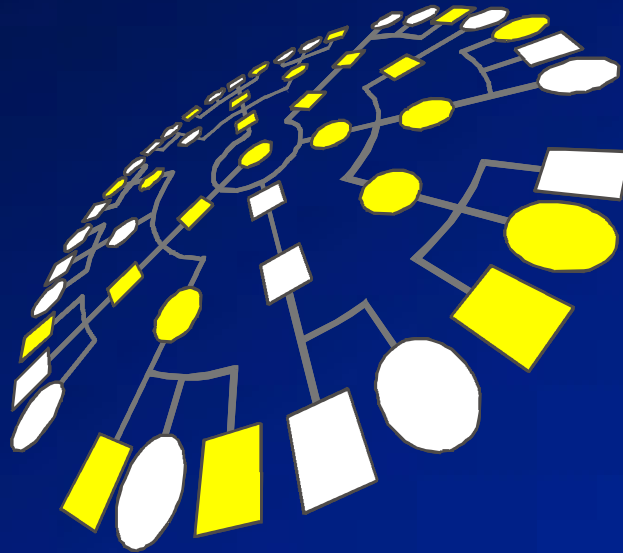


Psychological Profile of Colorectal Cancer Genetic Testing Recipients in Hong Kong



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Introduction

Predictive Genetic Testing

- Revolutionize management of hereditary colorectal cancer (HCRC)
- Genetic testing
 - Stressor
 - Untoward psychological response
- Identification of factors affecting such response may improve adjustment to test results

Introduction

Previous Study

Decisional consideration process

- Our subjects focused more on the reactions of others in their decisional consideration process
- Perceived risk was an important factor in decision consideration
- Those with higher perceived risk focused more on the negative consequence of knowing the results & sharing the results with relatives

Aim

For Hong Kong Chinese undergoing genetic testing for HCRC

- Examine their psychological profile
- Identify factors affecting adjustment to the test results

Methodology

Subjects

- Chinese HCRC syndrome family members recruited by the Registry
- Offered genetic testing
- Cross-sectional study using self-administered questionnaire

Methodology: Psychological Inventories

Cancer knowledge	Meiser et al
Coping style	Chinese version of Miller Behavioral Style Scale (CMBSS): monitoring, blunting
Hope	Adult Trait Hope Scale (ATHS): way power, will power
Distress	Chinese version of Hospital Anxiety & Depression Scale (CHADS)
Positive affect	Chinese version of Satisfaction with Life Scale (CSWLS)
Posttraumatic growth	Chinese Post Traumatic Growth Inventory (CPTGI)
Posttraumatic stress	Chinese version of Impact of Event Scale-Revised (CIES-R)

Results

- 125 eligible families & 350 eligible subjects
- 141 subjects from 70 families participated (response rate: 40%)
- Data of 131 subjects were analyzed
 - 61 male, 70 female
 - 52 FAP, 79 HNPCC
 - Mean age 43.3 ± 11.4 years
 - 72 gene carriers; 6 non-carriers; 53 pending genetic testing results

Results

Distress measured by CHADS

- Cutoff score = 10
- 11.9% had depression
- 20.5% had anxiety

Results: Descriptive Statistics (1)

	FAP	HNPC	T-value
	Mean (SD)	Mean (SD)	
Cancer knowledge	5.69 (1.89)	4.96 (2.14)	1.99**
CMBSS			
Blunting	8.82 (2.34)	7.40 (2.89)	0.833
Monitoring	10.76 (3.15)	11.56 (2.92)	-1.45
Hope Scale			
Will power	23.10 (5.57)	23.16 (5.41)	-0.06
Way power	24.27 (5.29)	23.86 (4.86)	0.46
Hope total	47.37 (10.20)	47.12 (9.80)	0.14

** $p < 0.05$

Results: Descriptive Statistics (2)

	FAP Mean (SD)	HNPCC Mean (SD)	T-value
CHADS			
Depression	4.24 (2.98)	6.08 (4.49)	-2.57**
Anxiety	5.31 (3.29)	7.53 (4.71)	-2.91**
Life satisfaction (CSWLS)	21.71 (6.51)	22.11 (7.86)	-0.30
Posttraumatic growth (PTGI)	64.26 (14.16)	64.07 (9.80)	0.76
CIES-R			
Avoidance	1.02 (0.70)	1.30 (0.65)	-2.341**
Intrusion	0.97 (0.54)	1.30 (0.66)	-2.973**
Hyperarousal	0.68 (0.53)	1.10 (0.71)	-3.525**
CIES-R total	2.65 (1.54)	3.74 (1.73)	-3.436**

** $p < 0.05$

Results: Correlation Analysis

	1	2	3	4	5	6	7	8
1. Cancer knowledge	*	-0.07	0.11	0.11	-0.12	-0.07	-0.01	0.22
2. Blunting Coping Style	0.08	*	0.16	0.56	0.13	0.10	0.05	0.04
3. Monitoring Coping Style	0.06	0.001	*	0.16	0.04	0.06	0.04	0.29
4. Hope	0.16	0.10	-0.002	*	-0.53**	-0.46**	0.61**	0.44**
5. Depression	-0.20	-0.07	0.07	-0.45**	*	0.62**	-0.65**	-0.33*
6. Anxiety	-0.15	-0.13	0.21	-0.28*	0.79**	*	-0.67**	-0.21
7. Satisfaction with Life	-0.10	0.08	-0.12	0.50**	-0.42**	-0.37**	*	0.16
8. Posttraumatic growth	0.30*	0.17	0.13	0.69**	-0.32**	-0.10	0.29*	*

Upper triangle: FAP; lower triangle: HNPPC

** $p < 0.01$; ** $p < 0.05$*

Results: Regression Analysis

- Hope is the significant predictor for
 - HADS depression score (β -0.450**)
 - HADS anxiety score (β -0.319**)
 - Life satisfaction score (β 0.536**)
- Hope & colorectal cancer knowledge were significant predictors for PTGI score (β 0.27* & 0.585**, respectively)

* $p < 0.05$

** $p < 0.01$

Conclusion

- Hope is the most important predictor of psychological outcome in Chinese individuals undergoing genetic testing for HCRC
- Hope-based training should be able to reduce negative psychological impact & facilitate adjustment of individuals to genetic testing result
- Improvement in knowledge on colorectal cancer may also facilitate growth

Acknowledgement

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Limitation of Study

- Cross-sectional study: assessment at only one time-point
- Subjects at different stages of genetic testing: different psychological adaptation
- Psychological profile of non-responders unknown

Implication for Further Study

- Prospective longitudinal study of individuals undergoing genetic testing
 - To confirm result of this study
 - To investigate psychological adaptation process
- Intervention study
 - Compare psychological outcome of subjects with or without hope-based training