

# Dietary resilience in COPD patients at the start of a pulmonary rehabilitation program

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## Aim

In this qualitative study, we aimed to explore dietary resilience: the process of development of strategies for nutrition-related challenges, experienced by patients with Chronic Obstructive Pulmonary Disease (COPD).

## Background

Patients with COPD are susceptible to dietary challenges in grocery shopping, preparing and eating food, possibly resulting in an unhealthy diet.

An unhealthy diet may result in malnutrition, which in turn may negatively impact clinical outcome and is related to poorer quality of life.

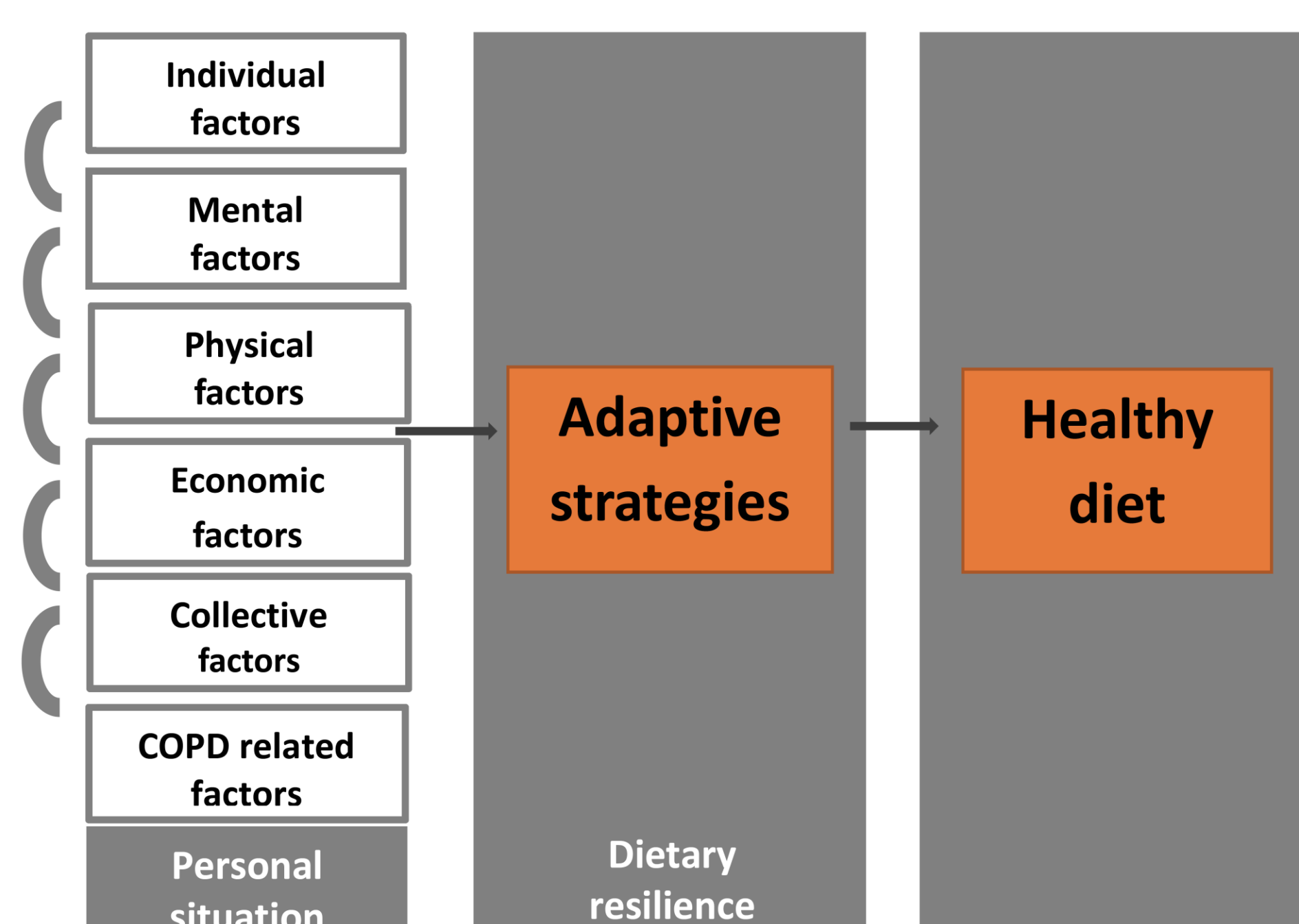


Figure 1. Deductive conceptual model in COPD patients

## Results

- Challenges in grocery shopping, cooking, eating and used strategies were identified (Table 1)
- Key themes: 'Wanting to be as healthy as possible', 'Getting support from loved ones', and 'Staying independent'
- Two patients achieved a healthy diet. Participants that did not have a healthy diet mostly had insufficient intake of fruit, bread and dairy products

## Methods

- Deductive conceptual model, adapted from Vesnaver et al.<sup>1</sup>, used to develop a semi-structured topic list (Figure 1)
- Interviews in 13 COPD patients (aged 46-70 years; 9 female) with  $\geq 2$  risk factors for nutritional vulnerability, i.e. nutrition impact symptoms or living alone, at the start of a rehabilitation program
- Recruitment occurred until saturation of themes was reached
- Healthy diet was defined as  $\geq 80\%$  of Recommended Daily Allowance for all food groups, as assessed by 24 hour recall
- Data were analyzed through thematic descriptive analysis

## References

1. Vesnaver E, Keller HH, Payette H, Shatenstein B. *Appetite* 2012;58(2): 730-738.

## Conclusion

The key themes show that motivation for the development of strategies can derive from either wanting to do anything that helps to stay as healthy as possible, the need to be independent, or from being stimulated by family to eat well.

COPD patients develop a wide range of strategies, i.e. show dietary resilience, although most of the patients in our study do not achieve a healthy diet.

Table 1. Challenges and strategies in COPD patients

Challenges	Strategies
<b>Grocery shopping</b>	
Chest tightness Lack of energy Lack of physical strength Being overweight Limited mobility Nervousness Windy, hot, misty or cold weather Limited financial resources	Getting help from others Adjust to a slower pace Use of a car/e-bike Use of a trolley/cart Choose a particular point in time to avoid crowded conditions
<b>Cooking</b>	
Steam from cooking Smell of food Lack of energy Limited mobility	Getting help from others Air-refreshing measures, like opening all windows, or use of a cooking hood Specific choice of food (with regard to time to cook or smell) Adjust to a lower pace Eating fast food now and then One-pan dish Prepare food for several days Ready-made meals Hairdresser chair, to easily move around the kitchen while sitting
<b>Eating</b>	
Loss of partner Stress Smell of cooked food Dry mouth Chest tightness Fatigue Lack of appetite Early satiation Eating too fast	Creating a pleasant atmosphere at the dinner table with music and/or reading Search for companion to have dinner with Look ahead into the future Use of 'meal boxes' Drinking with meal Breathing techniques Adjust the amount of activity before eating Smaller portions and spreading of meals Use of flavorants Self-discipline by talking to one-self in a firm way Implementation of regularity Being encouraged by partner Alternatives like liquid foods or specific choice of food Being encouraged by own children Taking extra time

