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Kesan Terapi “*Applied Progressive Muscle Relaxation Training*” kepada Paras Kemurungan, Kerisauan, Keresahan dan Kualiti Hidup di Kalangan Pesakit Kanser Prostat.

Bidang Penyelidikan: **Epidemiologi**

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Title of Project Paper/Research Report/Dissertation/Thesis (“this Work”):

The Impact of the Applied Progressive Muscle Relaxation Training on the Levels of Depression, Anxiety, Stress and Health-Related Quality of Life among Prostate Cancer Patients

Field of Study: **Epidemiology**

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Abstrak

Pengenalan

Tujuan utama kajian ini adalah untuk menentukan tahap keberkesanan *applied progressive muscle relaxation training* (APMRT) pada paras kemurungan, kebimbangan, tekanan dan asas kualiti hidup (HRQOL) di kalangan pesakit kanser prostat.

Metodologi

Ini adalah kajian percubaan kuasi-eksperimen dengan pengukuran berulang yang dijalankan di dua pusat perubatan pengajian tinggi di Kuala Lumpur. Kajian dijalankan dalam tempoh selama enam bulan. Kumpulan intervensi adalah pesakit kanser prostat yang mendapat rawatan susulan di Pusat Perubatan Universiti Malaya (PPUM) dan kumpulan perbandingan adalah pesakit kanser prostat yang mendapat rawatan susulan di Pusat Perubatan Universiti Kebangsaan Malaysia (PPUKM).

Maklumat asas tentang ciri-ciri sosio-demografi, sejarah penyakit kronik, amalan gaya hidup pesakit, permasalahan pembuangan kencing semasa, status kanser dan rawatan untuk kanser prostat telah di ambil melalui temuduga bersemuka dan kajian dari rekod perubatan. Permarkahan bagi kemurungan, kebimbangan dan tekanan telah dinilai menggunakan Skala Kemurungan, Kebimbangan Tekanan (DASS) dan pemarkahan untuk tahap asas kualiti hidup (HRQOL) telah dinilai dengan menggunakan soal selidik Tinjauan Kesihatan Ringkas dengan 36 item (SF-36). Penilaian telah dikumpulkan melalui soal selidik yang di jawab oleh pesakit itu sendiri.

Keputusan

Sejumlah dari 193 pesakit layak menyertai kajian ini, di mana 109 pesakit dari PPUM dan 84 pesakit dari PPUKM. Di ke dua-dua kumpulan tersebut, pesakit adalah di kalangan mereka yang berumur 70 hingga 80 tahun, bangsa Cina, berkahwin, tinggal dengan ahli keluarga atau rakan kongsi mereka dan mempunyai pendidikan sekolah menengah. Tiada perbezaan yang signifikans ($p > 0.05$) pada ciri-ciri sosio-demografi, sejarah penyakit kronik, amalan gaya hidup pesakit, aduan kencing dan status kanser semasa kecuali untuk rawatan bagi kanser prostat di mana kumpulan perbandingan, mereka banyak mendapat rawatan lanjut dengan suntikan zoladex ($p < 0.001$) dan dalam kumpulan intervensi, mereka lebih banyak mendapat rawatan lanjut suntikan lucrine ($p < 0.001$). Hipertensi adalah penyakit kronik yang tertinggi (67.6%) dan kerap kencing pada waktu malam adalah aduan kencing (87.3%) di kalangan pesakit kanser prostat

Pada permulaan, hanya 77 pesakit dari PPUM dan 78 pesakit dari PPUKM telah bersetuju untuk mengambil bahagian dalam kajian ini. Pada akhir kajian, hanya 70 pesakit dari PPUM dan 68 pesakit dari PPUKM telah melengkapkan kajian

memberikan kadar penyiapan sebanyak 90.9% bagi kumpulan intervensi dan 88.2% bagi kumpulan perbandingan.

Selepas pemberian APMRT, terdapat peningkatan skor yang signifikan dalam mengurangkan tahap kebimbangan ($p < 0.001$) dan tekanan ($p < 0.001$) tetapi tidak pada kemurungan ($p = 0.784$). APMRT juga meningkatkan skor yang signifikan pada skor ringkasan komponen mental (MCS) ($p = 0.019$) dan jumlah skor keseluruhan kualiti hidup (QOL) ($p = 0.045$) tetapi tidak pada skor ringkasan komponen fizikal ($p = 0.656$). Walau pun APMRT telah menunjukkan perubahan yang signifikan dalam perubahan kebimbangan, tekanan, MCS dan skor keseluruhan kualiti hidup, APMRT hanya memberikan kesan yang rendah disebabkan *effect sizes* yang kecil.

Kesimpulan

Walaupun keputusan daripada kajian ini tidak menunjukkan signifikan secara klinikal, APMRT telah menunjukkan kesan yang memberangsangkan kepada masalah psikologi dan kualiti hidup di kalangan pesakit kanser prostat. Justeru itu, APMRT perlu dikekalkan untuk memastikan semua peningkatan dalam kualiti yang berkaitan kesihatan umum serta tekanan psikologi di kalangan pesakit kanser prostate boleh dikekalkan pada masa hadapan.

Abstract

Introduction

The main aim of this study was to determine the impact of the applied progressive muscle relaxation training (APMRT) on the levels of depression, anxiety, stress and general health-related quality of life (HRQOL) among prostate cancer patients.

Methodology

A quasi-experimental trial with repeated measurements conducted at two tertiary medical centres in Kuala Lumpur with a follow up period for six months. The intervention group comprised patients who were being followed up at University Malaya Medical Centre (UMMC) and the comparison group were patients who were followed up at Universiti Kebangsaan Malaysia Medical Centre (UKMMC).

Baseline information on socio-demographic characteristics, history of chronic diseases, lifestyles practices of the patients, current urinary complaints and cancer status and treatment for prostate cancer were collected via face to face interview and review of the medical records. The scores for depression, anxiety and stress were assessed by using Depression Anxiety Stress Scales (DASS) and the scoring for HRQOL was assessed by using Short Form Health Survey consisting 36 items (SF-36). The assessments were achieved through self-administered questionnaires.

Results

There were 109 patients from UMMC and 84 patients from UKMMC who were eligible for the study. In both groups, majority of them were: in the age group 70 to 80 years, Chinese, male were married, staying with their family members or partner and had secondary school education. The baseline socio-demographic characteristics, history of chronic diseases, lifestyle practices of the patients, current urinary complaints, current cancer status were comparable ($p>0.05$) in both groups except for the treatment for the prostate cancer. In comparison group, more patients (79.8%) were treated with zoladex injection ($p<0.001$) and in intervention group, more patients (42.2%) treated with luteal injection ($p<0.001$). Hypertension was the highest co-morbidity besides prostate cancer (67.6%) and nocturia was the commonest urinary complaint among the patients (87.3%).

Only 77 patients from UMMC and 78 patients from UKMMC eventually agreed to participate in the study. At the end of the study, there were 70 patients from UMMC and 68 patients from UKMMC who completed the study. The completion rates were 90.9% for intervention group and 88.2% for the comparison group.

After implementation of the APMRT, it was observed that there were significant improvement for anxiety ($p<0.001$) and stress ($p<0.001$) but not for depression ($p=0.784$). APMRT also significantly increased in the score for mental component

summary (MCS) ($p=0.019$) and overall total quality of life (QOL) ($p=0.045$) but not for physical component summary (PCS) ($p=0.656$). Even though APMRT was found to be statistically significant in improving anxiety, stress, MCS and total QOL levels, the impact of the APMRT was low due to small effect sizes.

Conclusion

Although the results were not clinically significant, APMRT shows promising effect on the psychological problems and quality of life among prostate cancer patients. The practice of APMRT should be maintained to ensure that all improvements in general health-related quality of life as well as psychological distress among prostate cancer patients can be sustained in the future.

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Content

	Page
Perakuan keaslian penulisan	i
Original literary work declaration	ii
Abstrak	iii
Abstract	v
Acknowledgement	vii
Contents	viii
Tables	xviii
Figures	xxi
Publications	xxii
Abbreviations	xxv
CHAPTER 1: INTRODUCTION	1
1.1 Global pattern of prostate cancer	1
1.2 Psychological Problems in Prostate Cancer Patients	2
1.3 Health Related Quality of Life (HRQOL) in Men with Prostate Cancer	3
1.4 Treatment for prostate cancer	4
1.5 Complementary and Alternative Medicine (CAM) in Prostate Cancer Patients	6
1.6 Relaxation Therapy	7
1.7 Statement of Problem and research gap	8
1.8 Conceptual Framework	9
1.9 The Hypothesis	12
1.10 Objectives of the study	12
1.10.1 General objective	12
1.10.2 Specific objectives	13
CHAPTER 2: LITERATURE REVIEW	14
2.0 Introduction	14
2.1 Prostate	15
2.1.1 Anatomy of Prostate Gland	15
2.1.2 Epidemiology of Prostate Cancer	17
2.1.2.1 Global	17
2.1.2.2 Malaysia	18
2.1.3 Mortality	19
2.1.4 Survival	21
2.1.5 Pathogenesis of Prostate Cancer	22
2.1.6 Types of Prostate Cancer	23
2.1.7 Risk factors of Prostate Cancer	24
2.1.7.1 Age	24
2.1.7.2 Race	26
2.1.7.3 Family History	28
2.1.7.4 Nutrition and Dietary Supplements	29
2.1.7.5 Hormone	31

	2.1.7.6	Environmental Factors	31
	2.1.7.7	Sexual Activity	32
	2.1.7.8	Genetic Factors	32
	2.1.7.9	Physical Activity and Obesity	33
2.1.8		Screening for Prostate Cancer	34
	2.1.8.1	Digital Rectal Examination (DRE)	35
	2.1.8.2	Prostatic Specific Antigen (PSA)	36
2.1.9		Diagnosis and Investigations	38
	2.1.9.1	Trans-rectal Ultrasound (TRUS) and Needle Biopsy	38
	2.1.9.2	Gleason Score	39
	2.1.9.3	Staging	42
	2.1.9.4	Prognosis	44
2.1.10		Impact on Diagnosis	45
	2.1.10.1	Impact on Incidence of Prostate Cancer	45
	2.1.10.2	Impact on Stage of Prostate Cancer	46
	2.1.10.3	Impact on Grade of Prostate Cancer	47
	2.1.10.4	Impact on Mortality	48
2.2		Depression, Anxiety and Stress in Prostate Cancer Patients	50
	2.2.1	Depression	50
	2.2.1.1	Introduction	50
	2.2.1.2	Depression and Prostate Cancer	52
	2.2.1.3	The Impact of Depression on Quality of Life	53
	2.2.2	Anxiety	55
	2.2.2.1	Introduction	55
	2.2.2.2	Anxiety in Cancer Patients	57
	2.2.2.3	Anxiety and Prostate Cancer	58
	2.2.2.4	The Impact of Anxiety on Quality of Life in Cancer Patients	59
	2.2.3	Stress	60
	2.2.3.1	Introduction	60
	2.2.3.2	Stress Responses	62
	2.2.3.2.1	Physiological Stress Response	62
	2.2.3.2.2	Psychological Stress Response	66
	2.2.3.3	Stress and Prostate Cancer	67
	2.2.3.4	The Impact of Stress on Quality of Life	69
2.3		Health Related Quality of Life (HRQOL)	72
	2.3.1	Introduction	72
	2.3.2	Why is HRQOL Important?	74
	2.3.3	Measurement of HRQOL in Prostate Cancer Patients	75
	2.3.4	Quality of Life in Men with Localized and Advanced Prostate Cancer	78
	2.3.4.1	Quality of Life in Men with Localized Prostate Cancer	79
	2.3.4.2	Quality of Life in Men with Metastatic Prostate Cancer	81
	2.3.5	The Impact of HRQOL Affecting Treatment Decision	82
	2.3.5.1	The Impact of Radical Prostatectomy on HRQOL	82
	2.3.5.2	The Impact of Radiotherapy on HRQOL	84
	2.3.5.3	The Impact of Watchful Waiting on HRQOL	86

2.3.5.4	The Impact of Brachytherapy (BT) on HRQOL	87
2.3.5.5	The Impact of Androgen Deprivation Therapy (ADT) on HRQOL	88
2.3.5.6	The Impact of Cryosurgery on HRQOL	89
2.3.5.7	The Impact of Orchiectomy (Androgen withdrawal) on HRQOL	89
2.3.5.8	The Impact of Hormonal therapy on HRQOL	90
2.4	Relaxation	92
2.4.1	Introduction	92
2.4.2	Relaxation Technique	92
2.4.3	Relaxation Response	93
2.4.4	Classification of Relaxation Technique	94
2.4.5	Aims of Relaxation Therapy	95
2.4.6	The Benefits of Relaxation Therapy	96
2.4.7	Progressive Muscle Relaxation (PMR)	98
2.4.8	Abbreviated Methods of Progressive Muscle Relaxation	99
2.4.9	The Mechanism of Relaxation	102
2.4.9.1	Physiological Theories	102
2.4.9.1.1	The Autonomic Nervous System (ANS)	102
2.4.9.1.2	Endocrine System	105
2.4.9.1.3	Skeletal Musculature	106
2.4.9.2	Psychological Theories	106
2.4.9.2.1	Cognitive Theory	106
2.4.9.2.2	Behavioural Theory	107
2.4.9.2.3	Cognitive-Behaviour Theory (CBT)	108
2.4.10	Review of Clinical Studies of the Progressive Muscle Relaxation (PMR) on the Depression, Anxiety, Stress and Health Related Quality of Life (HRQOL)	108
2.4.10.1	Demographics	132
2.4.10.2	Types of intervention	132
2.4.10.3	Study designs	133
2.4.10.4	The frequency, duration and length of intervention given	132
2.4.10.5	Sample size	133
2.4.10.6	Instruments	134
2.4.10.7	Outcomes	135
2.4.10.8	Conclusion	138
CHAPTER 3: METHODOLOGY		139
3.1	Study Design	139
3.2	Location of Study	139
3.2.1	University of Malaya Medical Centre (UMMC)	140
3.2.2	Universiti Kebangsaan Malaysia Medical Centre (UKMMC)	141
3.3	Study Population	141
3.3.1	Inclusion Criteria	141
3.3.2	Exclusion Criteria	142
3.4	Sampling Method and Sample Size Estimation	142
3.4.1	Sampling Procedure	142
3.4.2	Sample Size Estimation	142

3.4.2.1	Depression	143
3.4.2.2	Anxiety	144
3.4.2.3	Stress	144
3.4.2.4	Health Related Quality of Life	145
3.5	Recruitment of Patients	146
3.6	Flowchart of the Methodology	146
3.7	Intervention	148
3.7.1	The Applied Progressive Muscle Relaxation Training (AMPRT)	148
3.7.2	Modules and Mode of Delivery	148
3.7.2.1	First Module	148
3.7.2.2	Second Module	149
3.7.2.2.1	Abdominal breathing Technique	149
3.7.2.2.2	Abdominal Breathing Instruction	150
3.7.2.3	Third Module	151
3.7.2.4	Fourth Module	151
3.7.2.5	Fifth Module	151
3.7.2.6	Sixth (Final Module)	152
3.7.2.7	Mode of Delivery	152
3.7.3	Daily Home APMRT by Patients	152
3.7.4	Pamphlets and Health Information	153
3.7.5	Monitoring of Compliance	153
3.7.5.1	Worksheet	154
3.7.5.2	Phone Calls	154
3.8	Comparison Group	154
3.9	Assessments of Health Related Quality of Life, Depression, Anxiety and Stress	155
3.10	Method of Data Collection	157
3.10.1	Face to Face Interview	157
3.10.2	Review of Medical Records	157
3.10.3	Review of Log Book	158
3.10.4	Self-Administered Questionnaires	158
3.10.4.1	Depression Anxiety Stress Scales-21 (DASS-21)	158
3.10.4.2	Short Form Health Survey the RAND-36 General Health Related Quality of Life (SF-36)	161
3.10.4.2.1	Interpretation of SF-36 Domains and the Two Health Summaries	164
3.10.4.2.2	Scoring of SF-Domains	167
3.10.4.2.3	Calculation of SF-36 Domains ...	168
3.10.4.2.4	Health Summaries Calculation ...	169
3.10.4.2.4.1	Standardization of the Eight SF-36 Domains to Z-score	170
3.10.4.2.4.2	Weighting and Aggregation of the Eight SF-36 Scales	170
3.10.4.2.4.3	Transformation of the Aggregate Scale to a T-score	171

	3.10.4.2.5	Clinically Meaningful Difference in Assessment of Health Related Quality of Life	172
3.11		Study Variables	172
3.12		Data Management	175
3.13		Data Analysis	176
	3.13.1	Reliability Analysis	176
	3.13.2	Descriptive Analysis	177
	3.13.3	Homogeneity of the Study Groups	178
	3.13.4	Analysis for the Correlation between Physical Component Summary (PCS) and Mental Component Summary (MCS) and Correlation between Age and Total Health Related Quality of Life (HRQOL)	178
	3.13.5	Analysis for the paired differences in the scores (depression, anxiety, stress, Physical component summary (PCS), mental component summary (MCS) and total quality of life (QOL)) at baseline to 4-month, baseline to 6-month and 4-month to 6- month	179
	3.13.6	Analysis for the Impact of the Applied Progressive Deep Muscle Relaxation Training on the Score for Depression, Anxiety, Stress and Health Related Quality of Life	179
		3.13.6.1 Univariate Approach	180
		3.13.6.2 Multivariate Approach	180
	3.13.7	Effect Size (ES)	182
	3.13.8	Test of Within-subject Contrast	183
3.14		Ethical Consideration	183
3.15		Consent	183
3.16		Registration of Trial	184
3.17		Quality Metric Permission for the Scoring of Short Form Health Survey the RAND-36 General Health Related Quality of Life (SF-36)	184
3.18		Budget	185
CHAPTER 4: RESULTS			186
4.1		Reliability of DASS-21 and SF-36	187
	4.1.1	Reliability Analysis for DASS-21	187
	4.1.2	Reliability Analysis for SF-36	187
4.2		Baseline Characteristics of the Patients	188
	4.2.1	Socio-demographic Characteristics of Patients	188
	4.2.2	History of Chronic Diseases of the Patients	190
	4.2.3	Lifestyle Practices of the Patients: Smoking and Alcohol Status and Sexual Activity	191
	4.2.4	Current Urinary Complaints of the Patients	192
	4.2.5	Current Cancer Status of the Patients	193
	4.2.6	Treatment for Prostate Cancer of the Patients	196
4.3		Baseline Scores	197
	4.3.1	Health Related Quality of Life (HRQOL)	197
		4.3.1.1 Domain of Health Related Quality of Life (HRQOL)	197
		4.3.1.2 Physical and Mental Component Summaries and	199

		Total Health Related Quality of Life (HRQOL)	
	4.3.1.3	Self-reported Health Transition	200
	4.3.1.4	Correlation between Physical Component Summary (PCS) and Mental Component Summary (MCS)	201
	4.3.1.5	Correlation between Age and Health Related Quality of Life (HRQOL)	203
	4.3.2	Self-Perceived Depression, Anxiety and Stress	203
	4.3.2.1	Baseline Scores of Self-Perceived Depression, Anxiety and Stress	203
	4.3.2.2	Categories of Self-Perceived Depression, Anxiety and Stress among Intervention and Comparison Groups at Baseline	204
4.4		Process Evaluation	206
	4.4.1	Response and Completion Rates	206
	4.4.2	Characteristics of Respondents and Non-respondents	208
	4.4.3	Completion Rate	210
	4.4.4	The Frequency of Applied Progressive Muscle Relaxation Training (APMRT) Conducted	211
	4.4.5	Frequency of Practicing APMRT at Home	214
	4.4.6	Frequencies of Telephone Calls	214
4.5		Comparison Group	214
4.6		Outcome Evaluation	215
	4.6.1	Health Related Quality of Life (HRQOL)	215
	4.6.1.1	Physical Component Summary (PCS)	215
		4.6.1.1.1 Mean Score of PCS throughout the Study	215
		4.6.1.1.2 Between-subject Effect for PCS ...	216
		4.6.1.1.3 Within-subject Effect for PCS	218
		4.6.1.1.4 Post-hoc Multiple Comparison of score for PCS	219
	4.6.1.2	Mental Component Summary (MCS)	219
		4.6.1.2.1 Mean Score of MCS throughout the Study	219
		4.6.1.2.2 Between-subject Effect for MCS ...	220
		4.6.1.2.3 Within-subject Effect for MCS	223
		4.6.1.2.4 Post-hoc Multiple Comparison for score of MCS	224
		4.6.1.2.5 Within-subject Contrast for MCS ..	226
	4.6.1.3	Total Quality of Life (QOL)	227
		4.6.1.3.1 Mean Score of Total QOL throughout the Study	227
		4.6.1.3.2 Between-subject Effect for total QOL	227
		4.6.1.3.3 Within-subject Effect for total QOL .	230
		4.6.1.3.4 Post-hoc Multiple Comparison for Score of total QOL	231
		4.6.1.3.5 Within-subject Contrast for total QOL	233

4.6.1.4	Self-reported health transition of the participants at baseline and at 6-months of the study	234
4.6.2	Self-perceived Depression, Anxiety and Stress	236
4.6.2.1	Depression	236
4.6.2.1.1	Mean Score of Depression throughout the Study	236
4.6.2.1.2	Between-subject Effects for Depression	237
4.6.2.1.3	Within-subject Effects for Depression	239
4.6.2.1.4	Post-hoc Multiple Comparison for Score of Depression	240
4.6.2.2	Anxiety	240
4.6.2.2.1	Mean Score of Anxiety throughout the Study	240
4.6.2.2.2	Between-subject Effect for Anxiety	242
4.6.2.2.3	Within-subject Effect for Anxiety ...	244
4.6.2.2.4	Post-hoc Multiple Comparison for Score of Anxiety.....	245
4.6.2.2.5	Within-subject Contrast for Anxiety	247
4.6.2.3	Stress	248
4.6.2.3.1	Mean Score of Stress throughout the Study	248
4.6.2.3.2	Between-subject Effects for Stress	249
4.6.2.3.3	Within-subject Effects for Stress ...	251
4.6.2.3.4	Post-hoc Multiple Comparison for Score of Stress	252
4.6.2.3.5	Within-subject Contrast for Stress	254
4.6.2.4	Categories of Self-perceived Depression, Anxiety and Stress of the participants at baseline and 6-month of the Study	255
CHAPTER 5: DISCUSSION		257
5.1	Instruments used in assessment	258
5.1.1	Depression Anxiety Stress Scales Version 21 (DASS-21)	258
5.1.2	Short Form Health Survey the RAND-36 General Health Related Quality of Life (SF-36)	259
5.2	Reliability Analysis of the Instruments	259
5.2.1	Reliability Analysis for DASS-21	259
5.2.2	Reliability Analysis for SF-36	259
5.3	Baseline Characteristics of the patients	260
5.3.1	Socio-demographic Characteristic of Patients	260
5.3.2	History of chronic diseases of the patients	262
5.3.3	Lifestyle practices of the patients – smoking, alcohol and sexual statuses	264
5.3.4	Current urinary complaints of the patients	266
5.3.5	Current cancer status of the patients	267
5.3.6	Treatment for the prostate cancer of the patients	269
5.4	Health-related Quality of Life	270

5.4.1	Total quality of life (QOL)	270
5.4.2	Comparison between Physical Component Summary (PCS) and Mental Component Summary (MCS)	271
5.4.3	Correlation between Physical Component Summary (PCS) and Mental Component Summary (MCS)	273
5.4.4	Correlation between Age and Health Related Quality of Life (HRQOL)	273
5.5	Depression, Anxiety and Stress	274
5.5.1	Depression	275
5.5.1.1	The mean score of depression using DASS-21	275
5.5.1.2	The categories of depression	276
5.5.2	Anxiety	277
5.5.2.1	The mean score of anxiety using DASS-21	277
5.5.2.2	The categories of anxiety	277
5.5.3	Stress	278
5.5.3.1	The mean score of stress using DASS-21	278
5.5.3.2	The categories of stress	279
5.6	Process Evaluation	280
5.7	Outcome evaluation	280
5.7.1	Health Related Quality of Life (HRQOL)	281
5.7.1.1	Physical Component Summary (PCS)	281
5.7.1.2	Mental Component Summary (MCS)	282
5.7.1.3	Total Quality of Life (QOL)	284
5.7.1.4	Self-reported Health Transition of the participants at baseline and at 6-months	286
5.7.2	Depression, Anxiety and Stress	286
5.7.2.1	Outcome evaluation for Depression	287
5.7.2.2	Outcome evaluation for Anxiety	289
5.7.2.3	Outcome evaluation for Stress	292
5.7.2.4	Categories of Depression, Anxiety and Stress of the Participants at Baseline and at 6-months of the Study	293
5.7.2.4.1	Depression	293
5.7.2.4.2	Anxiety	294
5.7.2.4.3	Stress	295
5.7.3	The correlation between frequency of practicing Applied Progressive Muscle relaxation Training (APMRT) and the scores of depression, anxiety and stress and the scores of health related quality of life (HRQOL)	295
5.8	Strengths and limitations of the study	296
5.8.1	Strength of this study	296
5.8.1.1	Homogeneity of the participants	296
5.8.1.2	Location of the study	296
5.8.1.3	Data analysis	297
5.8.1.4	Script of relaxation therapy and compact disc instruction	297
5.8.1.5	Data collection	297
5.8.1.6	Follow up	297
5.8.1.7	Type of Analysis	298
5.8.2	Limitations of the study	298

5.8.2.1	Study design	298
5.8.2.2	Response, non-response and selection biases	299
5.8.2.3	Information bias	299
5.8.2.4	Missing data from the secondary data	300
5.8.2.5	Poor compliance of the patients	300
5.9	Study implication	300

CHAPTER 6: CONCLUSION & RECOMMENDATIONS 302

6.1	Conclusions	302
6.1.1	Baseline psychological problems and health related quality of life	302
6.1.2	The impact of Applied Progressive Muscle Relaxation Training on psychological problems and health related quality of life	302
6.2	Recommendations	303
6.2.1	Result-based recommendations	303
6.2.2	Other related recommendations: Lesson learnt from this research	305
6.2.3	Recommendations for future research	306

REFERENCES 308

APPENDICES

Appendix A	: Abdominal Breathing Instruction	346
Appendix B	: Applied Progressive Muscle Relaxation Training Instruction	347
Appendix C	: End of Relaxation Session Instruction	353
Appendix D	: Relaxation Worksheet	355
Appendix E	: Background Questionnaire	356
Appendix F	: Depression, Anxiety, Stress Scale (DASS-21) : English and Malay Versions	360
Appendix G	: Medical Outcomes Survey Short Form 36 (SF-36) (English and Malay Versions)	362
Appendix H	: Scoring for pre-coded item and its corresponding final values	370
Appendix I	: UMMC Ethic Committee	372
Appendix J	: UKMMC Ethic Committee	375
Appendix K	: UMMC Patient Information Sheet	378
Appendix L	: UKMMC Patients Information Sheet	380
Appendix M	: UMMC Consent by Patient for Clinical Research (Malay and English Versions)	384
Appendix N	: UKMMC Consent form for Patient (Malay and English Versions)	388
Appendix O	: Trial Registration	390

Tables

		Page
Table 2.1	: Prostate Cancer Registry, Malaysia	19
Table 2.2	: The age specific prostate cancer incidence (per 100,000 populations)	25
Table 2.3	: The Prostate Cancer incidence (per 100,000 populations) and Age Standardized Incidence (ASR) by Ethnicity	28
Table 2.4	: Treatment and prognosis of prostate cancer related to tumor stage	43
Table 2.5	: The Health Related Quality of Life (HRQOL) instruments used in Prostate Cancer	77
Table 2.6	: The difference between Jacobson's progressive relaxation method and Progressive Relaxation Training	101
Table 2.7	: Progressive muscle relaxation studies for depression, anxiety, stress and health-related quality of life	110
Table 2.8	: Distribution of the instrument used for the quality of life assessment	134
Table 2.9	: Distribution of the instrument used for assessment of depression, anxiety and stress	135
Table 3.1	: Measurements taken during the study period	156
Table 3.2	: General guideline for the Depression Anxiety Stress Scales (DASS) severity ratings	160
Table 3.3	: Grouping of items according to domains	163
Table 3.4	: Summary of information about SF-36 domains	165
Table 3.5	: Summary of information about components summary measures	166
Table 3.6	: Formula for scoring and transforming scale	169
Table 3.7	: The norms used in calculating PCS and MCS for Malaysian population	170
Table 3.8	: The norms used in calculating PCS and MCS	171
Table 3.9	: Operational definitions	173
Table 4.1	: Minimum Score, Maximum Score and the Cronbach's α of DASS-Depression, DASS-Anxiety and DASS-Stress	187
Table 4.2	: Minimum Score, Maximum Score and the Cronbach's α of SF-36	188
Table 4.3	: The Socio-demographic Characteristics of Patients	189
Table 4.4	: History of Chronic Diseases and Surgery of Patients	190
Table 4.5	: The Lifestyle Practices of Patients: Smoking and Alcohol Statuses and Sexual Activity	192
Table 4.6	: Current Urinary Complaints of Patients	193
Table 4.7	: Current Cancer Status of Patients	195
Table 4.8	: Prostate Cancer Treatment of Patients	196
Table 4.9	: The Baseline Score of the Health Related Quality of Life.	198
Table 4.10	: The baseline means score of Physical Component Summary (PCS), Mental Component Summary (MCS) and total Quality of Life (QOL)	199
Table 4.11	: Correlation between Age and PCS, MCS and Total QOL ..	203
Table 4.12	: The baseline score of the Self-Perceived Depression,	204

	Anxiety and Stress	
Table 4.13	: Categories of Self-perceived Depression, Anxiety and Stress among Intervention and Comparison Groups at Baseline	205
Table 4.14	: Socio-demographic characteristics and some lifestyles of the respondents and non-respondents	209
Table 4.15(a)	: The comparison of patients' scores of physical component summary (PCS), mental component summary (MCS) and total quality of life (QOL) given by the principal investigator (PI) and occupational therapist (OT)	212
Table 4.15(b)	: The comparison of patients' scores of depression, anxiety and stress given by the principal investigator (PI) and occupational therapist (OT)	213
Table 4.16	: Comparison of PCS score level between two study groups	217
Table 4.17	: Paired differences for mean PCS score from baseline to at 4-months, baseline to at 6-months and at 4-months to at 6-months in intervention and comparison groups	218
Table 4.18	: Comparison of MCS score level between two study groups	222
Table 4.19	: Paired differences for mean MCS score from baseline to at 4-months, baseline to at 6-months and at 4-months to at 6-months in intervention and comparison groups	223
Table 4.20	: Post-hoc comparison of score of MCS (Interaction between Time and group) between two study groups at each pair of time level	225
Table 4.21	: Within-subject contrast for MCS	226
Table 4.22	: Comparison of total QOL score level between two study groups	229
Table 4.23	: Paired differences for mean total QOL score from baseline to at 4-months, baseline to at 6-months and at 4-months to at 6-months in intervention and comparison groups	230
Table 4.24	: Post-hoc comparison of total QOL score between two study groups at each pair of time level	232
Table 4.25	: Within-subject contrast for total QOL	233
Table 4.26	: Self-reported health transition of the participants at baseline and at 6-month of the study	235
Table 4.27	: Comparison of depression score level between two study groups	238
Table 4.28	: Paired differences for mean depression score from baseline to at 4-months, baseline to at 6-months and at 4-months to at 6-months in intervention and comparison groups	239
Table 4.29	: Comparison of Anxiety score level between two study groups	243
Table 4.30	: Paired differences for mean anxiety score from baseline to at 4-months, baseline to at 6-months and at 4-months to at 6-months in intervention and comparison groups	244
Table 4.31	: Post-hoc comparison of anxiety score between two study groups at each pair of time level	246
Table 4.32	: Within-subject contrast for anxiety	247
Table 4.33	: Comparison of Stress score level between two study groups	249

	groups	
Table 4.34	: Paired differences for mean stress score from baseline to at 4-months, baseline to at 6-months and at 4-months to at 6-months in intervention and comparison	251
Table 4.35	: Post-hoc comparison of stress score between two study groups at each pair of time level	253
Table 4.36	: Within-subject contrast for stress	254
Table 4.37	: Classification of the depression, anxiety and stress of the participants at baseline and at 6-months of the study	256

Figures

		Page
Figure 1.1	: Conceptual framework of the study	11
Figure 2.1	: Male reproductive tract and the prostate gland	16
Figure 2.2	: Digital Rectal Examination	35
Figure 2.3	: The Gleason Scale and its description	41
Figure 2.4	: Age adjusted (1970 US standard) prostate cancer incidence in White population by stage	46
Figure 2.5	: Age-adjusted (1970 US standard) prostate cancer incidence in White by tumour grade	47
Figure 2.6	: The pathway of physiological stress response	64
Figure 2.7	: The Sympathetic Outflow. The main structures supplied and the effects of stimulation. Solid lines pre-ganglionic fibers; broken lines postganglionic	103
Figure 2.8	: The Parasympathetic Outflow, the main structures supplied and the effects of stimulation. Solid lines pre-ganglionic fibers; broken lines, postganglionic fibers	104
Figure 3.1	: Flowchart of the Methodology	147
Figure 3.2	: Eight domains of SF-36 with its two summaries component	163
Figure 3.3	: Flow Chart for Repeated Measurement Analysis	181
Figure 4.1	: Comparison of the prevalence of at least one co- morbidity with age categories	191
Figure 4.2	: The Distribution of the self-reported health transition for intervention and comparison groups	200
Figure 4.3(a)	: Correlation between PCS and MCS for Intervention group	202
Figure 4.3(b)	: Correlation between PCS and MCS for comparison group	202
Figure 4.4	: The flow diagram of the progress at different phases of study in intervention and comparison groups	207
Figure 4.5	: Completion rates for intervention and comparison groups ..	210
Figure 4.6	: The score of the physical component summary (PCS) for both intervention and comparison groups	216
Figure 4.7	: The score of the mental component summary (MCS) for both intervention and comparison groups	219
Figure 4.8	: The score of the total quality of life (QOL) for both intervention and comparison groups	228
Figure 4.9	: The score of depression for both intervention and comparison groups	237
Figure 4.10	: The score of the anxiety for both intervention and comparison groups	241
Figure 4.11	: The score of the stress for both intervention and comparison groups	249

Publications

The following papers have been published or submitted from this thesis:

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1. The General Health Related Quality of Life and Depression Status among prostate Cancer Patients in Two University Hospitals in Kuala Lumpur, Malaysia. Mohamad Rodi Isa, Moy Foong Ming, Azad Hassan Abdul Razack, Zulkifli Md Zainuddin, Nor Zuraida Zainal. 6th Asia Pacific Organization for Cancer Prevention, Taipei, Taiwan, 20th – 23rd March 2014. Presented as Poster.
2. The impact of Applied Progressive Muscle Relaxation Training on the Health Related Quality of Life among Prostate Cancer Patients – A quasi Experimental Trial. Mohamad Rodi Isa, Moy Foong Ming, Azad Hassan Abdul Razack, Zulkifli Md Zainuddin, Nor Zuraida Zainal. 1st Asia Pacific Clinical Epidemiology and Evidence –Based Medicine Conference. Kuala Lumpur, Malaysia. 6th – 8th July 2012. Presented as oral.
3. Study of Stress Status and its Relationship with General Health Related Quality of Life among Prostate Cancer Patients in Two Tertiary Centers in Kuala Lumpur. Mohamad Rodi Isa, Moy Foong Ming, Azad Hassan Abdul Razack, Nur Zuraida Zainal. 6th Asia Pacific Organization for Cancer Prevention, Kuching Sarawak, Malaysia. 26th – 29th April 2012. Presented as poster.
4. A study of Stress Status and its Relationship with General Health Related Quality of Life among Prostate Cancer Patients in a Tertiary Centre in Kuala Lumpur. Mohamad Rodi Isa, Moy Foong Ming, Azad Hassan Abdul Razack, Zulkifli Md Zainuddin, Nor Zuraida Zainal. International Health Conference IIUM 2011, Kuantan, Pahang, Malaysia. 7th – 8th December 2011. Presented as oral
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DOI: 10.1016/j.ypmed.2013.02.011.
2. The impact of applied progressive muscle relaxation training on the levels of depression, anxiety and stress among prostate cancer patients: A quasi-experimental study. **Mohamad Rodi Isa**, Foong Ming Moy, Azad Hassan Abdul Razack, Zulkifli Md Zainuddin, Nor Zuraida Zainal. Asia Pacific Journal of Cancer Prevention 2013;14(4): 2237-2242.
DOI:<http://dx.doi.org/10.7314/APJCP.2013.14.4.2237>
3. Anxiety Status and its Relationship with General Health Related Quality of Life among Prostate Cancer Patients in Two University Hospitals in Kuala Lumpur, Malaysia. **Mohamad Rodi Isa**, Foong Ming Moy, Azad Hassan Abdul Razack, Zulkifli Md Zainuddin, Nor Zuraida Zainal. Iranian J Publ Health 2013; 42(3): 240 – 248
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DOI:<http://dx.doi.org/10.7314/APJCP.2012.13.12.5999>
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Abbreviations

3D-CRT	3-Dimensional Conformal Radiation Therapy
ACTH	Adrenocorticotrophic Hormones
ADH	Anti-diuretic Hormone
ADHD	Attention-deficit Hyperactivity Disorder
ADT	Androgen Deprivation Therapy
AJCC	American Joint Committee on Cancer
ANOVA	Analysis of Variance
ANS	Autonomic Nervous System
APA	American Psychiatric Association
APMRT	Applied Progressive Muscle Relaxation Training
ASR	Adjusted Standardization Rate
AVP	Arginine-Vasopression
BAI	Beck Anxiety Inventory
BDI	Beck Depression Inventory
BMI	body mass index
BP	Bodily Pain
BPD	Borderline Personality Disorder
BT	Brachytherapy
CAM	Complementary and Alternative Medicine
CCV	Quality of life: Cuestionario de Calidad de Vida QL-CAAFex
CBT	Cognitive Behavioral Theory
CR	Crude Rate
CRH	Corticotrophin Releasing Hormone
CSAI-2	Competitive State Anxiety Inventory-2
CSAQ	Cognitive Manifestations of Anxiety
DAS	Dental Anxiety Scale
DASS-21	Depression Anxiety Stress Scales-21
DRE	Digital Rectal Examination
EBRT	Electron Beam Radiation Therapy
EMAS	Endler Multidimensional Anxiety Scale
EORTC	The European Organization for Research and Treatment of Cancer
EPIC	Expended Prostate Cancer Index Composite
ERSPC	European Randomised Study of Screening for Prostate Cancer
FACT	Functional Assessment of Cancer Therapy-Colorectal scale
FACT-G	Functional Assessment of Cancer Therapy Scale (General)
FACT-P	Functional Assessment of Cancer Therapy Scale (Prostate)
F2IP	F2-Isoprostanes
GH	General Health
GHQ-12	General Health Questionnaire
GP	General Practitioner
HADS	Hospital Anxiety and Depression Scale
HAQ	Hierarchical Anxiety Questionnaire
HPA	Hypothalamic-pituitary-adrenal
HPAA	Hypothalamic-pituitary-adrenal Axis
HRQOL	Health Related Quality of Life
HTLV-1	Human T-cell Lymphotropic Virus type I
HUI3	Health Utilities Index

HUSM	Hospital Universiti Sains Malaysia
ICD	International Classification of Disorders
IMRT	Intensity Modulated Radiation
LC/NE	Locus Ceruleus-Norepinephrine
LHRH	Luteinising Hormone-releasing Hormone
MBM	Mind-body medicine
MBT	Mind-body therapy
MCS	Mental Coefficient Summary
MH	Mental Health
MLR	Multiple Linear Regression
MOH	Ministry of Health
OR	Odds Ratio
PCI	UCLA-Prostate Cancer Index
PCOS	Prostate Cancer Outcomes Study
PCS	Physical Coefficient Summary
PF	Physical Function
PIN	Prostatic Intraepithelial Neoplasia
PLCO	Prostate, Lung, Colorectal and Ovarian Cancer Screening Trial
PMR	Progressive Muscle Relaxation
PRL	Prolactin
PSA	Prostatic Specific Antigen
PSAD	PSA Density
PSADT	PSA Doubling Time
PSAT	PSA Density of Transition Zone
PSAV	PSA Velocity
PSS	Perceived Stress Scale
PTSD	Post-Traumatic Stress Disorder
QALY	Quality of Life Adjusted Life
QOL	Quality of Life
RE	Role-Emotional
RP	Role-Physical
SEER	Surveillance Epidemiology and End Results
SF	Social Functioning
SF-36	RAND 36-Item Health Survey
SLR	Simple Linear Regression
SNS	Sympathetic Nervous System
SPSS	Statistical Package for Social Sciences
STAI	State-Trait Anxiety Inventory
STPI	State-Trait Personal Inventory sub-scale Anxiety
TRUS	Trans-rectal Ultrasound
UICC	International Union Against Cancer
UK	United Kingdom
UKMMC	Universiti Kebangsaan Malaysia Medical Centre
UMMC	University of Malaya Medical Centre
US	United States of America
VASS	Visual Analogue Scale Stress
VT	Vitality
WHO	World Health Organization