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Empowering Self-Management: Translation and Content Validation through Expert Judgement of the Heart Failure Symptom Tracker (HFaST) tool for the Portuguese population

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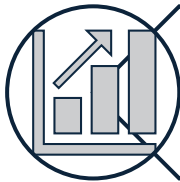
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Introduction

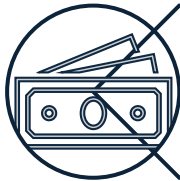
Heart Failure: A Global Public Health Challenge



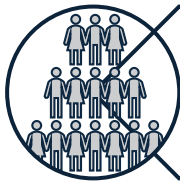
High morbidity and mortality rates ¹⁻⁴



Diminished quality of life and high risk of hospitalisation, among individuals ≥ 65 years old ¹⁻⁴



Hospitalisations strain healthcare systems, increasing healthcare costs ¹⁻⁴



64M affected globally ¹; 4.4% of the Portuguese population ⁵

Introduction

The Importance of Self-Management in Heart Failure

Self-management strategies are Class I, Level A evidence-based recommendation according to the European Society of Cardiology ¹

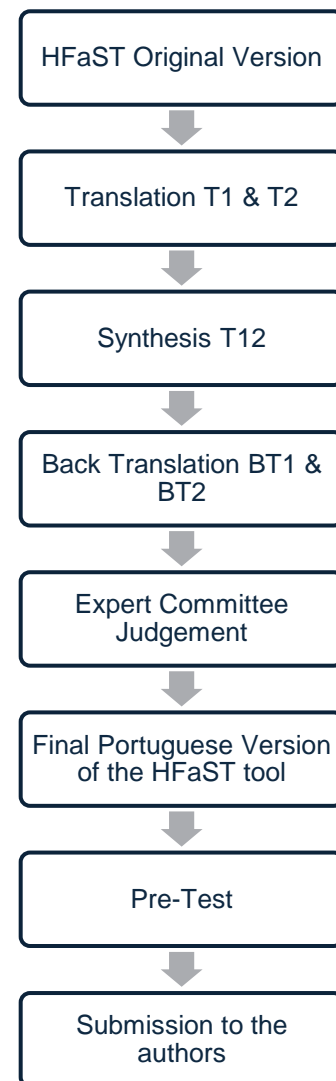
Self-monitoring symptoms and signs improves better quality of life outcomes and reduce unnecessary hospitalisations ⁶⁻⁹

HFaST tool

It is a brief and easy self-administered 6-item tool, that can revolutionise symptom management, lower hospitalisations and help predict risk of hospital admissions ¹⁰

Methods

- ❑ Observational, cross-sectional descriptive study
- ❑ European Portuguese translation and cross-cultural adaptation followed a qualitative methodology based on the guidelines of Beaton D. et al.¹¹
- ❑ 10 experts, with different areas of knowledge, assessed through an online survey the clarity and relevance and the suitability of the translation, ensuring the content validity of instrument and leading to the development of the final Portuguese version of the HFaST tool
- ❑ Adjustments deemed necessary were made and a pre-test was performed to a sample of 25 professionals, using cognitive interviews to assess item comprehensibility



Results

- ❑ The translation process ensured consistency, with the back-translated HFaST tool closely aligning with the original version
- ❑ Expert evaluations highlighted high content validity index (I-CVI), with I-CVI scores of 0.7 to 1.00 for clarity and relevance on the instructions
- ❑ Adjustments to the Likert scale, based on clarity and relevance I-CVI scores ranging from 0.5 to 0.9, led to a more comprehensible 6-point format. Fleiss' k values of 0.548 and 0.570, respectively, indicating a moderate strength of agreement, supported this decision
- ❑ Equivalence between the original and translated versions gathered substantial to almost perfect agreement, having Fleiss' k values ranging from 0.678 to 1.000
- ❑ The pre-test demonstrated high comprehensibility, with a score of 96%.

Results

HFaST Items	Fleiss' k	Strength of Agreement (Landis & Koch, 1977) ¹²
Item 1 – Fatigue or low energy level when performing everyday activities (Fadiga ou pouca energia ao realizar atividades diárias)	0,678	Substantial
Item 2 – Shortness of breath when performing everyday activities (Falta de ar quando realizar as atividades diárias)	0,792	Substantial
Item 3 – Shortness of breath at rest (Falta de ar em repouso)	0,857	Almost Perfect
Item 4 – Shortness of breath while lying down or reclining (for example, needing to add pillows or move to a recliner to sleep) (Falta de ar quando deitado ou reclinado (por exemplo, necessidade de adicionar almofadas ou de se mudar para um cadeirão reclinável para dormir)	0,898	Almost Perfect
Item 5 – Swelling of feet, ankles, legs, or abdomen; shoes or waistband feeling tight (Inchaço dos pés, tornozelos, pernas ou abdómen; sensação de sapatos ou cinto apertados)	0,839	Almost Perfect
Item 6 – Have you gained more than 2 pounds during the past 24 hours or more than 5 pounds during the past 72 hours? (Ganhou mais de 1kg durante as últimas 24 horas ou mais de 2kg durante as últimas 72 horas?)	1,000	Perfect

Table 1. Strength of agreement among experts for each item of the Portuguese Version of the HFaST tool, for a $p < 0.001$.

Results

The final Portuguese Version of the HFaST tool

Esta ferramenta de monitorização de sintomas na Insuficiência cardíaca foi concebida para o ajudar a refletir sobre os seus sintomas ou alterações nos mesmos que possam indicar um agravamento da Insuficiência Cardíaca.

Utilize esta ferramenta diariamente para registar a intensidade de cada sintoma de insuficiência cardíaca em comparação com o seu padrão habitual. Se identificar alterações nos seus sintomas, tiver sintomas novos ou agravamento dos mesmos, procure aconselhamento médico para determinar a importância das alterações.

Assinale com um **X** a resposta que melhor descreve os seus sintomas de insuficiência cardíaca nas últimas 24 horas.

Pense em como se sentiu nas últimas 24 horas em comparação com o que costuma sentir.

1 - Fadiga ou pouca energia ao realizar atividades diárias <ul style="list-style-type: none"><input type="checkbox"/> Não senti nas últimas 24 horas<input type="checkbox"/> Muito melhor do que o habitual<input type="checkbox"/> Ligeiramente melhor do que o habitual<input type="checkbox"/> Mais ou menos o mesmo que o habitual<input type="checkbox"/> Ligeiramente pior do que o habitual<input type="checkbox"/> Muito pior do que o habitual
2 - Falta de ar quando realiza as atividades diárias <ul style="list-style-type: none"><input type="checkbox"/> Não senti nas últimas 24 horas<input type="checkbox"/> Muito melhor do que o habitual<input type="checkbox"/> Ligeiramente melhor do que o habitual<input type="checkbox"/> Mais ou menos o mesmo que o habitual<input type="checkbox"/> Ligeiramente pior do que o habitual<input type="checkbox"/> Muito pior do que o habitual
3 - Falta de ar em repouso <ul style="list-style-type: none"><input type="checkbox"/> Não senti nas últimas 24 horas<input type="checkbox"/> Muito melhor do que o habitual<input type="checkbox"/> Ligeiramente melhor do que o habitual<input type="checkbox"/> Mais ou menos o mesmo que o habitual<input type="checkbox"/> Ligeiramente pior do que o habitual<input type="checkbox"/> Muito pior do que o habitual
4 - Falta de ar quando deitado ou reclinado (por exemplo, necessidade de adicionar almofadas ou de se mudar para um cadeirão reclinável para dormir) <ul style="list-style-type: none"><input type="checkbox"/> Não senti nas últimas 24 horas<input type="checkbox"/> Muito melhor do que o habitual<input type="checkbox"/> Ligeiramente melhor do que o habitual<input type="checkbox"/> Mais ou menos o mesmo que o habitual<input type="checkbox"/> Ligeiramente pior do que o habitual<input type="checkbox"/> Muito pior do que o habitual
5 - Inchaço dos pés, tornozelos, pernas ou abdómen; sensação de sapatos ou cinto apertados <ul style="list-style-type: none"><input type="checkbox"/> Não senti nas últimas 24 horas<input type="checkbox"/> Muito melhor do que o habitual<input type="checkbox"/> Ligeiramente melhor do que o habitual<input type="checkbox"/> Mais ou menos o mesmo que o habitual<input type="checkbox"/> Ligeiramente pior do que o habitual<input type="checkbox"/> Muito pior do que o habitual
6 - Ganhou mais de 1kg durante as últimas 24 horas ou mais de 2kg durante as últimas 72 horas? <ul style="list-style-type: none"><input type="checkbox"/> Sim<input type="checkbox"/> Não



Discussion

- ❑ Adapting the HFaST tool to European Portuguese required a meticulous process to ensure linguistic and cross-cultural adaptation suitability ^{11,13,14}
- ❑ Considering experts' judgement, a reasonable agreement on the Portuguese version of the HFaST was achieved. Modifications to the Likert scale, reducing it to a 6-point format, addressed discrepancies and enhanced clarity and user comprehension
- ❑ Implementing educational programs is crucial to maximize the tool's effectiveness and to ensure patient self-monitoring engagement and understanding, as the HFaST tool aligns with the global shift towards mHealth technologies ¹⁵⁻¹⁷
- ❑ Further research is currently on going to assess the psychometric properties of the tool in clinical contexts to validate its sustained impact on patient outcomes
- ❑ The tool's integration into risk prediction models could significantly contribute to hospital admission management, providing valuable insights into patient health status

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Thank you.

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