

# The Relationships between Perfectionism and Cancer-Related Symptoms in Non-Metastatic Breast Cancer Patients Undergoing Chemotherapy



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## Introduction

- Anxiety, depression, fear of cancer recurrence (FCR), insomnia, fatigue, pain, cognitive impairments, and sexual dysfunctions are frequently reported in cancer patients.
- Cancer-related symptoms often occur concomitantly, which suggests the presence of common etiological mechanisms, including psychological ones.
- Perfectionism is increasingly considered as a transdiagnostic factor in the development and maintenance of psychological symptoms and psychopathologies (e.g., anxiety, depression).
- Authors generally agree on the existence of two higher-order dimensions of perfectionism: Perfectionistic Strivings (PS) and Perfectionistic Concerns (PC).
- Some findings suggest that perfectionism could negatively affect patients' adjustment to chronic diseases, but few studies have explored its role in oncology.

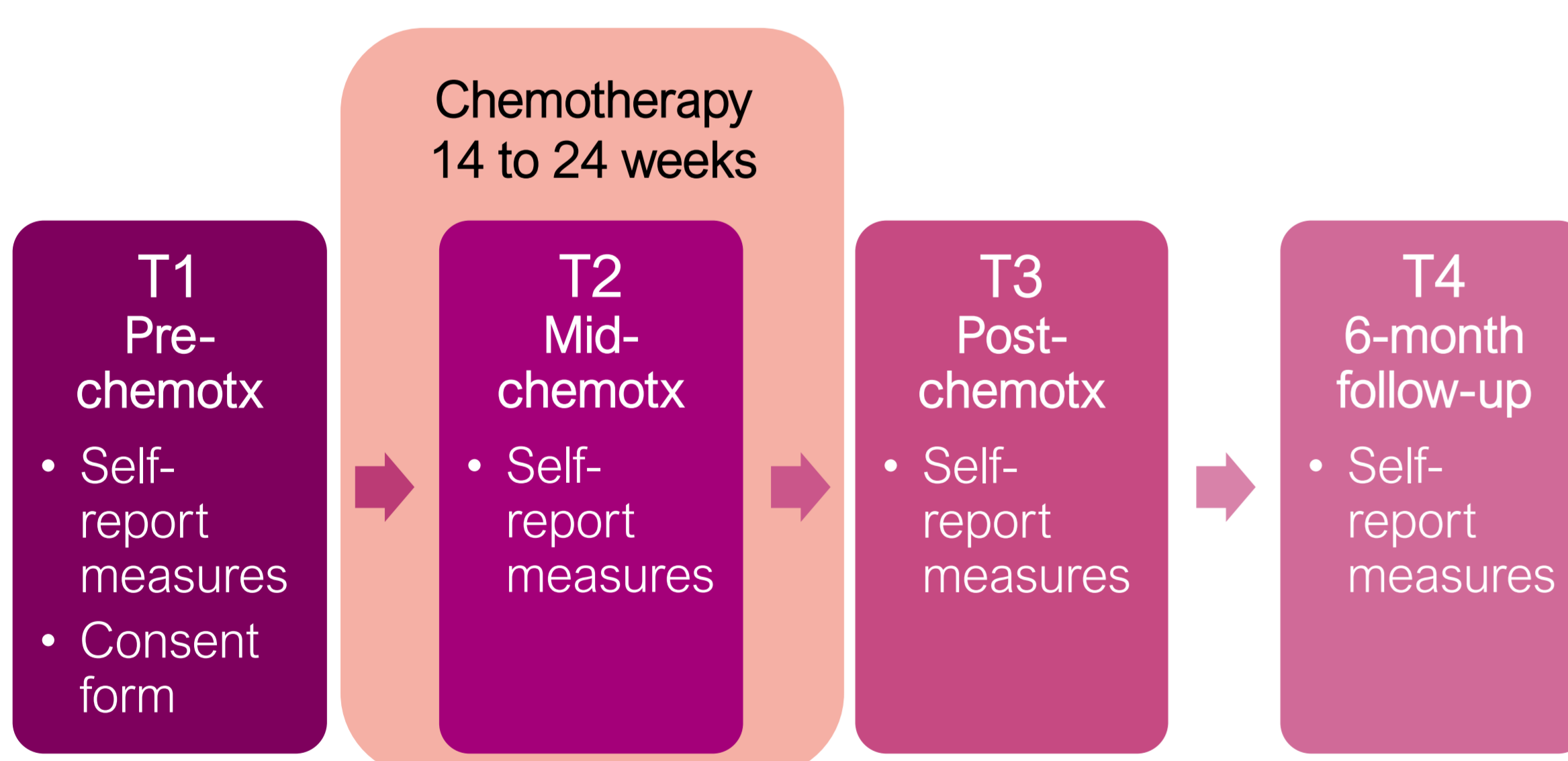
## Objective

- To examine cross-sectional and prospective relationships between PS and PC and psychological (i.e., anxiety, depression, FCR) and psychophysiological symptoms (i.e., insomnia, fatigue, pain, perceived cognitive impairments, sexual dysfunctions).

## Methods

- 40 women diagnosed with non-metastatic breast cancer were recruited before their chemotherapy at the Hôpital du St-Sacrement (CHU de Québec-Université Laval) in Quebec City between July 2019 and March 2020.

## Procedure



### Questionnaires

Frost Multidimensional Perfectionism Scale (FMPS)

Hewitt & Flett Multidimensional Perfectionism Scale (HFMP)

Hospital Anxiety and Depression Scale (HADS)

Fear of Cancer Recurrence Inventory (FCRI)

Insomnia Severity Index (ISI)

Fatigue Symptom Inventory (FSI)

Numeric Rating Pain Scales

Functional Assessment of Cancer Therapy-Cognitive Function (FACT-Cog)

Female Sexual Function Index (FSFI)

Demographic and Medical Questionnaire

## Analyses and Results

### Statistical Analyses

- Creation of the two higher-order dimensions of perfectionism:

PS	PC
<ul style="list-style-type: none"> <li>Self-Oriented Perfectionism (HFMP)</li> <li>Personal Standards (FMPS)</li> </ul>	<ul style="list-style-type: none"> <li>Socially Prescribed Perfectionism (HFMP)</li> <li>Concerns over Mistakes (FMPS)</li> <li>Doubts about Actions (FMPS)</li> </ul>

- Spearman correlations at T1, T2, T3, and T4.
- Partial correlations, controlling for the other perfectionism dimension, at T1, T2, T3, and T4.
- Eight linear repeated measures models, including participant's random effect (intercept), using PS and PC scores (T1 to T4 combined), as well as their interaction with time, as predictors of each symptom (T1 to T4 combined).

Table 1. Demographic and Medical Characteristics at T1 (N = 40)

	M (SD)	N (%)
Age (years; range: 37-73)	54.2 (10.8)	
Marital status		
Married/Cohabiting		27 (67.5)
Education		
High School		11 (27.5)
College/University degree		29 (72.5)
Current occupation		
Working full time/part-time		10 (25.0)
Sick leave		13 (32.5)
Retired		13 (32.5)
Annual family income (Canadian dollars)		
More than \$60 001		21 (52.5)
Time since cancer diagnosis (months; range: 0-6)	2.4 (1.7)	
Cancer stage		
I		6 (15.0)
II		25 (62.5)
III		8 (20.0)
Unspecified		1 (2.5)

Table 2. Spearman Correlations (Partial Correlations) between Dimensions of Perfectionism and Symptoms at each Time Point.

Time	Dimensions of perfectionism	Symptoms							
		Anxiety	Depression	FCR	Insomnia	Fatigue	Pain	Perceived cognitive abilities	Sexual dysfunctions
T1 (N = 40)	PS	.29 (.06)	.33* (.06)	.52*** (.27)	.25 (.17)	.10 (.00)	.09 (.07)	-.26 (-.27)	-.10 (.03)
	PC	.36* (.18)	.41** (.19)	.50*** (.23)	.27 (.02)	.22 (.13)	.07 (.06)	-.15 (.08)	-.10 (-.03)
T2 (N = 40)	PS	.42** (.28)	.40* (.07)	.45** (.24)	.25 (.07)	.42** (.15)	.27 (.08)	-.17 (-.03)	.03 (.22)
	PC	.30 (-.04)	.36* (.19)	.33* (-.00)	.27 (.14)	.41** (.23)	.25 (.17)	-.18 (-.09)	-.11 (-.22)
T3 (N = 35)	PS	.49** (.24)	.42* (.07)	.23 (.08)	.22 (-.12)	.14 (-.14)	.00 (-.18)	-.31 (-.26)	.14 (.06)
	PC	.44** (.13)	.50** (.26)	.21 (.08)	.44** (.30)	.33 (.26)	.23 (.29)	-.36* (-.13)	.09 (.15)
T4 (N = 35)	PS	.23 (.13)	.34* (.04)	.28 (.22)	.15 (-.02)	.26 (.09)	.29 (-.07)	-.17 (-.10)	-.16 (-.05)
	PC	.28 (.03)	.45** (.18)	.23 (.01)	.29 (.19)	.38* (.10)	.43* (.28)	-.21 (-.03)	-.14 (-.00)

Note. FCR = fear of cancer recurrence; PS = perfectionistic strivings; PC = perfectionistic concerns; coefficients in ( ) are partial correlation coefficients when controlling for the other dimension of perfectionism.

\*p ≤ .05; \*\*p ≤ .01; \*\*\*p ≤ .001

Table 3. Unique Contribution of Perfectionism Dimensions on Symptoms (T1 to T4 combined).

Symptoms	Predictors	df num	df den	F	p
Anxiety	PS	1	131	6.01	.016
	PS X time	3	54	1.44	.241
	PC	1	131	0.18	.671
	PC X time	3	58.2	0.94	.426
	Time	3	58.2	3.85	.014
Depression	Time since COVID-19 <sup>a</sup>	1	61.4	4.89	.031
	PS	1	96.8	0.22	.642
	PS X time	3	38	0.61	.615
	PC	1	94.2	5.81	.018
	PC X time	3	39	0.56	.648
Time	3	35.5	0.10	.961	

Note. df num = degree of freedom in the numerator; df den = degree of freedom in the denominator; PS = perfectionistic strivings; PC = perfectionistic concerns; FCR = fear of cancer recurrence; <sup>a</sup> = covariate included in the model.

- In the six remaining models (i.e., FCR, insomnia, fatigue, pain, perceived cognitive abilities, and sexual dysfunctions), dimensions of perfectionism did not significantly predict symptoms ( $ps = .084$  to  $.922$ ).

## Conclusion

- PS and PC had significant and moderate-to-strong correlations with greater scores of anxiety, depression, and FCR at most time points.
- Significant correlations were less consistent over time with psychophysiological symptoms.
- None of the partial correlations was significant, which suggests that the common variance between PS and PC accounts for a considerable part in their relationships with the symptoms.
- The linear repeated measures models revealed that only PS were significantly associated with greater anxiety, while only PC predicted higher depressive symptoms. Both relationships were consistent throughout the study (T1 to T4).
- Overall, findings support the relevance of evaluating the role of perfectionism in cancer patients and suggest that patients with higher levels of perfectionism are more vulnerable to experience psychological distress during their cancer care trajectory.
- These results are consistent with the differential susceptibility hypothesis suggesting that PS are more likely to be associated with negative outcomes in the context of chronic stress.
- Associations between PC and depressive symptoms were expected and could reflect the tendency of people high in PC to be overly critical of themselves.

## Limitations

- Small sample size.
- Generalization of findings limited to non-metastatic breast cancer patients.