Relationships Among Fatigue, Physical Activity, Depressive Symptoms, and Quality of Life In Chinese Young Cancer Survivors

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Outlines of Presentation

- The background of childhood cancer in Hong Kong

- Examine the relationships among fatigue, physical activity, depressive symptoms, and quality of life in childhood cancer survivors

Background

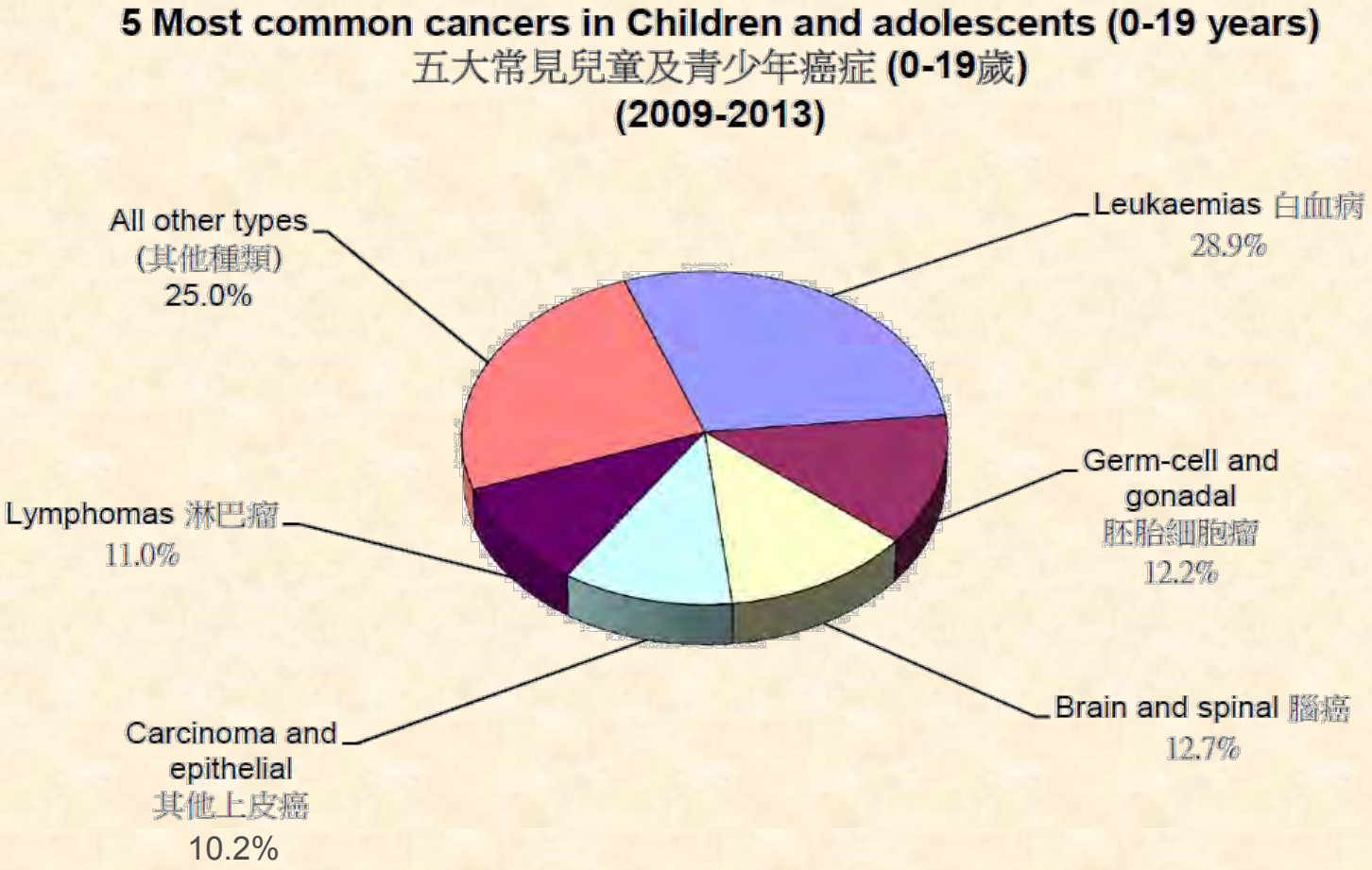
In Hong Kong,

- Childhood cancer is the 2nd major cause of death among children

- Incidence: 10 cases per 100,000 children, represents ~ 0.8 of all new cancer cases

(Hong Kong Cancer Registry)

Most Common Types of Childhood Cancer In Hong Kong

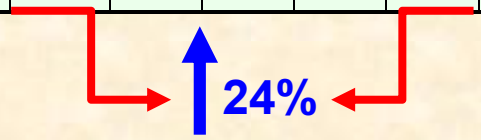


- **~ 200 (0 to 19 years) diagnosed cancer between 2009 – 2013**

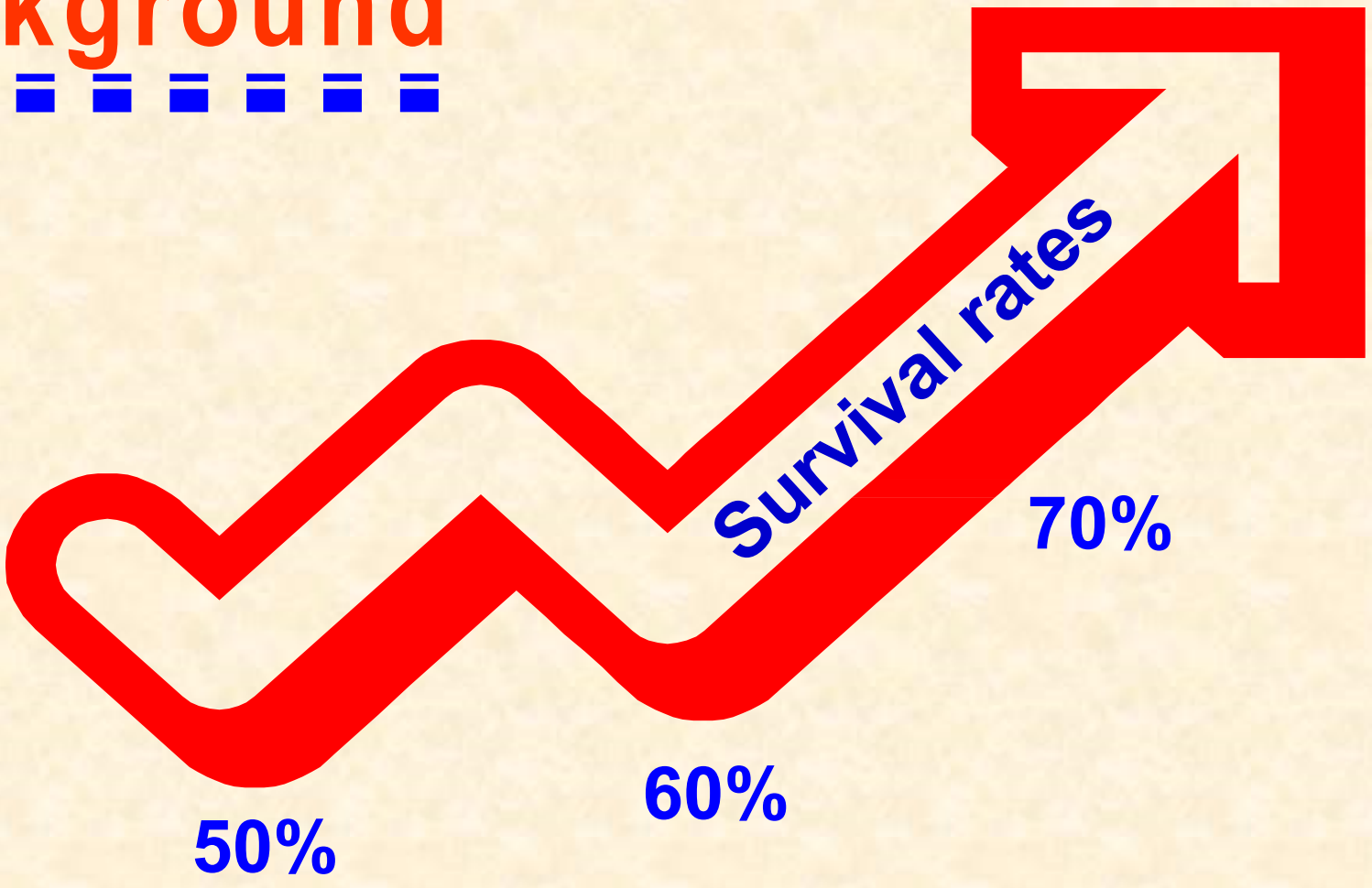
New Cases of Cancer among Children & Adolescents (0-19 years) in Hong Kong

Hong Kong Cancer Registry (2015)

Diagnostic Group	Both genders							
	Year / No.					Average per year	Rel. freq. %	Crude Rate*
	2009	2010	2011	2012	2013			
Leukaemia	48	65	60	53	65	58	28.9%	46.6
Lymphomas	25	19	18	22	27	22	11.0%	17.8
Brain and spinal	34	22	28	23	21	26	12.7%	20.5
Sympathetic nervous system tumours	6	12	7	12	20	11	5.7%	9.1
Retinoblastoma	5	3	5	7	2	4	2.2%	3.5
Renal tumours	3	2	4	4	7	4	2.0%	3.2
Hepatic tumours	4	4	9	3	7	5	2.7%	4.3
Malignant bone tumours	9	11	7	15	8	10	5.0%	8.0
Soft tissue sarcomas	12	14	13	12	18	14	6.8%	11.0
Germ-cell and gonadal tumours	22	26	18	26	31	25	12.2%	19.7
Carcinoma and epithelial tumours	20	16	23	18	26	21	10.2%	16.5
Other & unspecified	1	4	0	0	2	1	0.7	1.1
Total	**189**	**198**	**192**	**195**	**234**	**202**	**100%**	**161.3**

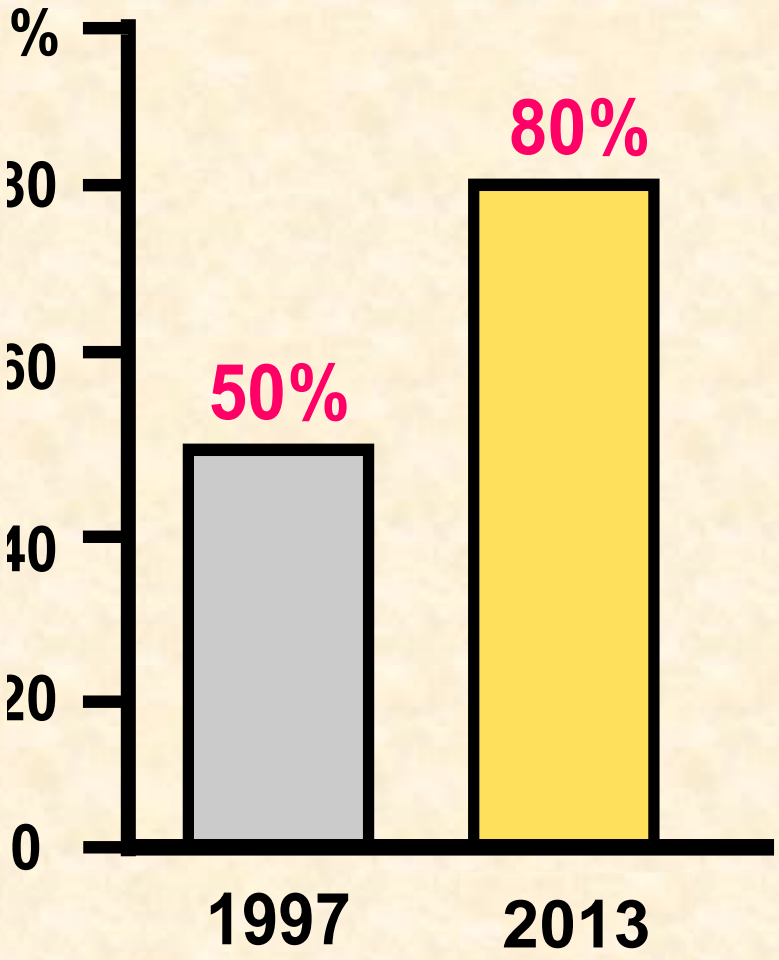


Background



New technological & breakthroughs in cancer treatment

Treatment efficacy has improved…



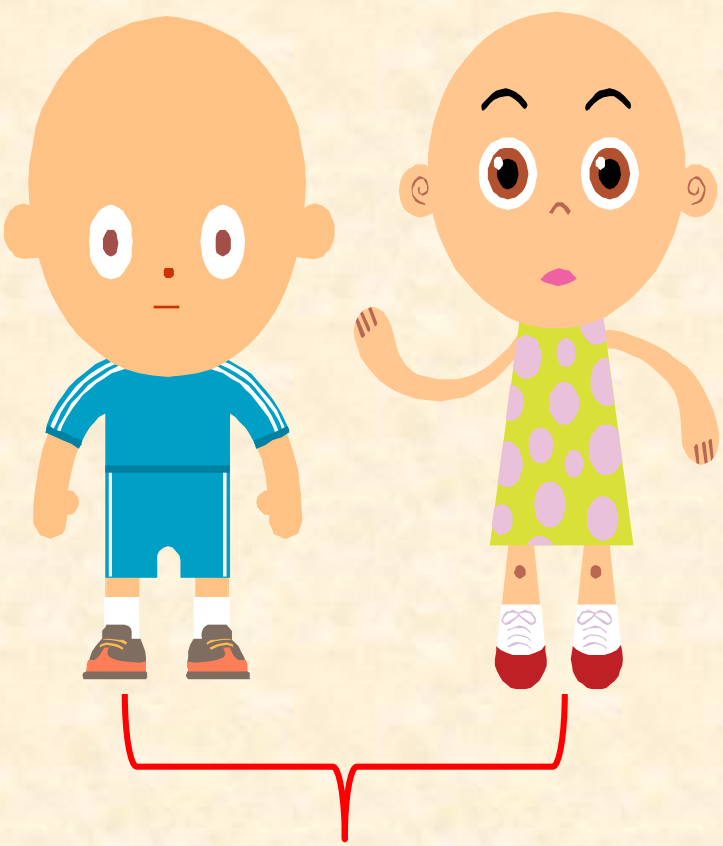
5-Year Survival Rates in 1997 & 2007

…but survivors pay a high price in side effects

- Persistent fatigue
- reduced muscle strength and endurance
- decreases in functional mobility and physical fitness
- poor concentration and decreased attention
- memory loss
- activity intolerance and
- depression, and lower self-esteem

Severely affect the quality of life

Amongst all,
Cancer-related fatigue is the most common….



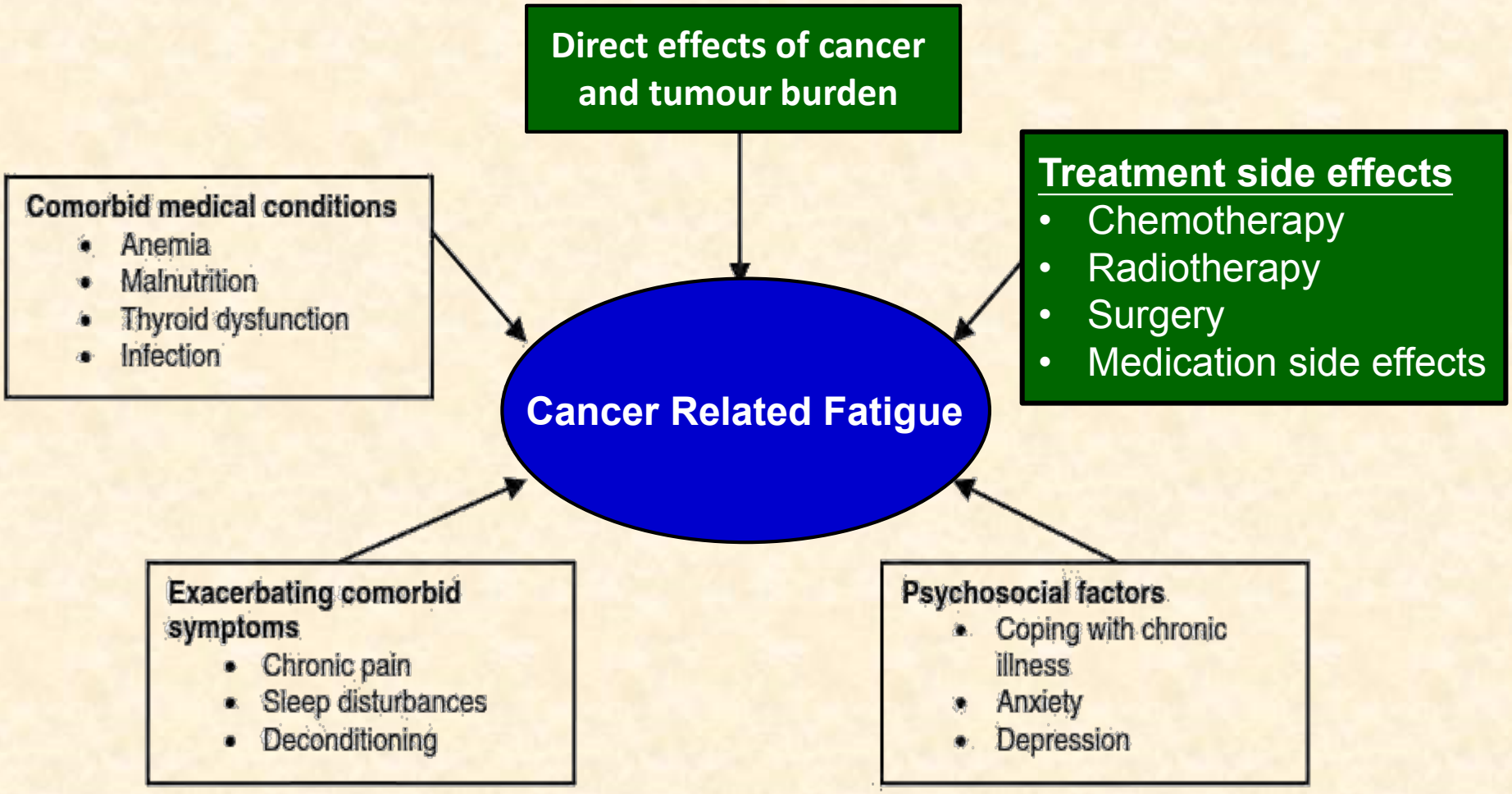
Cancer patients
70%

Cancer survivors
30%

Definition of Cancer-related Fatigue

A person's subjective feeling of persistent tiredness and exhaustion that cannot be relieved by rest

Etiology of Cancer-related Fatigue



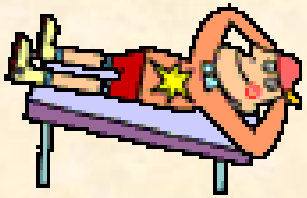
Impact of Cancer-related Fatigue

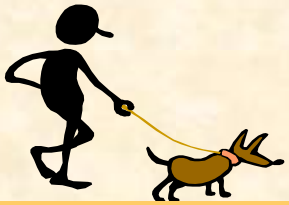
Fatigue ...

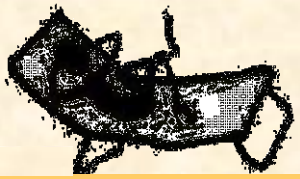
a debilitating adverse effects...

World Health Organization

Physical & Psychological Well-being







Childhood Cancer

Physical Activity Level

Treatment

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Violeta Lopez, PhD, RN

The Impact of Cancer and Its Treatment on Physical Activity Levels and Behavior in Hong Kong Chinese Childhood Cancer Survivors

Childhood cancer survivors

52.1% in United States

92.2% in Hong Kong

did not perform regular physical exercise

Study Aims

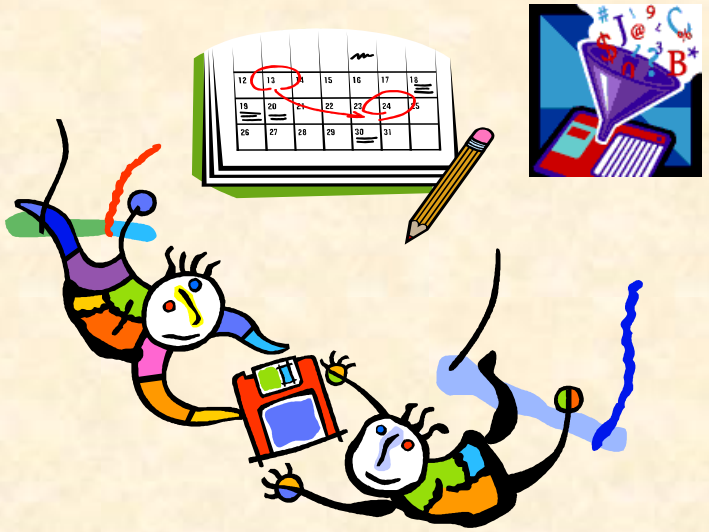
Methods

- cross-sectional study
- 400 childhood cancer survivors
- ages 7 to 18 years old
- a pediatric oncology outpatient clinic

Instruments

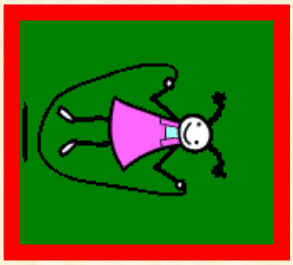
- Chinese version of the Fatigue Scale
- Physical Activity Rating for Children and Youth
- Centre for Epidemiologic Studies Depression Scale for Children
- Pediatric Quality of Life Inventory 4.0 Generic Core Scales

Results



An average of 47% participants reported that the occurrence and severity of their fatigue was between “half the time” and “all the time” over the previous seven days.

Physical Activity Levels



Cancer-related Fatigue

Depressive Symptoms

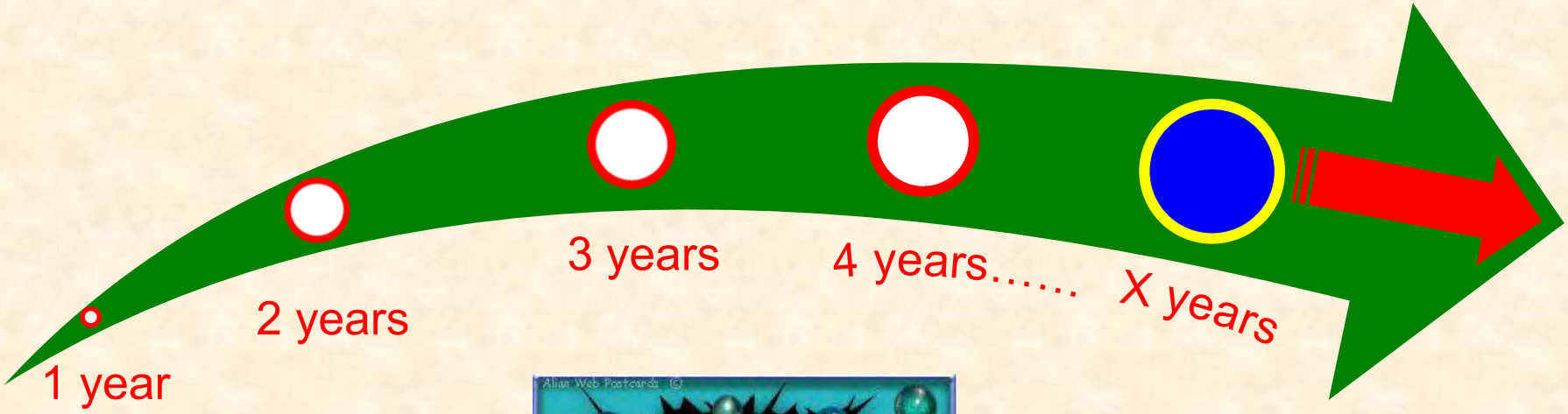
Quality of Life

Multiple Regression Analysis...

Variables contributing to fatigue	*B*	*SE B*	*β*	*p*-value
Step 1				
Age	0.05	0.35	0.01	.88
Sex	0.46	2.57	0.02	.86
Diagnosis	0.28	0.31	0.08	.38
Step 2				
Age	-0.37	0.27	-0.09	.18
Sex	-0.93	1.95	-0.03	.64
Diagnosis	-0.04	0.24	-0.01	.87
Treatment received	-0.87	0.53	-0.11	.10
Times since treatment completed	-2.46	1.19	-0.14	.04
Number of depressive symptoms	0.47	0.09	0.21	.01
Physical activity levels	-1.90	0.21	-0.56	.00
$R^2 = 0.53$				
Adjusted $R^2 = 0.51$				
R^2 change = 0.49				

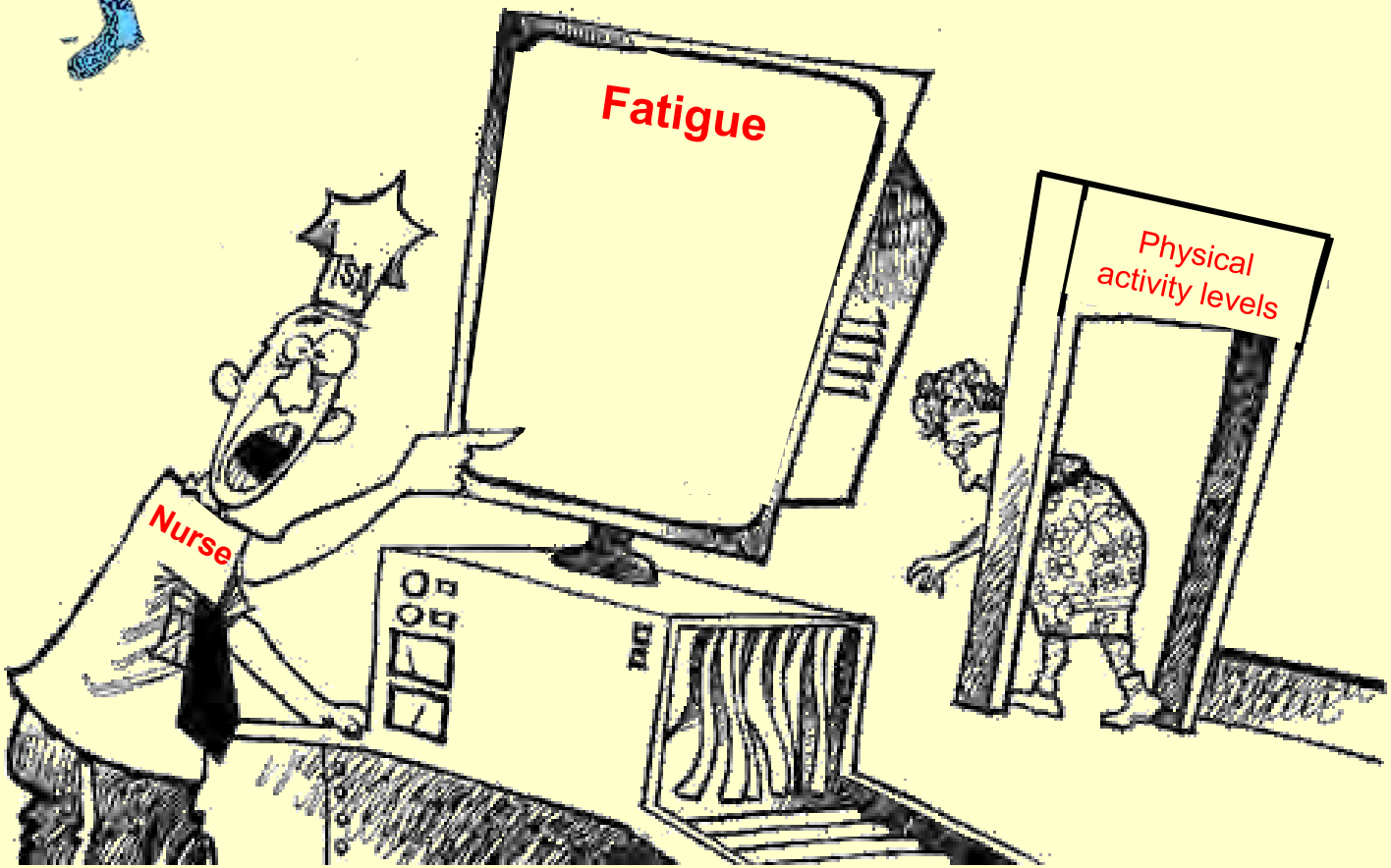
Multiple Regression Analysis for Variables Contributing to Cancer-related Fatigue (*N* = 400)

Conclusion



Implications for Nursing Practice

Physical activity may be a useful indicator for *Screening* those childhood cancer survivors who are likely to exhibit cancer-related fatigue.

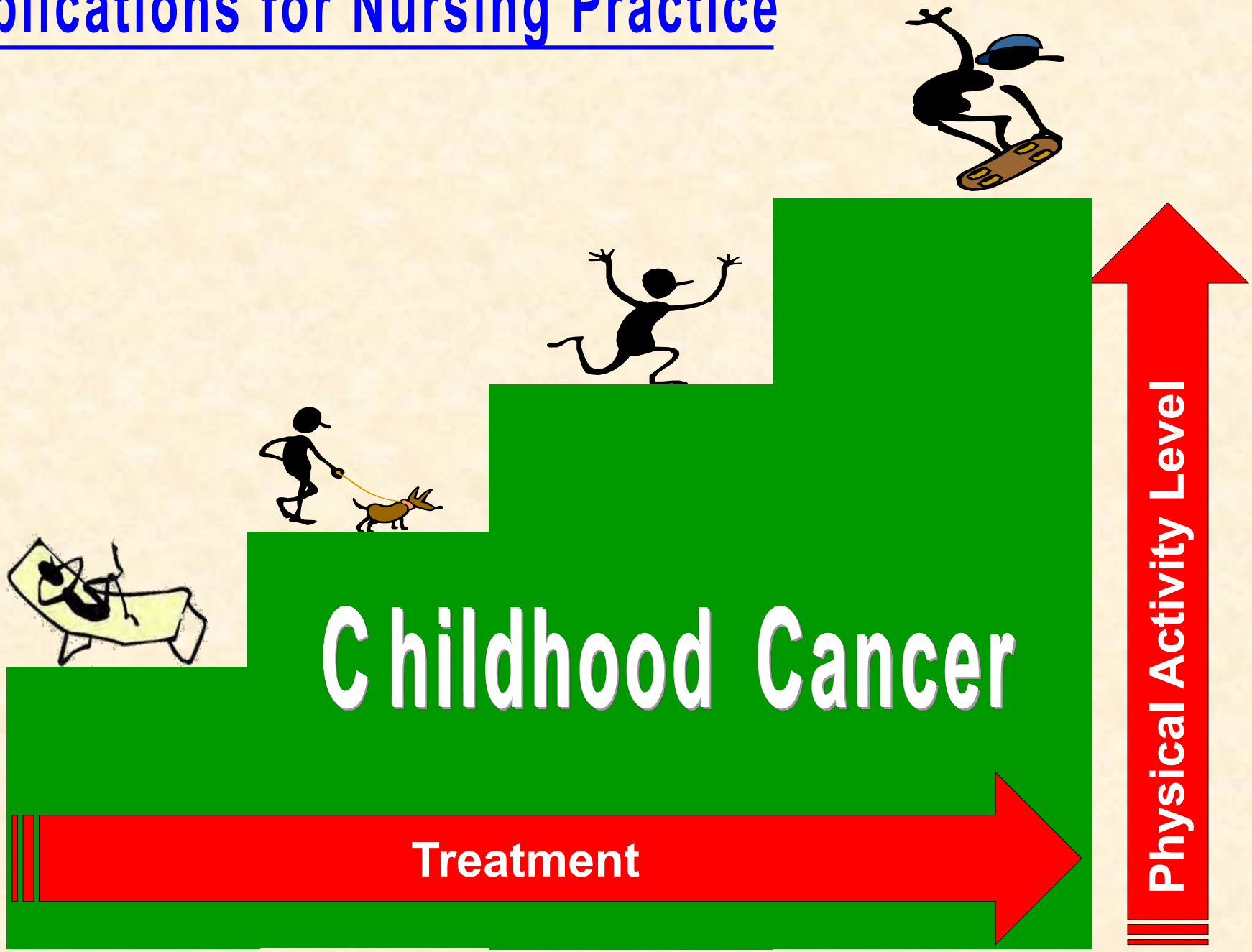


Implications for Nursing Practice

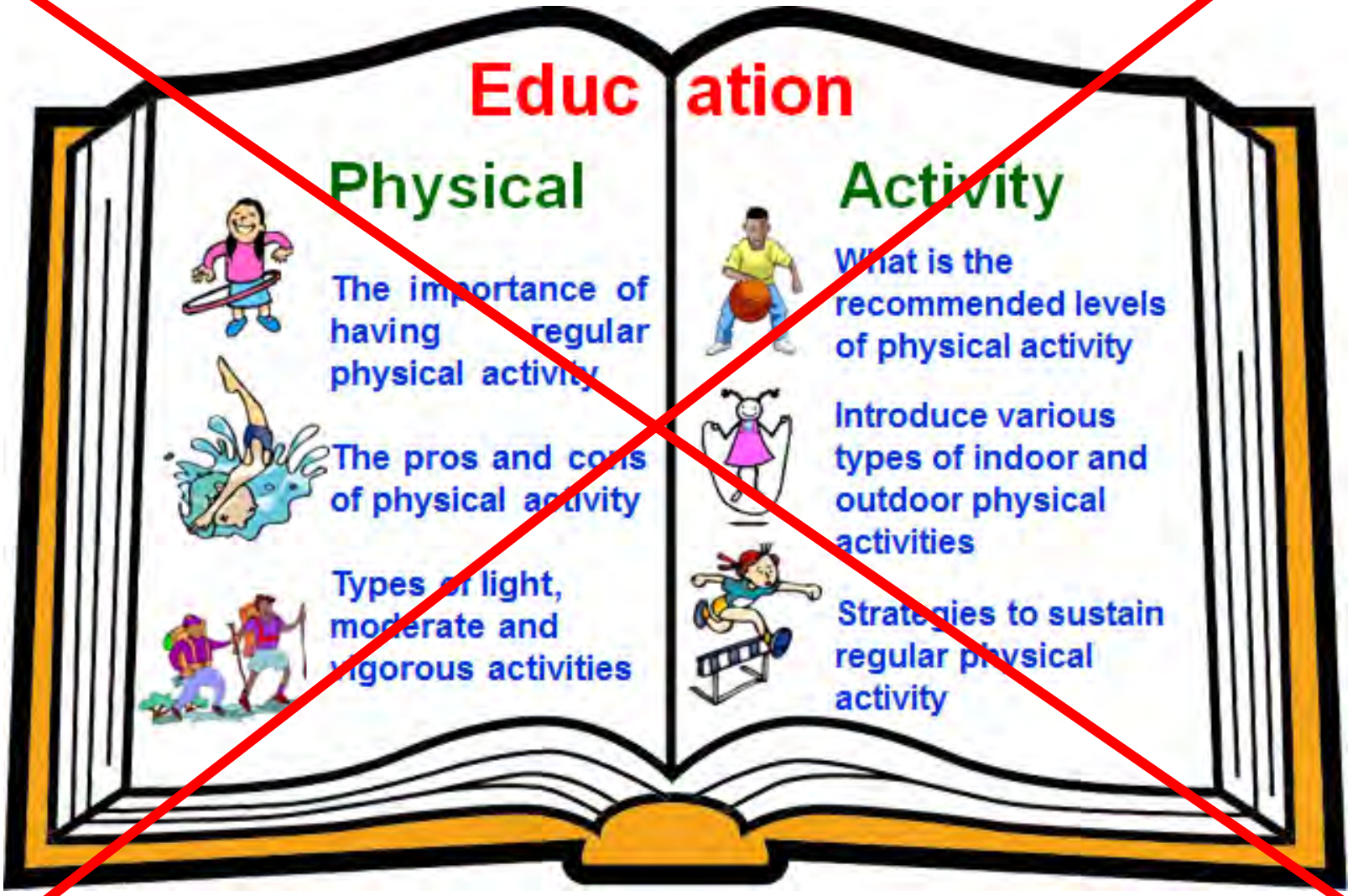
~~Misconceptions~~

↑ Awareness

Implications for Nursing Practice



Implications for Nursing Practice



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Adventure-Based Training and Health Education Program to Enhance Quality of Life Among Chinese Childhood Cancer Survivors

A Randomized Controlled Trial

Cancer kids join recovery challenge

Adventure-based physical training is beneficial to children who survive cancer, says a University of Hong Kong study.

The research, conducted by the School of Nursing, recruited 71 children last year for a nine-month study.

Half the children were sent to four adventure-based physical training day camps, involving a rope course, rock climbing, archery and group competitive games, in six months.

The remaining children attended extra-curricular activities such as health talks, museum and theme park visits, and playing computer games.

Results after nine months of observation showed that those who took part in adventure-based training reported higher levels of physical activity by 96 percent.

Confidence in physical exercises increased 23 percent and quality of life 7 percent.

University head of pediatrics and adolescent medicine Godfrey Chan Chi-fung said: "With the recent advances in medical technology, the overall cure rate of childhood cancers is already more than 70 percent.

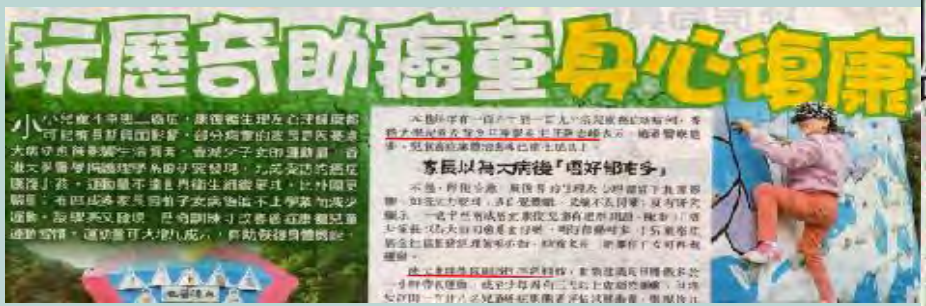
Ryan Chan Ho, 14, who was diagnosed with leukemia eight years ago, reported a constant feeling of fatigue after recovering from cancer.

"I didn't want to exercise because I always felt tired," he said yesterday.

Meanwhile, Vanessa Law Yat-tung, 9, who suffered from muscle cancer at the age of one, now cites rock-climbing as her favorite activity during the adventure-based training camps.

Researcher and school associate professor William Li Ho-cheung said adventure-based learning allows participants to challenge themselves by experiencing, learning and doing seemingly impossible tasks.

JASMINE SIU



Thank you!

Thank you & Bye-bye !