

Relationship between family function and exercise capacity and inspiratory muscle strength in COPD

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Background

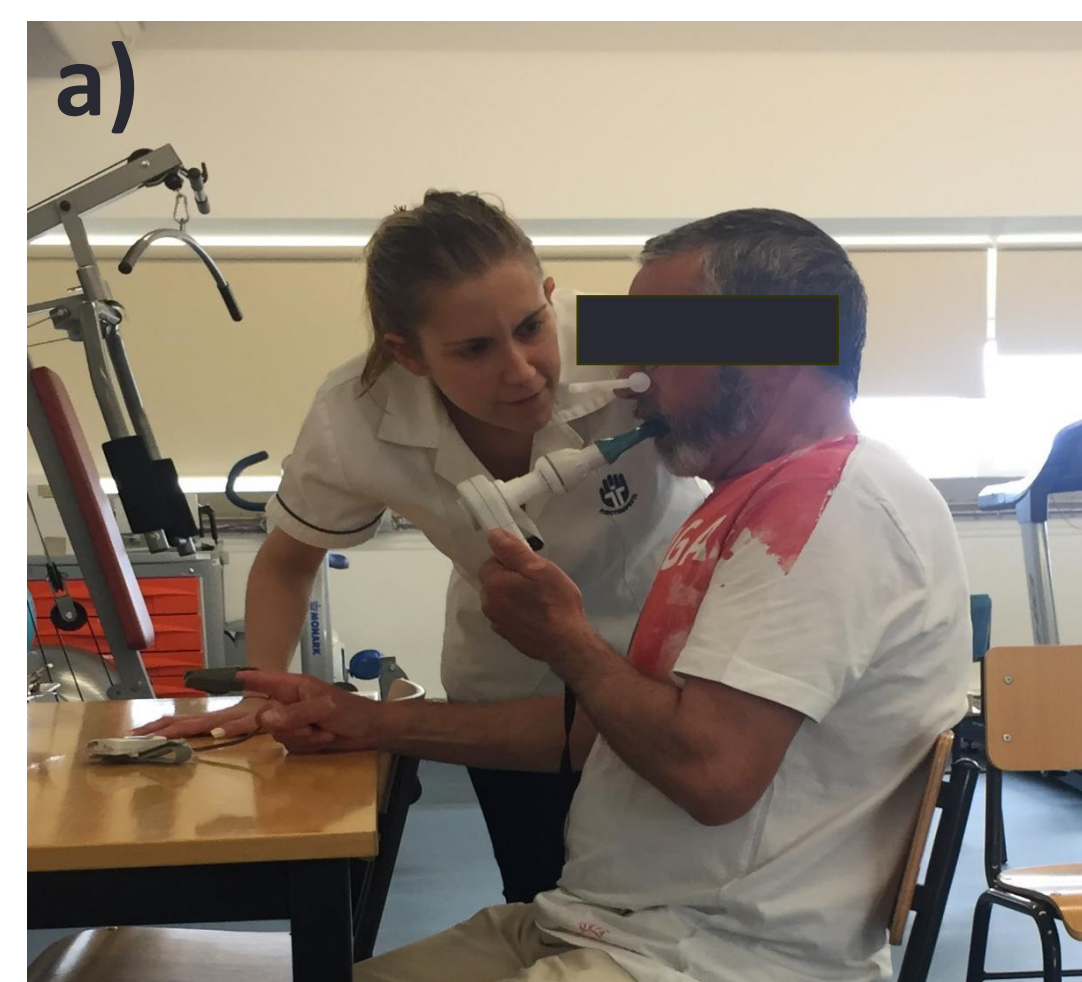
- Chronic obstructive pulmonary disease (COPD) is a multidimensional disease known to affect not only patients but also family functioning¹.
- Family functioning affects several dimensions of patients' psychological and social performance², however its association with patient's physical outcomes remains unknown.

Aim

- This study explored associations between family function and exercise capacity and inspiratory muscle strength in COPD.

Methods

- Patients with COPD were recruited via clinicians from hospitals and primary care centres of the centre region of Portugal.
- Data collection included (Fig. 1):
 - Exercise capacity (6min-walk test - 6MWT)³;
 - Respiratory muscle strength (maximal inspiratory pressure - MIP)⁴;
 - Family function (family adaptability and cohesion evaluation scale - FACES-IV)⁵.
- Correlations were explored with the Spearman's correlation coefficient.



c) Escala de Avaliação da Adaptabilidade e Coesão Familiar

	Discordo Fortemente	Discordo	Não concordo nem discordo	Concordo	Concordo Fortemente
1. Os membros da família estão envolvidos nas vidas uns dos outros.					
2. A nossa família tenta novas formas de lidar com os problemas.					
3. Nós damos-nos melhor com pessoas fora da nossa família do que de dentro.					
4. Nós passamos tempo demais juntos.					
5. Há consequências rígidas para a quebra de regras na nossa família.					
6. Nós nunca parecemos ficar organizados na nossa família.					
7. Os membros da família sentem-se muito próximos uns dos outros.					
8. Os pais partilham igualmente a liderança na nossa família.					
9. Os membros da família parecem evitar o contacto uns com os outros quando estão em casa.					

Fig. 1 - Performance of: a) maximal inspiratory pressure assessment; b) 6-min walk test; c) family adaptability and cohesion evaluation scale.

References

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Results

- 20 patients with COPD (85% male; 67.5±10 years; 54.3±29.4 FEV₁ %predicted) were included.
- Moderate and positive correlations were found between family satisfaction and 6MWT (r=0.55; p=0.02) and between family cohesion and MIP values (r=0.59; p=0.01). Strong and positive correlations (r=0.61; p=0.01) were found between family satisfaction and MIP values. No further significant correlations were found

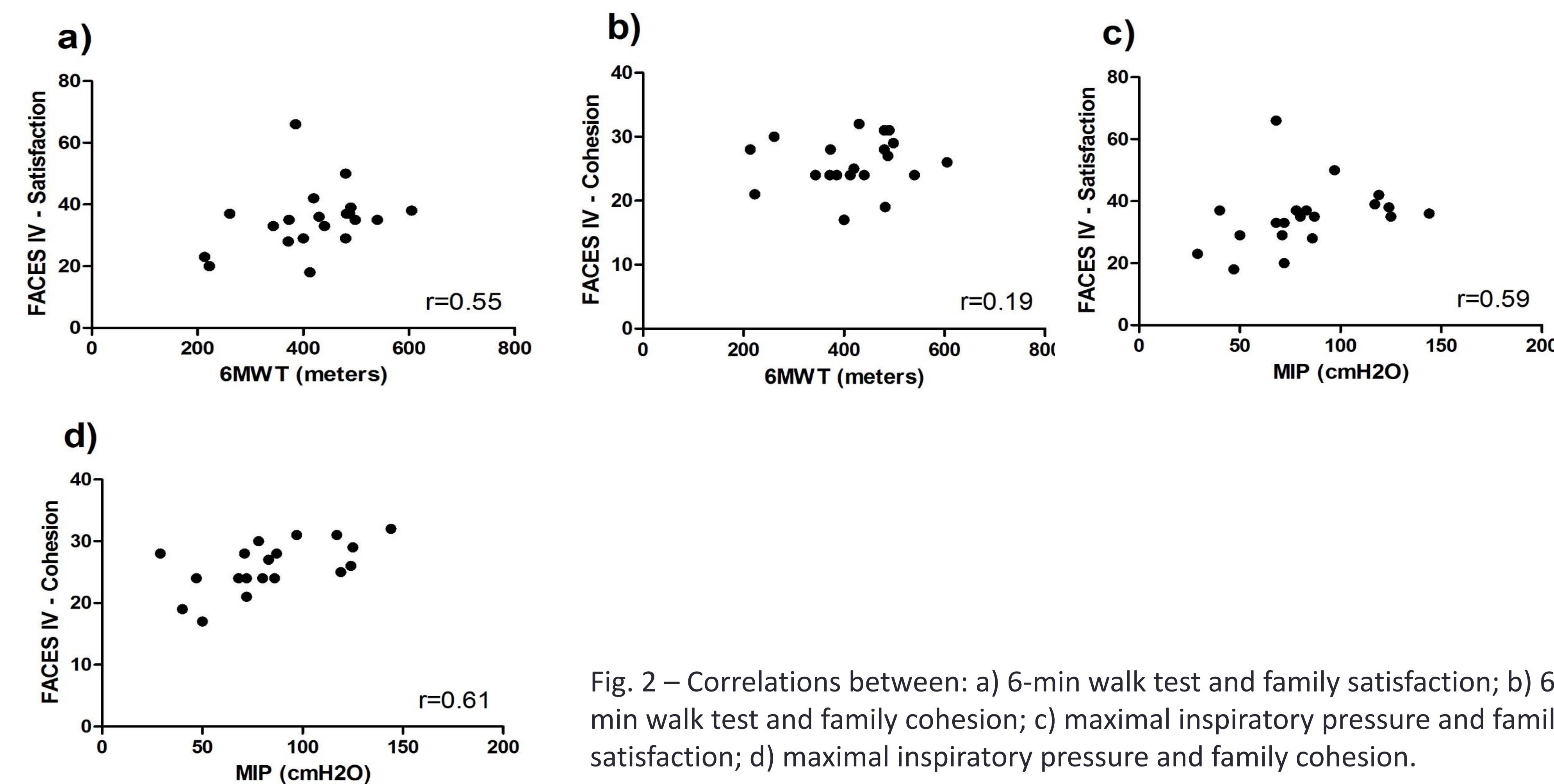


Fig. 2 – Correlations between: a) 6-min walk test and family satisfaction; b) 6-min walk test and family cohesion; c) maximal inspiratory pressure and family satisfaction; d) maximal inspiratory pressure and family cohesion.

Conclusions

- Family function correlated significantly with patients' exercise capacity and inspiratory muscle strength.
- Further research on family functioning is needed to enhance knowledge on COPD management.