OVERALL ASSESSMENT OF THE CONSULTATION
I am very satisfied with the healthcare provided to me in the Chronic Pain Unit.
11. ACCEPTANCE OF TELECONSULTATION (Acceptance)
I wouldn't mind if the next appointment was by telephone.
12. FEAR OF SEVERE CORONAVIRUS INFECTION (FearCOVID)
I am afraid of becoming seriously ill due to COVID-19.

Statistical Analysis

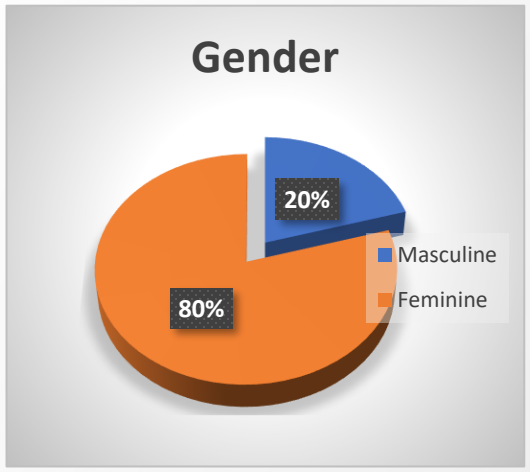
- Data analysis was performed using IBM® SPSS® Statistics Software. Continuous variables were represented with means and standard deviations. Interval data were calculated using Student test.
- Spearman correlation between the listed items were calculated (Table III). A correlation of between [0.2, 0.4) was considered weak, [0.4, 0.6) moderate, [0.6-0.8) strong, and very strong between [0.8, 1].
- The p-values were calculated with a chi-square test for categorical data and a t-test for continuous data. A p-value of less than 0.05 was considered statistically significant.
- Missing data or unanswered survey questions were excluded from statistical analysis.

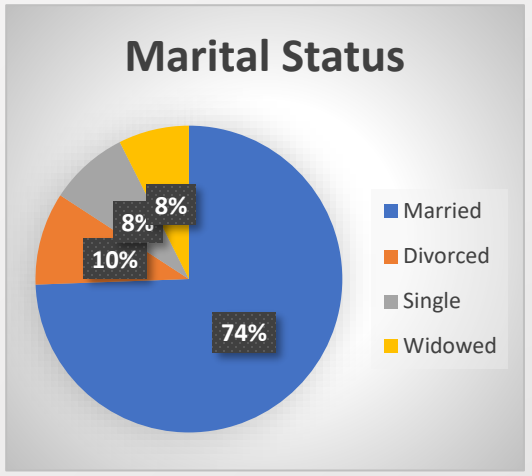
Results

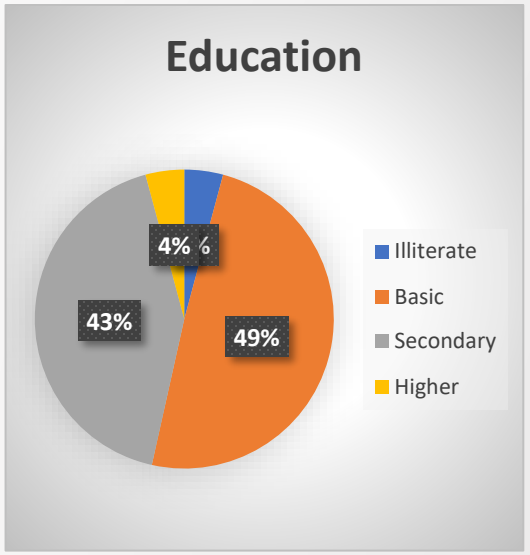
- 262 patients were submitted to a remote consultation between March 22 and May 2, 2020.
- From these, 47 were excluded from our study.

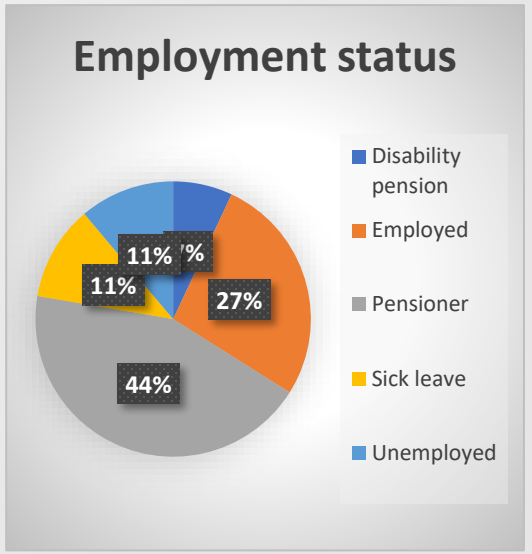
Age
Average: 61,58 (+/-14,96) yrs

DESCRIPTION OF THE SOCIO-DEMOGRAPHIC VARIABLES OF THE STUDY PARTICIPANTS



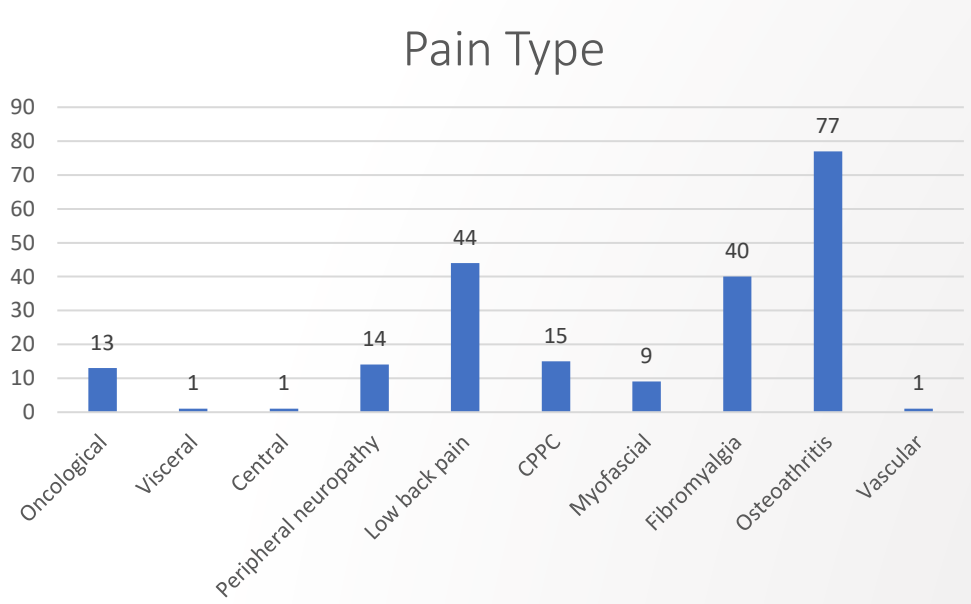


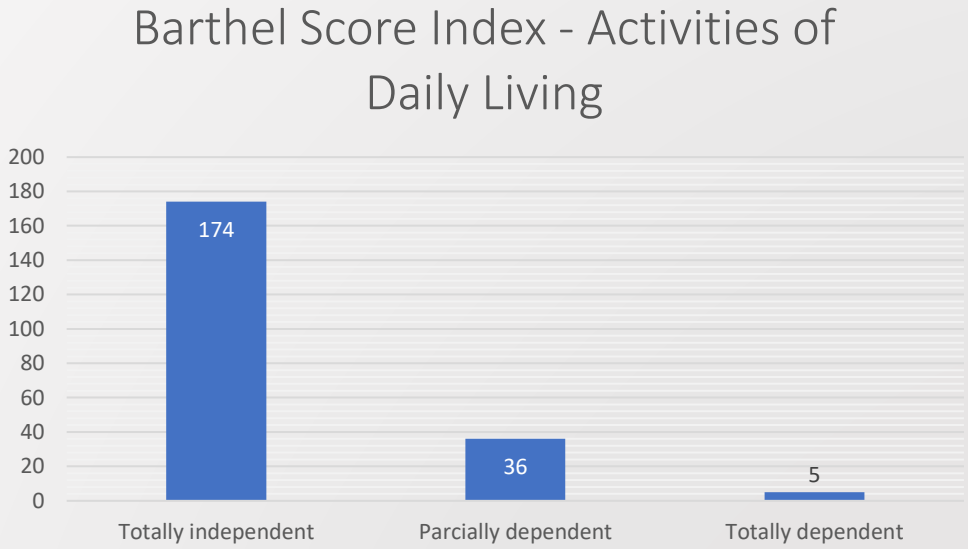




Results

Description of the socio-demographic variables of the study participants





58 of the patients have been in follow-up for less than 6 months (26.97%) and 61 for more than 5 years (28.37%).

Results

- 93% of the patient sample was **satisfied/very satisfied with the provided services in the CPU**
- 93% of patients totally agree/agree with the statement **" I had no technical problems in performing the consultation".**
- 86% reported no problems in **obtaining the prescription**, and 87.4% in **understanding the changes to the prescription**
- 85.1% agree/strongly agree that the clinician **valued their complaints** during the remote consultation.
- Regarding the **time required for the consultation**, 80.5% of the patients felt that the consultation had taken an adequate duration

Results

CORRELATION BETWEEN PATIENT SATISFACTION WITH CPU AND OTHER ITEMS.

PATIENT SATISFACTION	Correlation Coef	p-value
FOLLOW UP TIME (Fol time)	0.025	0.712
CURRENT HEALTH STATUS (Cur health)	0.169	0.13
TECHNICAL PROBLEMS (Tech prob)	0.285	0.00
OBTAINING A PRESCRIPTION (Obt presc)	0.258	0.00
UNDERSTANDING THE PRESCRIPTION	0,292	0.00
THE IMPORTANCE OF PAIN (Pain import)	0.481	0.00
CONSULTATION DURATION (Time)	0.475	0.00
SAFETY AND CONFIDENTIALITY (Safety)	0.276	0.00
CONFIDENCE (Confidence)	**0.410**	**0.00**
LACK OF PHISYCAL CONTACT (Physcontact)	**0.446**	**0.07**
ACCEPTANCE OF TELECONSULTATION (Acceptance)	0,476	0.08
FEAR OF SEVERE CORONAVIRUS INFECTION (FearCOVID)	0,41	0,21
AGE	**0,63**	**0.04**

- A correlation was found between patient age and the difficulty in understanding the changes in the prescription (Spearman = 0.010, Pearson's R = 0.027).
- We also found an association between the education level and the existence of technical difficulties in carrying out the consultation or understanding the changes in prescription (Spearman = 0.07; Pearson's R =0,027.
- A correlation was found between fear of Sars-CoV-2 infection and acceptance of future teleconsultation.

Discussion

- The results indicated a high level of patient satisfaction with the telemedicine. 93% of the patients considered very satisfied/satisfied with the consultation by telephone.
- Data analysis revealed no statistically significant difference between patient satisfaction and demographic variables: gender; age; and marital status.
- 86.51% had no technical difficulties in performing the consultation, obtaining the prescription (86.04%) or understanding the changes in the prescription.

Discussion

- Prior knowledge, beliefs, and experiences shape expectations. However, telemedicine involves a high degree of uncertainty due to the lack of previous experience and unfamiliarity with the technology. The COVID-19 pandemic further adds uncertainty and fear to society, resulting in exceptional characteristics that may have altered patients' perception of some consultation dimensions.
- The population served by our unit has relevant **characteristics**: is an elderly; rural; poor; and highly dependent on others for access to health services.
- On the other hand, we detected a **high fear of Sars-Cov-2 infection** in the elderly group, which may have conditioned the results of the satisfaction survey.

Discussion

- Questions not answered:
  - Where patients satisfied with teleconsultation or with the fact that they had less risk of infection by not travelling to the health services?
  - Could the fact that a chronic pain physician took the initiative to contact the patient by phone and showed concern for his health condition have contributed to the increase in patient satisfaction with the teleconsultation?
  - What are the considerations for maintaining teleconsultation in a non-pandemic scenario?

Conclusion

- The primary outcome of this retrospective cross-sectional cohort survey, is to determine the level of satisfaction of the patients submitted to a phone consultation during the first state of emergency in Portugal, due to COVID-19 pandemic.
- We conclude that the vast majority were **satisfied/very satisfied**.
- Data analysis revealed **no statistically significant difference between patient satisfaction and demographic variables** (gender, age, marital status).
- Most patients reported no difficulties in obtaining an appointment, a prescription or understanding changes to prescriptions, with teleconsultation.
- However, we found a statistically significant relation between **the age of the patients**:
  - **and the existence of technical difficulties in carrying out the consultation**
  - **and obtaining a prescription.**

Conclusion

- Prospecting future improvements, we also pretend to evaluate telemedicine as an alternative to traditional in-person follow up in a Chronic Pain Unit. In this scenario, 68.4% of our sample prefer teleconsultation instead of traditional consult.

- How the fear for COVID-19 affected patients' satisfaction with teleconsultation?

- Whether by maintaining contact with the health services at a time of general confinement in which feelings of abandonment and isolation were frequent, or by avoiding visits to hospital, reducing the risk of viral transmission, it is possible that patient satisfaction with teleconsultation has been overestimated.

Thank you!

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