

BACKGROUND

Globally, HF is a growing health concern that affects more than 20 million people worldwide. Despite advances in HF therapies, nearly 40% of patients will die within a year of their first hospitalization. With the **lack of studies** documenting differences in symptom perception, physical functioning, and quality of life between genders, there are potentially missed ways to help improve patient care. Further lack of knowledge can result in a **lower quality of life** and **more functional impairment** in female populations with Heart Failure (HF).

QUESTION/OBJECTIVE:

Is the perception of dyspnea different between men and women in HF along with its relationship with muscle weakness, functional status, depressive symptoms, and disability in ADLs?

METHODS

A secondary analysis of a cross-sectional design was used with a sample of **186 adults** over 21 years of age who were in the New York Heart Association's Functional Class II-IV. Patients were recruited from 3 outpatient tertiary centers and 1 primary clinic.

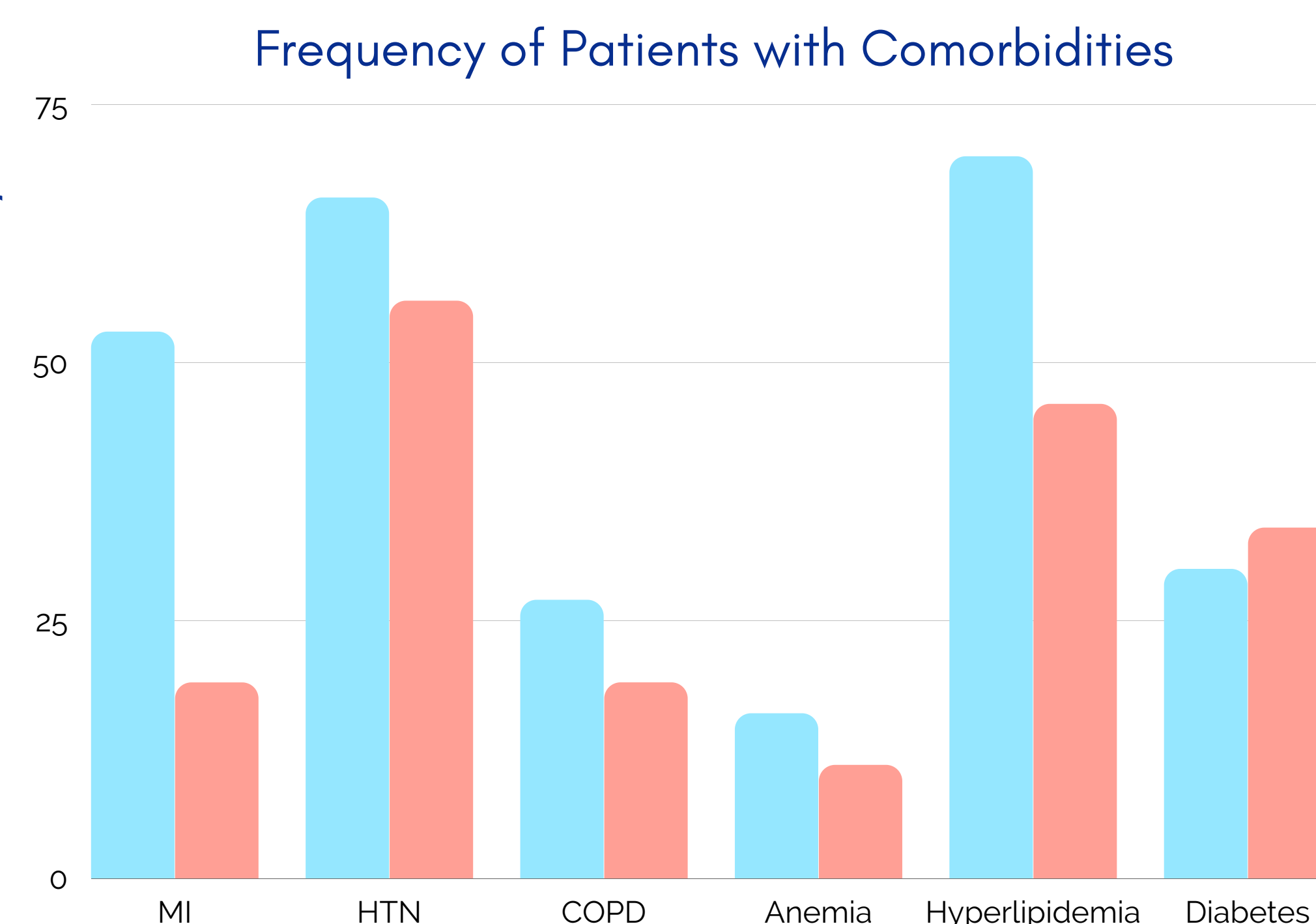
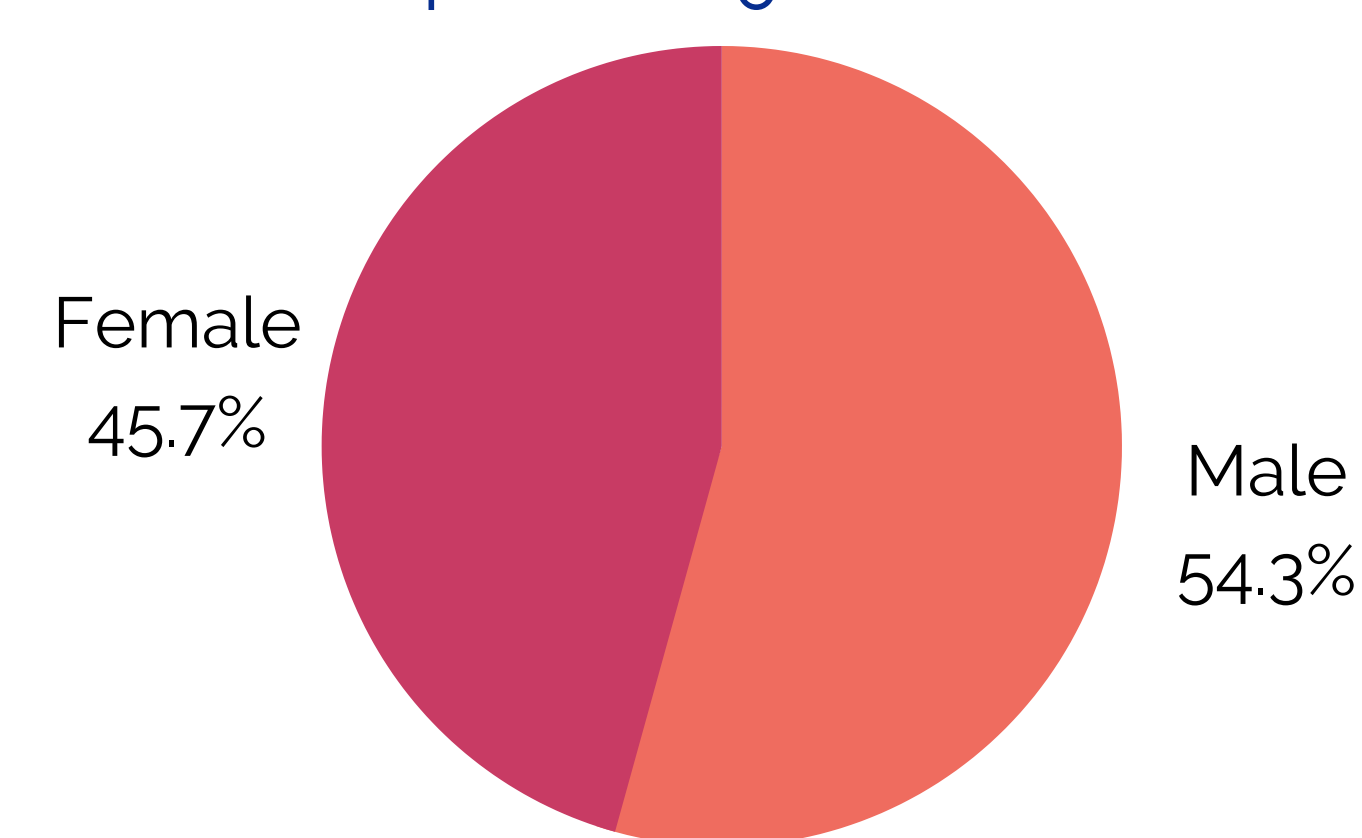
Exclusion Criteria: patients with walking/mobile difficulties from neuromuscular conditions or with severe pain from arthritis or intermittent claudication

MEASURES

- Dyspnea** was measured using a **10-point likert scale** to measure its relation to **ADLs** (3 activities), **IADLs** (5), and **physical functioning (7)** from the **Older Americans Resource Survey** and Late-Life Function and Disability Index.
- Muscle Weakness** on the knee extensor was measured with a **hand-held dynamometer**
- Functional Status** was measured by the **6-minute walk test**
- Disability** was measured by performing **ADLs in relation to restriction using a 0-3 scale and modification with a 10-point likert scale** from **Older Americans Resource Survey** and Late-Life Function and Disability Index
- Depression** was measured by the **Beck Depression Inventory-II**
- Comorbidities** were measured with **Charlson's Comorbidity Index**

RESULTS

Cumulative percentage of Each Gender



Correlation Matrix on 10 Variables for Men with Heart Failure

Men	1	2	3	4	5	6	7	8	9	10
1 bBDI Beck Depression Inventory - Total score b	1									
2 SumDys_Pf	.393***	1								
3 SumDysbADI	.189	.721***	1							
4 SumDysIADL	.267**	.704***	.772***	1						
5 M6mwt_meters	.072	-.204*	-.277**	-.265**	1					
6 aveADLsr average of 6ADLs_restriction	-.067	-.362***	-.516***	-.487***	-.328***	1				
7 aveIADLsr average of IADLs_restriction	-.234*	-.310**	-.338***	-.478***	.414***	.507***	1			
8 aveADLsm average of 6ADLs_modification	.199	.465***	.745***	.646***	-.326***	-.728***	-.473***	1		
9 aveADLsm average of IADLs_modification	.267**	.356***	.478***	.545***	-.447***	-.543***	-.742***	.739***	1	
10 MS_IH	-.209*	-.187	-.241*	-.216*	.092	.158	.023	-.223*	-.193	1

* = p ≤ .05; ** = p ≤ .01; *** = p ≤ .005

Correlation Matrix on 10 Variables for Women with Heart Failure

Women	1	2	3	4	5	6	7	8	9	10
1 bBDI Beck Depression Inventory - Total score b	1									
2 SumDys_Pf	.563***	1								
3 SumDysbADI	.554***	.724***	1							
4 SumDysIADL	.595**	.758***	.795***	1						
5 M6mwt_meters	-.268*	-.231*	-.355***	-.247*	1					
6 aveADLsr average of 6ADLs_restriction	-.292**	-.476***	-.608***	-.495***	-.380***	1				
7 aveIADLsr average of IADLs_restriction	-.193	-.359***	-.449***	-.452***	.406***	.543***	1			
8 aveADLsm average of 6ADLs_modification	.416***	.600***	.762***	.640***	-.394***	-.649***	-.517***	1		
9 aveADLsm average of IADLs_modification	.417***	.593**	.594***	.662***	-.365***	-.538***	-.756***	.761***	1	
10 MS_IH	-.091	-.167	-.058	.075	.119	.068	.117	-.144	-.154	1

* = p ≤ .05; ** = p ≤ .01; *** = p ≤ .005

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CONCLUSION

The results showed that levels of *dyspnea correlated with higher levels of depression and high levels of disability in female patients* while *dyspnea correlated with lower muscle strength in male patients*.

In terms of comorbidities, there were not many differences except that *men with HF had a higher history of myocardial infarction and hyperlipidemia*.

These findings may help with providing target interventions and prevention strategies. Such findings related to dyspnea can encourage improved intervention methods to improve the quality of life for patients accordingly to their gender-specific needs. Understanding comorbidities can introduce prevention programs for patients to prevent or minimize the effects of HF.

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