STATE ANXIETY IN THE PTCA AND STENT POPULATION

RENÉE TROTTER, BN, Grad Dip (Critical Care)

A thesis submitted in accordance with the (partial) requirements of the Degree of Master of Nursing (Honours)

Faculty of Nursing Midwifery and Health
University of Technology, Sydney
December 2007

i

Certificate of Authorship/Originality

I certify that the work in this thesis has not been previously submitted for a degree nor has it been submitted as part requirements of a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help I have received in my research work and in the preparation of this thesis itself has been acknowledged. In addition, I certify that all the information sources and the literature used are indicated in the thesis.

Signature of candidate

Production Note:
Signature removed prior to publication.

Acknowledgements

I wish to express my appreciation to several people who have provided me with guidance, comment, and support over the past four years. I would like to thank my principal supervisor, Associate Professor Robyn Gallagher (Associate Professor of Chronic and Complex Care, Faculty of Nursing Midwifery and Health, University of Technology Sydney) for her guidance, advice and support during my candidature. I would also like to thank Professor Judith Donoghue (Professor of Acute Care Nursing, Faculty of Nursing Midwifery and Health, University of Technology Sydney and South Eastern Sydney and Illawarra Health Service) who acted as co-supervisor for her helpful comments.

I would also like to express my appreciation to the people who participated in this research, as well as my gratitude to the staff of the Cardiac Catheterisation

Laboratory and the Coronary Care Unit, at the recruiting hospital. Without the participation and support for this study from these people, the research would have been limited.

I would also like to thank Jean Trotter for her assistance with data entry and thesis formatting. Finally and personally, I would like to express my thanks to my family and friends for their support. I am particularly thankful for the unfailing support, good will and humour that my husband Christopher, whose love and unwavering faith in my ability to persevere and succeed in this endeavour, sustained me on many occasions.

Table of Contents

Certificate of Authorship/Originalityi					
Acknow	vledgements	i			
Table o	Γable of Contents				
List of	List of Figuresv				
List of	Гables	vi			
Abstrac	ct	.vii			
Chapte	r One - Background	1			
1.1	Introduction	1			
1.2	Coronary Artery Disease	2			
1.3	The PTCA and Stent Procedure	5			
1.4	Patients' Experience of PTCA and Stent	6			
1.5	Procedural Experiences for Patients	7			
1.6.	Potential Post Procedure Complications and Consequences	8			
1.7	Anxiety	.11			
1.8	Anxiety in CAD Patients	.13			
1.9	Anxiety Measurement, Management and Nursing Care	15			
1.10	Thesis Structure	17			
1.11	Summary	17			
Chapter	r Two - Literature Review	19			
2.1	Introduction	19			
2.2	Assessment of Anxiety in PTCA and Stent Patients	19			
2.3	Anxiety in PTCA and Stent Patients	25			
2.3	Anxiety in Coronary Angiography and Myocardial Infarction Populations	29			
2.4	Patient Concerns	31			

	2.5	Anx	riety Assessment	34
	2.6	Sum	nmary	34
	2.7	Rese	earch Questions	35
C	hapter	Thro	ee - Method	36
	3.1	Intro	oduction	36
	3.2	Desi	ign	36
	3.3	Setti	ing and Sample	36
	3.3.	1	Study Setting	36
	3.3.2	2	Sample Inclusion Criteria	37
	3.3.3	3	Sample Exclusion Criteria.	38
	3.3.4	4	Withdrawal of Participants	38
	3.4	Ethi	cs	38
	3.4.	1	Informed Consent	39
	3.4.2	2	Freedom from Coercion	39
	3.4.3	3	Strategies for Addressing High Levels of Anxiety	40
	3.4.4	4	Privacy and Confidentiality	40
	3.5	Data	Collection and Instruments	40
	3.5.1	1	Socio-Demographic Data	40
	3.5.2	2	Anxiety Measures	41
	3.6	Proc	edure	43
	3.6.1	l	Recruitment	43
	3.6.2	2	Sample Participation (Tracking of Participants)	43
	3.6.3	3	Timing of Assessments	.45
	3.7	Data	Analysis	.46
	3.7.1		Data Entry	.46

3.7	7.2 Analysis Techniques	46				
3.7	7.3 Sample Size	46				
3.7	7.4 Multiple Regression Analysis	47				
3.7	7.5 Assumptions of the Analysis	49				
3.8	Summary of Methods.	49				
Chapter 4 - Results50						
4.1	Introduction	50				
4.2	Sample Characteristics.	50				
4.3	Anxiety	54				
4.4	Nursing Interventions Suggested by Participants to Manage Anxiety	56				
4.5	Predictors of Anxiety	57				
4.6	Evaluation of the FAS in the PTCA and Stent Population	59				
4.7	Summary of Predictors	61				
4.8	Summary of Results	62				
Chapter Five - Discussion65						
5.1	Introduction	65				
5.2	Occurrence of Anxiety	65				
5.3	Measuring Anxiety in Cardiac In-patients	71				
5.4	Strengths and Limitations	73				
5.5	Implications for Nursing Practice	75				
Referen	ices	80				
Appendix A: Spielberger State Anxiety Inventory89						
Appendix B: Faces Anxiety Scale90						
Appendix C: Ethics Approval from Study Site91						
Appendix D: Ethics Approval From The University of Technology, Sydney92						

Append	ix E: Patient Information Sheet	93
Append	ix F: Patient Consent Form	94
Append	ix G: Data Collection Sheet	95
List of I	Figures	
Figure 1	. Recruitment of participants (tracking of participants)	14
Figure 2	. Concerns identified by participants at each time	56
Figure 3	. Comparison of the number of participants found to be clinically anxious	
	using the FAS and SAI6	50
List of 7	Tables	
Table 1.	Summary of variables entered into multiple regression models	18
Table 2.	Socio-demographic and clinical characteristics	51
Table 3.	PTCA and stent related characteristics	52
Table 4.	Procedure related complications	53
Table 5.	Post discharge events	54
Table 6.	Anxiety over time, measured by the State Anxiety Inventory (SAI)	55
Table 7.	Predictors of anxiety; pre-procedure, post procedure and post discharge5	58
Table 8.	Anxiety measured by the State Anxiety Inventory compared to the Faces	
	Anxiety Scale5	59
Table 9.	Sensitivity and specificity of the Faces Anxiety Scale pre and post	
	procedure6	0
Table 10	. Correlations of the FAS vs. SAI6	1
Table 11	. Summary of predictors of anxiety pre-procedure, post procedure and post	
	discharge 6	52

Abstract

Percutaneous transluminal coronary angioplasty (PTCA) and stent has become the most commonly performed cardiac procedure in Australia over the last decade. This study investigated the level of anxiety experienced by patients who were undergoing elective PTCA and stent procedures. Anxiety was assessed at three specific times, inhospital pre-procedure, within 18 hours after the procedure, and one-week post discharge, using two methods to assess anxiety, the State Anxiety Inventory and the Faces Anxiety Scale.

The sample (n = 100) was predominantly elderly (mean 65.63 years), male (80%) and married (83%). Most participants (70%) had previously experienced a cardiac event, of which the most common was PTCA and stent (41%). Almost half of the participants had experienced unstable angina (47%) and the most frequent concurrent condition was hypertension (67%).

The results confirm that most people were not clinically anxious as anxiety SAI scores ranged from 37.72 (mean) pre-procedure and decreased over time to 31.8 (mean) post procedure and again post discharge 28.79 (mean). However, there is a significant group of participants that experienced more than normal levels of anxiety pre procedure (49%), post procedure (32%) and post discharge (19%). The independent predictors of anxiety were also identified through multiple regression analysis. Participants at risk of pre-procedure anxiety were those taking medications for the management of the symptoms of anxiety and depression. The predictors of post procedure anxiety included anxiety pre-procedure, having chest pain post procedure, or

undergoing a PTCA and stent procedure for the first-time. Again, post discharge patients were more likely to be anxious if they were anxious pre-procedure and they reported their major concern to be related to the future progression of their coronary artery disease. The Faces Anxiety Scale proved to have low sensitivity and moderate specificity in this sample.

The conclusion is that anxiety is relatively common and needs to be identified and treated, particularly pre-procedure to decrease subsequent anxiety. An instrument to detect anxiety quickly and accurately needs to be developed for clinical use.