

The Perception of Occupational Safety Risks Among Nursing Students in Hong Kong

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Background

Nursing students are exposed to various occupational risks, including physical, psychosocial, biological and mechanical hazards, during their clinical practicum. They are particularly vulnerable to these risks during their training. However, limited information exists regarding their perceptions of occupational safety in Hong Kong.

Objective

This study explored the perceptions of occupational safety risk among nursing students in Hong Kong.

Methods

- A quantitative, descriptive, and cross-sectional design was employed, utilizing convenience sampling to invite nursing students enrolled in the Bachelor of Nursing (Honours) programme at Saint Francis University to participate in the study.
- Nursing students' perceptions of occupational safety risk were collected from November to December 2023 using the **Occupational Risk Perception Scale for Nursing Students (ORPSNS)** questionnaire that uses a Likert scale ranging from 1 to 5, with higher scores indicating higher awareness of occupational risks.



Table 1. Total Score and Subscale Scores of the Occupational Risk Perception Scale in Nursing Students (ORPSNS) Scale

Scales	Range	Item Mean	Cronbach's Alpha
Occupational Risk Perception Scale in Nursing Students (ORPSNS)	31-80	4.29	0.74
Physical Environment Risks Subscale	5-25	4.76	0.79
Psychological and Ergonomic Risks Subscale	22-35	4.56	0.65
Person and Institution- Related Risks Subscale	4-20	4.42	0.68

Table 2. Comparison between years of study for sub-dimension scores of the occupational risk perception scale

Scales	Junior Year Mean (SD)	Senior Year Mean (SD)	p-Value [#]	t
Physical Environment Risks Subscale	4.07 (0.57)	3.61 (0.75)	0.003	-1.45
Psychological and Ergonomic Risks Subscale	4.43 (0.41)	4.62 (0.35)	0.516	1.51
Person and Institution-Related Risks Subscale	4.23 (0.64)	4.53 (0.53)	0.211	-0.65

[#] Independent-sample t-tests

Results

- A total of 307 nursing students completed the questionnaires.
- The occupational risk perceptions of nursing students were high, with a mean score of 4.28 (s.d. = 0.36) out of 5.
- Results of the independent-sample t-test indicated that junior-year (years 2 & 3) and female students had higher awareness of physical environmental risks ($p < 0.01$).
- We found no significant differences in years of study and the gender of nursing students in the psychological and ergonomic risks subscales and the person and institution-related risks subscales.

Conclusion

The study explored occupational risk perceptions and their relationships with demographic variables among nursing students in Hong Kong. It provided practical implications and insights for enhancing education on occupational risks for nursing students in clinical environments.

Table 3. Comparison between gender for sub-dimension scores of the occupational risk perception scale

Scales	Male Mean (SD)	Female Mean (SD)	p-Value [#]	t
Physical Environment Risks Subscale	3.68 (0.86)	3.81 (0.67)	0.003	-1.44
Psychological and Ergonomic Risks Subscale	4.61 (0.36)	4.54 (0.39)	0.516	-1.28
Person and Institution-Related Risks Subscale	4.39 (0.52)	4.44 (0.60)	0.211	-0.66

[#] Independent-sample t-tests

KNOWLEDGE, ATTITUDE AND PRACTICE ABOUT OSTEOPOROSIS AMONG YOUNG ADULTS IN HONG KONG



AUTHORS
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INTRODUCTION
 Osteoporosis: **reduced** bone density & tissue **deterioration**
 -> increases risk of bone fractures
Definition: T-score (≤ -2.5) in bone mineral density (BMD)
Risk factors: non-modifiable (eg.age, ethnicity...) & modifiable (eg.diet...)
Optimal bone mass development: ** aged 18-26 **
 Current studies : osteoporosis knowledge and attitudes in Hong Kong focus mainly on older age groups -> address their consequences of osteopenia

RESULTS

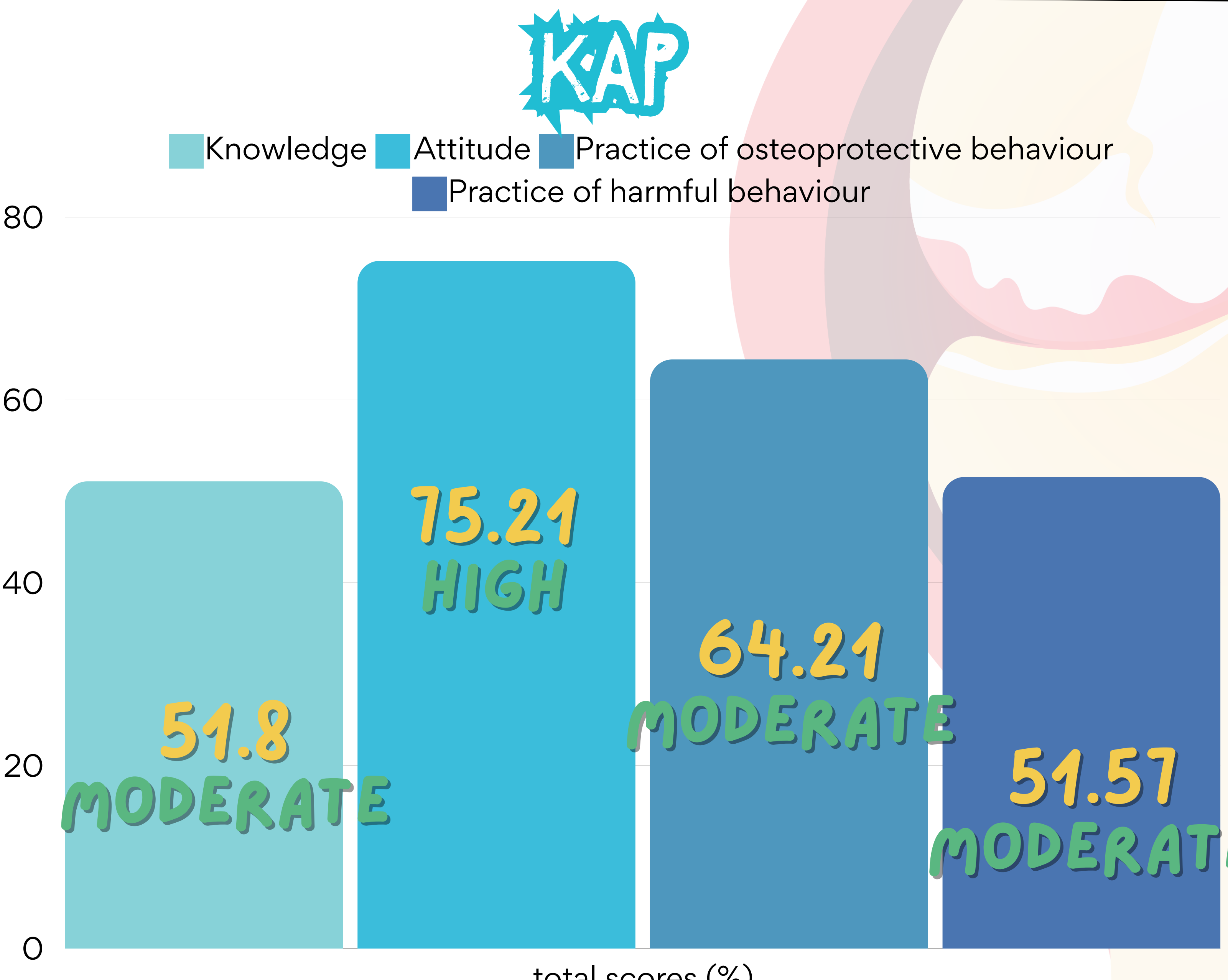
- **Knowledge** : Moderate level in total score. Risk factor and diagnosis and treatment were in low level particularly.
- **Attitude** : High level regarding osteoporosis in general, especially perceived severity and belief of prevention.
- **Practice** : Moderate level on both osteoprotective and harmful behaviors.
- In spearman correlation: The osteoprotective behavior versus attitude and knowledge has a moderately positive correlation (0.448) and a weak positive correlation (0.283) respectively .

OBJECTIVE
 investigate their knowledge, attitude, and practice (KAP) of osteoporosis
 -> Identify young adults' needs & preventing osteoporosis at a critical age

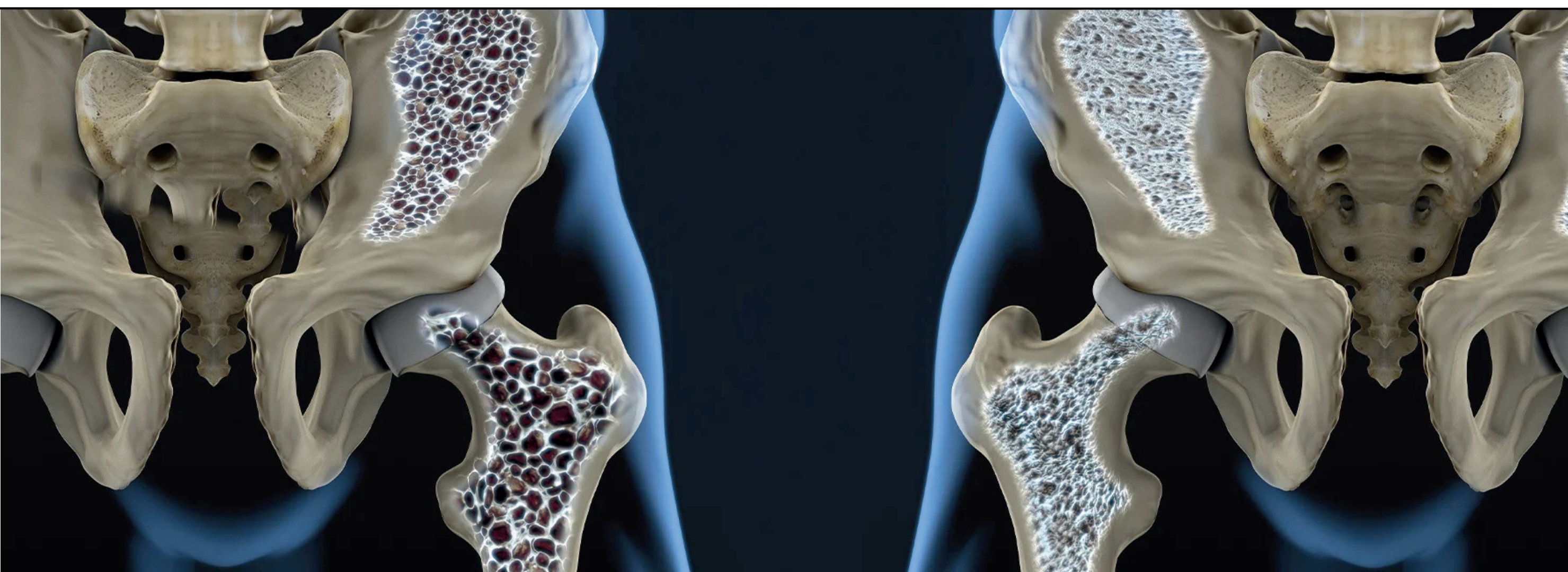
METHODOLOGY
Study area: Saint Francis University Hong Kong (SFU)
Population source: Year 1 Bachelor of Nursing students aged 18-26
Study design: Cross-sectional
Sample method: Convenient sampling
Sample size: 139
Primary Measurement Instrument: An osteoporosis questionnaire developed in Taiwan by Chen et al. (2012)

MAIN FINDINGS

- **Knowledge** : consistent with others studies, but there are raising awareness in level of knowledge in healthcare professional.
- **Attitude** : in conflicts with previous which low perceived severity was found in others. Althobiti (2022) : the low perceived severity of osteoporosis affect the preventive behaviors.
- **Protective behaviors:** in pair with the past and found to have high calcium intake comparing with others.
- **Harmful behaviors** : highlighted the risk of drinking too much tea or coffee, probably related to chinese culture, and have increasing alertness of carbonated drinks and sweetened beverages.
- **Knowledge vs behaviors** : weak, different with the past that was no significant relationship. The differences may be related to contextual differences.
- **Attitude vs behaviors** : fostering positive attitudes is crucial for adopting preventive practices in osteoporosis among this demographic during critical moments in bone mass development.



*Total scores
 Low level : < 50%
 Moderate level: 50% - 75%
 High level : > 75%
 Similar scale of level of KAP was used in Chen et al. (2012) , Khan et al. (2014)



RECOMMENDATIONS
 < **low** level of knowledge (risk factor + diagnostic & treatment)
 + high awareness of preventing osteoporosis >
 1. ↑ Promotion of osteoporosis prevention (18-26)
 2. ✓ Raise the public awareness
 -> e.g. ***nursing student*** •• they will be serving as agents (nurse)
 3. ✓ Allocation of resources

CONCLUSION
Knowledge towards osteoporosis : Moderate level
Attitude towards osteoporosis : High level
The practices : Moderate level (implementing osteoprotective behaviours & performing harmful behaviours)

Participants performed harmful behaviour less common than osteoprotective behaviour

- **Moderated positive correlation** is found between attitude and osteoprotective behaviour
- **Weak positive correlation** is found between knowledge and osteoprotective behaviour among young adults in Hong Kong

A Pilot Single-blinded Randomized Controlled Trial: The Effect of Myofascial Release Technique on Upper Limb Pain Management in Artistic Aerial Dancers

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Background and Purpose: Aerial dance is a demanding sport requiring acrobatic flexibility and aesthetic ability, making upper body injuries common due to intense weight-bearing and extreme movement. This study aimed to evaluate the effect of myofascial release on upper limb pain in aerial dancers. Twenty-six Hong Kong dancers with upper limb injuries were randomly assigned to an intervention group (neuromuscular control exercise and myofascial release therapy) or a control group (neuromuscular control exercise) for four weeks.

Methods: Participants were assessed using the Numeric Pain Rating Scale (NPRS), Quick Disabilities of the Arm, Shoulder, and Hand (Quick-DASH), and hand grip strength before and after treatment. Data were analyzed using SPSS software.

Results: Significant improvements were observed in NPRS and Quick-DASH scores for the intervention group compared to the control group, indicating benefits from the myofascial release therapy.

Conclusion: Aerial dancers with upper limb pain showed significant improvements in pain and disability following the intervention.

Baseline characteristic for two group

Baseline variable	Group	
	Neuromuscular control group (n=13)	Neuromuscular control group with myofascial release technique (n=13)
Age (year)	29.6±6.0	29.0±6.7
Sex (%)		
Male	0	0
Female	100	100
Body weight (Kg)	52.0±6.2	51.2±5.7
Body height (Cm)	160.5±6.1	160.5±5.7

Note. The table illustrate mean±standard deviation

Outcome measure data from pre-test and post-test

Outcome measure	Baseline		4 weeks		Mean Difference within group		
	Neuromuscular control group (n=13)	Neuromuscular control group with myofascial release technique (n=13)	Neuromuscular control group (n=13)	Neuromuscular control group with myofascial release technique (n=13)	Neuromuscular control group		Pre-post mean difference between group
					Neuromuscular control group (n=13)	Neuromuscular control group with myofascial release technique (n=13)	
NPRS	3.3±2.2	4.8±1.3	3.5±1.7	2.1±1.1	0.4 (p>0.05)	2.8 (p<0.05)	2.4 (p<0.05)
Hand grip (Kg)	21.4±4.4	26.5±7.0	21.5±4.2	26.4±6.8	0.2 (p>0.05)	0 (p>0.05)	0.2 (p>0.05)
Quick Dash	106.3±28.1	128.9±31.1	102.5±26.9	121.9±28.5	3.8 (p>0.05)	7.0 (p<0.05)	3.3 (p>0.05)
Disability domain	35.1±7.7	41.4±7.7	34.3±6.5	37.6±6.0	0.9 (p>0.05)	3.7 (p<0.05)	2.8 (p<0.05)
Work domain	31.7±14.5	37.0±11.5	30.3±13.7	35.6±11.2	1.4 (p>0.05)	1.4 (p>0.05)	0 (p>0.05)
Sports/performance domain	39.4±10.3	50.5±19.3	38.0±9.7	48.6±18.9	1.4 (p>0.05)	1.9 (p>0.05)	0.5 (p>0.05)

Note. The table illustrate mean±standard deviation with Numeric Pain Rating Scale (NPRS), hand grip and Quick Disabilities of Arm, Shoulder and Hand (Quick Dash). P value smaller than 0.05 refers to statistically significance.

Cross-cultural Adaptation and Testing of the Chinese Version of Wheelchair Skills Test (WST-Q) - A Pilot Study

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- Background and Purpose:** The Wheelchair Skills Test Questionnaire for manual wheelchair users Version 5.3 (WST-Q 5.3) is an assessment tool designed to evaluate confidence and effectiveness in manual wheelchair users. It aims to aid in documenting and planning training programs, enhancing participation, and improving quality of life.
- Methods:** The WST-Q 5.3 was translated from English to traditional Chinese with the help of physiotherapy students and a linguist, using back translation for accuracy. Twenty manual wheelchair users were recruited to assess the reliability and validity of the tool. Internal reliability and test-retest reliability were determined using Cronbach's alpha and intraclass correlation coefficient (ICC), respectively. Construct validity was evaluated through correlation with the WST scores.
- Results:** The mean scores increased from 47.1% to 54.8% over one month. Cronbach's alpha was 0.929, and ICC was 0.96. Moderate concurrent validity was indicated with a Pearson correlation of 0.574.
- Conclusion:** The Chinese version of WST-Q 5.3 demonstrates high reliability and moderate validity. Further research is needed for stronger validity in manual wheelchair users.

Table 4. Percentage success rates and agreement for individual wheelchair skills between WST-Q Chinese version and WST.

Skills	WST-Q baseline		WST		
	n	% success	n	% success	% agreement
1 Rolls forward	20	65.0%	20	70.0%	40.0%
2 Rolls backward	20	60.0%	20	70.0%	45.0%
3 Turns in place	20	50.0%	20	60.0%	50.0%
4 Turns while moving forward	20	50.0%	20	60.0%	60.0%
5 Turns while moving backward	20	40.0%	20	52.5%	55.0%
6 Maneuvers sideways	20	45.0%	20	30.0%	50.0%
7 Reaches objects	20	80.0%	20	82.5%	50.0%

8 Operates body positioning options	20	55.0%	19	77.5%	30.0%
9 Shifts weight	20	65.0%	20	70.0%	35.0%
10 Performs level transfers	20	65.0%	15	50.0%	30.0%
12 Folds and unfolds wheelchair	20	5.0%	11	5.0%	85.0%
11 Performs ground transfers	0	N/A	0	N/A	N/A
13 Gets through hinged door	20	50.0%	20	35.0%	50.0%
14 Ascends slight incline	20	15.0%	8	5.0%	55.0%
15 Descends slight incline	20	15.0%	8	5.0%	55.0%
16 Ascends steep incline	1	0.0%	0	N/A	N/A
17 Descends steep incline	1	0.0%	0	N/A	N/A
18 Rolls on soft surface	4	50.0%	0	N/A	N/A
19 Gets over obstacle	1	100.0%	0	N/A	N/A
20 Ascends low curb	1	100.0%	0	N/A	N/A
21 Descends low curb	1	100.0%	0	N/A	N/A
22 Ascends high curb	1	100.0%	0	N/A	N/A
23 Descends high curb	1	100.0%	0	N/A	N/A
24 Performs stationary wheelie	1	0.0%	0	N/A	N/A
25 Turns in place in wheelie position	0	N/A	0	N/A	N/A

26 Rolls forward and backward in wheelie position	0	N/A	0	N/A	N/A
27 Descends high curb in wheelie position	0	N/A	0	N/A	N/A
28 Descends steep incline in wheelie position	1	0.0%	0	N/A	N/A
29 Ascends stairs	0	N/A	0	N/A	N/A
30 Descends stairs	0	N/A	0	N/A	N/A

* WST = Wheelchair Skills Test ; WST-Q = Wheelchair Skills Test Questionnaire.

COMPARING THE EFFECTIVENESS OF ACUPUNCTURE AND CUPPING ON KNEE OSTEOARTHRITIS PATIENTS: A SYSTEMATIC REVIEW

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- Background and Purpose:** Knee osteoarthritis (KOA) is a common condition caused by joint wear, leading to pain. Acupuncture and cupping therapy are traditional non-pharmaceutical treatments effective for various pain conditions. A 2017 systematic review concluded that both therapies had similar pain relief effects. This review analyzes randomized controlled trials (RCTs) to compare the pain relief effects of acupuncture and cupping in KOA patients, aiming to guide clinical practice and enhance physiotherapy services.
- Methods:** A literature search was conducted using CINAHL, PsycINFO, PubMed, Embase, Medline, and Cochrane Library databases. RCTs from 2017-2023 focusing on acupuncture and cupping for KOA were included, measuring pain intensity. Authors screened titles and abstracts, performed data extraction, and assessed quality.
- Results:** The search yielded 9,941 articles, with 16 included (13 on acupuncture, 3 on cupping). Ten studies showed significant pain relief from acupuncture, while two studies indicated cupping was effective.
- Conclusion:** Current evidence on acupuncture and cupping for KOA pain relief is insufficient, necessitating larger, well-designed RCTs and potential economic studies on cost-effectiveness.

		Risk of bias domains					
		D1	D2	D3	D4	D5	Overall
Study	[22]	+	-	+	-	+	-
	[24]	+	+	+	+	-	-
	[32]	+	-	X	X	-	X

Domains:
D1: Bias arising from the randomization process.
D2: Bias due to deviations from intended intervention.
D3: Bias due to missing outcome data.
D4: Bias in measurement of the outcome.
D5: Bias in selection of the reported result.

Judgement
X High
- Some concerns
+ Low

Table 4: Outcomes: Mean change in Numerical Rating Scale (NRS) in knee osteoarthritis at different timepoints

Study (author/year)	Intervention group	Control group	Baseline mean (SD)	FU1 mean (SD)	FU2 mean (SD)	p-value
Wang et al. (2022) [34]	Electrical-DN plus corticosteroid injection	Corticosteroid injection	Electrical-DN plus corticosteroid injection: 5.5 (1.3)	3 months: 2.6 (CI 2.2-3.2)	N/A	p=0.008 for inter-group comparisons at 3 months FU
			Corticosteroid injection: 5.3 (1.0)	3.5 (CI 3.1-4.0)		
Tu et al. (2021) [38]	EA MA	Sham acupuncture	EA: 6.11 (1.32)	8 weeks: 2.59 (1.61)	26 weeks: 2.94 (1.67)	p<0.001 for intra-group comparisons for all timepoints p<0.001 for inter-group comparisons for EA vs. SA and MA vs. SA at each timepoint
			MA: 6.06 (1.33)	2.87 (1.62)	3.14 (1.64)	
			Sham acupuncture: 5.83 (1.30)	3.38 (1.91)	3.72 (1.89)	
Sánchez Romero et al. (2020) [43]	Exercise plus dry needling	Exercise plus sham-dry needling	Exercise plus dry needling: 6.16 (0.96)	6 weeks: 2.16 (1.29)	12 months: 3.58 (1.68)	p<0.0001 for intra-group comparisons between base line and all FU periods. p=0.499 for inter-group comparisons at each timepoint
			Exercise plus sham-dry needling: 6.00 (0.85)	2.16 (1.84)	3.61 (2.74)	
Dunning et al. (2019) [37]	Electrical-DN plus manual therapy and exercise	Manual therapy and exercise	Electrical-DN plus manual therapy and exercise: 5.7 (1.6) Manual therapy and exercise: 5.4 (1.8)	6 weeks NRS difference in intervention vs. control: -1.2 (CI -1.7 to -0.7)	3 months NRS difference in intervention vs. control: -2.7 (CI -3.4 to -2.0)	p<0.001 for inter-group comparisons at 6 weeks and 3 months FU

Abbreviations:
CI: 95% Confidence interval; DN: Dry needling; EA: Electroacupuncture; FU: Follow-up; MA: Manual acupuncture; NRS: Numerical Rating Scale; SD: Standard deviation

THE EFFECTIVENESS OF CUPPING FOR NECK AND SHOULDER PAIN: A SYSTEMATIC REVIEW

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► **Background and Purpose:** Neck and shoulder pain (NSP) is common in individuals with musculoskeletal issues. Cupping therapy, an ancient method that creates negative pressure on the skin, is used to relieve pain. This review examines parameters in dry cupping studies and their effects on pain control and pain-related disability.

► **Methods:** A literature search was conducted across six electronic databases. Included studies were randomized clinical trials (RCTs) or quasi-RCTs using cupping for neck or shoulder pain and measuring pain outcomes. Exclusion criteria included studies not using cupping, subjects with non-musculoskeletal pain, and those lacking pain outcome assessments. Data extraction followed the PRISMA flow chart, and included studies were evaluated using the PEDro scale.

► **Results:** As of August 16, 2023, eleven studies with 306 participants were reviewed. Treatment parameters included cup placement, negative pressure (-7.5 to -600 mmHg), duration (8 to 20 minutes), and cup sizes. Significant pain reduction was reported, but the effect on disability improvement was unclear.

► **Conclusion:** Further research is needed to establish cupping therapy protocols and examine the relationship between treatment parameters and outcomes. While cupping is confirmed effective for pain control, its impact on disability requires additional investigation.

	No. of study	Study quality	Evidence level
Significant improvement in NPRS	5 (Cramer et al., 2011; Gazbare et al., 2023; Rodriguez-Huguet et al., 2020; Saeidi et al., 2021; Stephens et al., 2020)	2 high, 3 moderate	High
No significant improvement in NPRS	0	N.A.	N.A.

Table 7. Evidence of improvement in NPRS induced by cupping therapy

	No. of study	Study quality	Evidence level
Significant improvement in NDI	6 (Cramer et al., 2011; Lauche et al., 2011; Patel et al., 2022; Rodriguez-Huguet et al., 2020; Saeidi et al., 2021; Saha et al., 2017)	1 high, 5 moderate	Moderate
No significant improvement in NDI	2 (Lauche et al., 2013; Yang et al., 2018)	1 high, 1 moderate	Moderate

Table 8. Evidence of improvement in NDI induced by cupping therapy

	No. of study	Study quality	Evidence level
Significant improvement in NDI	6 (Cramer et al., 2011; Lauche et al., 2011; Patel et al., 2022; Rodriguez-Huguet et al., 2020; Saeidi et al., 2021; Saha et al., 2017)	1 high, 5 moderate	Moderate
No significant improvement in NDI	2 (Lauche et al., 2013; Yang et al., 2018)	1 high, 1 moderate	Moderate

Table 8. Evidence of improvement in NDI induced by cupping therapy

TRANSLATION AND VALIDATION STUDY OF TRADITIONAL CHINESE VERSIONS OF THE GERIATRIC PAIN MEASURE (GPM) IN ELDERLY PATIENTS

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- **Background and purpose** Geriatric Pain Measure (GPM) is a multidimensional pain measurement tool. With its dichromatic plus quantitative nature, perceptions adding pain intensity in the elderly are reflected. The purpose of the study is to develop a culturally adapted Chinese version of the GPM (GPM-C) short form for use in elderly with chronic pain in Hong Kong (HK), including evaluating its validity, reliability. Chronic pain refers to at least one body part feeling pain that lasts longer than 3 months.
- **Methods** Forward plus backward translation was performed by the student investigators. The original plus backward-translated English versions were then compared. 20 subjects aged 65 years old or above who have chronic pain were invited to complete the GPM-C short form. McGill Pain Questionnaire plus Brief Pain Inventory were used to further validate the GPM-C short form. Internal consistency of GPM-C short form was assessed with Cronbach's alpha with test-retest reliability was estimated with intraclass correlation coefficient. Both strengths with limitations of this study were discussed.
- **Results** With the features of multidimensional with easy-to-administer, the GPM-C short form may provide a more functional, accurate picture of a patient's pain profile to health professionals to facilitate pain management, which may reduce risks of functional disability with related long-term healthcare costs.
- **Conclusion** Validation of GPM in Chinese can provide significant implications for elderly pain management with resource allocations for health care providers in the future.

Table 4 Correlations of the GPM-C with other demographic characteristics (n=20)

	GPM-K Total Score	Pain disengagement	Pain with ambulation	Pain Intensity	Pain with other activities
Age	-0.322	-0.474*	0.025	-0.206	-0.400
No. of medications	-0.004	0.040	0.198	-0.089	0.034
No of medical problems	0.237	0.108	0.089	0.256	0.143

*p < 0.05 for Pearson's correlations.

A RETROSPECTIVE COHORT PILOT STUDY OF EFFECTIVENESS OF AN 8-WEEK CREATIVE DANCE PROGRAMME ON STATIC AND DYNAMIC BALANCE IN HONG KONG ADULT

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- **Background and Purpose:** Dance is recognized for improving balance, functional mobility, and physical ability. Creative dance (CD), which emphasizes artistic expression over technical skills, may be more accessible for beginners with varying physical capabilities. Despite growing interest in CD in educational and rehabilitation settings, few studies validate its effectiveness for physical health, and no standardized CD program exists in Hong Kong. Thus, local research is needed to assess the impact of a structured CD program on physical improvement across all age groups.
- **Methods:** This study evaluated the effectiveness of an 8-week CD program on static and dynamic balance in 22 Hong Kong adults aged 18-64. Participants were divided into a control group (11 subjects) and a CD group (11 subjects) that completed two 60-minute sessions per week of a standardized CD protocol focusing on body movement and spatial awareness.
- **Results:** Significant improvements in balance were found in the CD group, with the Mini-BESTest scores showing notable differences ($P=0.006$ for total score; $P=0.042$ for dynamic gait).
- **Conclusion:** The findings suggest that CD effectively enhances balance in participants.

Comparison Between the Immediate Effects of Instrument-assisted Soft Tissue Mobilization (IASTM) on Superficial Back Line (SBL) of Lower Limbs and that of Myofascial Lateral Line (MLL) on Dynamic Balance among Individuals with Chronic Ankle Instability (CAI)

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Background and Purpose: Dance is known to enhance balance, functional mobility, and physical ability. Creative dance (CD), which focuses on artistic expression rather than technical skills, is more accessible for beginners with differing physical capabilities. Although interest in CD is rising in educational and rehabilitation contexts, few studies confirm its effectiveness, and no standardized CD program exists in Hong Kong. Local research is necessary to evaluate the impact of a structured CD program on physical improvement across all age groups.

Methods: This study assessed an 8-week CD program's effectiveness on static and dynamic balance in 22 Hong Kong adults aged 18-64. Participants were divided into a control group (11 subjects) and a CD group (11 subjects) that engaged in two 60-minute sessions weekly, focusing on body movement and spatial awareness.

Results: The CD group exhibited significant balance improvements, with Mini-BESTest scores showing notable differences ($P=0.006$ for total score; $P=0.042$ for dynamic gait).

Conclusion: CD effectively enhances balance in participants.

Parameters	SBL		Mean difference	Change (%)	p-Value
	Pre-intervention	Post-intervention			
DF-gastrocnemius (degree)	9.17±8.91	13.70±8.51	-4.53	49.40	.002*
DF-soleus (degree)	17.03±8.03	20.73±8.69	-3.70	21.73	.048*
WBLT (cm)	11.86±4.71	12.86±4.47	-1.00	8.43	.000*
YBT-relative anterior (cm)	65.54±11.10	58.97±11.23	6.57	10.02	.013*
YBT-relative posteromedial (cm)	80.37±13.11	70.57±11.38	9.80	12.19	.002*
YBT-relative posterolateral (cm)	68.83±16.79	64.50±13.35	4.33	6.29	.099

Notes: *significant difference; DF: dorsiflexion; YBT: Y-balance test and WBLT: weight bearing lunge test

Table 3. Outcome measures within the SBL group (pre- and post-intervention)

Parameters	MLL		Mean difference	Change (%)	p-Value
	Pre-intervention	Post-intervention			
DF-gastrocnemius (degree)	7.67±4.75	9.47±7.07	-1.80	24.25	.214
DF-soleus (degree)	10.47±5.46	11.83±6.62	-1.37	13.09	.149
WBLT (cm)	9.20±2.93	10.33±2.83	-1.13	12.28	.019*
YBT-relative anterior (cm)	60.82±10.78	53.82±10.77	7.00	11.51	.001*
YBT-relative posteromedial (cm)	71.07±16.07	63.85±16.31	7.22	10.16	.007*
YBT-relative posterolateral (cm)	60.75±12.24	57.43±19.08	3.32	5.47	.072

Notes: *significant difference; DF: dorsiflexion; YBT: Y-balance test and WBLT: weight bearing lunge test

Table 4. Outcome measures within the MLL group (pre- and post-intervention)

EFFECTS OF TAI CHI XIAO JIN CHONG EXERCISE ON REDUCTION OF FALL RISK IN MIDDLE-AGED ADULTS: A RETROSPECTIVE COHORT PILOT STUDY

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- **BACKGROUND AND PURPOSE:** TAI CHI XIAO JIN CHONG (TCXJC) COMBINES TRADITIONAL CHINESE MEDICINE WITH MODERN PHYSIOTHERAPY, YET LIMITED RESEARCH EXISTS ON ITS EFFECTS ON BALANCE AND FALL RISK, WHICH ARE CRITICAL IN HONG KONG. THIS STUDY AIMS TO EVALUATE TCXJC'S IMPACT ON BALANCE IN MIDDLE-AGED ADULTS.
- **METHODS:** SIXTEEN PARTICIPANTS WERE RECRUITED THROUGH TCXJC INSTRUCTOR MR. LAW YUEN TUNG. PARTICIPANTS WERE DIVIDED INTO TWO GROUPS: THE INTERVENTION GROUP PRACTICED TCXJC FOR AT LEAST ONE HOUR PER SESSION, TWICE WEEKLY FOR EIGHT WEEKS, WHILE THE CONTROL GROUP HAD NO PRIOR TCXJC EXPERIENCE. THE OUTCOME MEASURES INCLUDED THE SINGLE LEG STANCE, TIMED UP AND GO TEST (TUG), AND BERG BALANCE SCALE (BBS).
- **RESULTS:** THE STUDY INCLUDED SIX MALES AND TEN FEMALES, WITH MEAN AGES OF 57.8 IN THE INTERVENTION GROUP AND 55.0 IN THE CONTROL GROUP. THE INTERVENTION GROUP OUTPERFORMED THE CONTROL GROUP IN TUG ($P=0.037$) AND SINGLE LEG STANCE ($P<0.001$).
- **CONCLUSION:** TCXJC SIGNIFICANTLY IMPROVES BALANCE IN MIDDLE-AGED ADULTS, WARRANTING FURTHER RESEARCH ON OPTIMAL INTENSITY AND ITS RELATION TO FALL RISK REDUCTION.

Group Statistics					
	Have you ever participated in TCXJC?	N	Mean	Std. Deviation	Std. Error Mean
TUG	No	8	8.7975	1.96757	.69564
	Yes	8	6.8663	1.32004	.46671
BBS	No	8	54.88	1.356	.479
	Yes	8	56.00	.000	.000
SLS (L)	No	8	37.33313	32.006137	11.315878
	Yes	8	121.10063	47.326445	16.732425
SLS (R)	No	8	40.15125	22.626018	7.999505
	Yes	8	168.06750	80.204811	28.356683
SLS (Combined)	No	8	38.7422	23.65104	8.36190
	Yes	8	149.3625	54.48141	19.26209

Pilot Test-retest Reliability of Isokinetic Trunk Flexion and Extension Strength Healthy Adults

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- **Background and Purpose:** This study investigated the test-retest reliability of the Humac NORM isokinetic dynamometer for trunk extension and flexion in healthy young adults.
- **Methods:** Trunk flexion and extension were assessed in 20 healthy subjects (10 males, 10 females; mean age 23.3 ± 4.5 years) at angular velocities of $60^\circ/\text{sec}$ and $90^\circ/\text{sec}$. Each subject underwent two reciprocal concentric tests, conducted by the same operator with a minimum 48-hour gap between tests. All sessions were held at the same time of day. Intraclass correlation coefficients (ICCs) were calculated to determine reliability for both velocities and separately for genders.
- **Results:** High reliability ($\text{ICC} > 0.76$) was observed for peak torque and work per repetition at $60^\circ/\text{sec}$. At $90^\circ/\text{sec}$, initial peak torque and total work showed lower reliability ($\text{ICC} 0.51$ to 0.78). Variability in reliability was noted between male and female groups ($\text{ICC} -0.66$ to 0.84).
- **Conclusion:** The Humac NORM isokinetic dynamometer demonstrated high test-retest reliability for trunk flexion and extension at $60^\circ/\text{sec}$ in healthy young adults.

Table 3. ICC and session difference of peak torque, work per repetition, initial peak torque and total work done of trunk flexion and extension at strength test and endurance test of all subjects.

Strength Test	ICC (95% CI)		Session difference (%)	
	Flexion	Extension	Flexion	Extension
Peak torque	0.92 (0.797-0.967)	0.76 (-0.053-0.938)	1.5†	22.72†
Work per repetition	0.84 (0.622-0.934)	0.82 (0.029-0.952)	0.4†	22.75†

Endurance Test	ICC (95% CI)		Session difference (%)	
	Flexion	Extension	Flexion	Extension
Initial peak torque	0.51 (0.084-0.775)	0.61 (-0.045-0.865)	17.3^	40.08†
Total work done	0.78 (0.505-0.908)	0.73 (-0.054-0.924)	9.83†	33.29†

^ P<0.01; † P<0.001; * P<0.05

Table 4. ICC and session difference of trunk flexion and extension at strength test and endurance test among males and females.

Strength Test	Male				Female			
	ICC (95% CI)		Session difference (%)		ICC (95% CI)		Session difference (%)	
	Flexion	Extension	Flexion	Extension	Flexion	Extension	Flexion	Extension
Peak torque	0.84 (0.512-0.958)	0.60 (0.896- -0.095)	-2.72	12.92	0.75 (0.268-0.937)	0.24 (0.691- -0.087)	6.14	41.23*
Work per repetition	0.65 (0.114-0.899)	0.43 (0.816- -0.124)	-4.54	15.28	0.41 (-0.287-0.828)	0.39 (0.807- -0.134)	8.22*	36.07*

Endurance Test	Male		Female					
	Flexion	Extension	Flexion	Extension				
Initial peak torque	-0.66 (-0.916-0.411)	0.09 (0.5- -0.147)	0.90*	32.51*	0.07 (-0.193-0.534)	0.23 (0.684- -0.145)	31.58*	65.57*
Total work done	0.75 (0.259-0.93)	0.26 (0.695- -0.11)	2.03	26.38*	0.19 (-0.313-0.699)	0.50 (0.858- -0.120)	24.34*	30.00

^ P<0.01; † P<0.001; * P<0.05

Pilot Study of Validation of the Chinese Version of Postural Awareness Scale (PAS-C) on Chinese-Speaking Adults with Chronic Pain in Honh Kong

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Background and Purpose: Chronic pain (CP) is common among adults in Hong Kong, affecting daily activities and contributing to mood disorders. Enhancing postural awareness can improve posture and reduce CP and related mental distress. A valid tool for assessing postural awareness, the Postural Awareness Scale (PAS), is essential for managing CP. While the PAS has been translated into several languages, it has not yet been translated into Chinese or validated for Hong Kong. This pilot study aims to translate the English version of the PAS (PAS-E) into Chinese and validate it among the Hong Kong CP population using a 'forward-backward' translation method.

Methods: A convenience sample of 20 participants will complete the PAS twice, one week apart. Data collection will include a demographic questionnaire and the Chinese version of the PAS (PAS-C). Reliability and validity of the PAS-C will be evaluated.

Results: Twenty subjects yielded a mean PAS score of 47.5 ± 6.13 . The PAS-C showed weak internal consistency (Cronbach's $\alpha = 0.34$), moderate test-retest reliability (ICC = 0.78), and generally insignificant concurrent validity.

Conclusion: Future research should involve larger, randomly sampled populations to ensure demographic diversity and cultural appropriateness of the translation.

Table 2. Total score of the PAS-C (mean \pm standard deviation) in the complete sample and differences

between men and women

	Total (n=20)	Men (n=8)	Women (n=12)	Different PAS score between male and female
PAS total	47.5 \pm 6.13	48.2 \pm 7.48	47 \pm 5.34	U =47, Z =-0.78, p = 0.938
PAS-C factor 1 subscale	22.9 \pm 4.64	23.13 \pm 5.94	22.75 \pm 3.84	U=45.5, Z= -0.19, p = 0.846
PAS-C factor 2 subscale	24.6 \pm 3.5	25.13 \pm 3.52	24.25 \pm 3.60	U =40.5, Z=-0.58, p = 0.560

Effectiveness of Pilates on Fall Risk Reduction in Community-dwelling Elderly: A Systematic Review of Randomized Control Trials

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- **Background and Purpose:** This systematic review aims to synthesize randomized controlled trials (RCTs) on the effectiveness of Pilates exercise in reducing fall risk among community-dwelling elderly individuals. Falls contribute to significant mortality, disability, and economic burden in the aging population. Given the rising number of older adults, Pilates could serve as an alternative intervention. However, existing research is controversial and methodologically weak, highlighting the need for a high-quality systematic review.
- **Methods:** Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines, electronic databases (PubMed, PEDro, Cochrane, CINAHL) were searched for RCTs involving adults aged 60 and older. Studies assessed with the PEDro scale and scoring six or above were included.
- **Results:** Out of 241 identified studies, nine met the criteria, involving 448 participants (373 female).
- **Conclusion:** Pilates is effective for enhancing balance in older adults and can be integrated into fall prevention programs. A suggested regimen includes three 60-minute sessions per week for 12 weeks. Limitations include small sample sizes and outcome heterogeneity. Future research should explore specific intensity and training components.

Table 3. Characteristics of the included studies

Author	Mean Age	Sample Size	Type	Frequency	Duration (Weeks)	Comparison
Aibar-Almazán, Agustín et al. (2019) [17]	68.18	107 F PG: 55 CG: 52	Mat	2 x 60'/W	12	CG with no intervention
Barker et al. (2016) [18]	69.33	49 (43F) PG: 20 CG: 29	Reformer	2 x 60'/W	12	CG with Standard care
Campos de Oliveira et al. (2015) [19]	PG: 63.6 CG: 64.2	32 F PG: 16 CG: 16	Reformer	2 x 60'/W	12	CG with static stretch exercise
Gabizon et al. (2016) [20]	71.15	88 (43F) PG: 44 CG: 44	Mat	3 x 60'/W	12	CG with no intervention
Josephs et al. (2016) [21]	PG: 75.6 TG: 74.5	24 (13F) PG: 13 CG: 11	Reformer	2 x 60'/W	12	Traditional exercise Group
Markovic et al. (2015) [22]	70	30F PG: 14 HUBUR: 16	Mat	3 x 60'/W	8	HUBER training group
Mesquita et al. (2015) [23]	CG: 71.5 PNFG: 68.5 PG: 67.3	58F PG: 20 CG: 18 PNFG: 20	Mat	3 x 50'/W	4	CG with no intervention and PNFG
Noghani et al. (2023) [24]	PG: 62.7 CG: 65	19F PG: 10 CG: 9	Mat	3 x 2'/W	8	CG with no intervention
Patti et al. (2021) [25]	63.94	41 (28F) PG: 18 Pa-G: 23	Mat	3 x 50'/W	13	Pa-G

Notes: CG: Control Group; PG: Pilates Group; PNFG: Proprioceptive Neuromuscular Facilitation Group; Pa-G: Physical activity group; W: week

Table 6. Functional Performance Outcome

Author	Pilates Group	Control Group	Outcome Measure	Result
Barker et al. (2016) [18]	Reformer 2 x 60' x 12W	CG with Standard care	ST, FRT, LRT, TUG, MCTSIB, DGI, FSST	Significant improved in PG than CG (ST, FRT, TUG (fast), timed tandem stance on foam (EC), DGI)
Campos de Oliveira et al. (2015) [19]	Mat 2 x 60' x 12W	CG with static stretch exercise	BBS, TUG	Significant differences found in PG for all measures
Gabizon et al. (2016) [20]	Mat (Resistance bands and Swiss balls) 3 x 60' x 12W	CG with no intervention	BBS, TAT	Significant main effects for time for BBS, Ns in other measures
Josephs et al. (2016) [21]	Reformer 2 x 60' x 12W	Traditional exercise	TUG, FAB	Significant improvement in FAB for both the PG and TG; Ns in TUG
Mesquita et al. (2015) [23]	Mat (Swiss ball, theraband, and magic circle) 3 x 50' x 4W	CG with no intervention PNFG	BBS, FRT, TUG	Significant improvements in BBS, FRT, TUG for both PG and PNFG in within-group comparison
Noghani et al. (2023) [24]	Mat 3 x 2' x 8W	CG with no intervention	BBS, TUG	Significant effect of PG compared to CG in BBS and TUG
Patti et al. (2021) [25]	Mat 3 x 50' x 13W	Pa-G	BBS	Both groups showed a Ns improvement with PG > Pa-G

Notes: Ns: Not significant; PG: Pilates Group; CG: Control Group; Pa-G: Physical activity group; W: week; BBS: Berg balance scale; TUG: time up and go test; FRT: functional reach test; Step test: ST; LRT: lateral reach test; MCTSIB: modified clinical test of sensory interaction in balance; DGI: dynamic gait index; FSST: four step square test; TAT: Timetti assessment tool

A Pilot Study: Thoracic Rotation Range of Motion in Recreational Sports Olayer of Overhead Rotation-related Sports With and Without Low Back Pain

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- **Background and Purpose:** This study investigates whether thoracic rotation range of motion (ROM) differs between individuals with and without low back pain (LBP) who regularly engage in sports involving trunk rotation and overhead actions.
- **Methods:** Thirteen participants (7 male, 6 female) who participate in overhead sports were divided into two groups: those without a history of LBP (nLBP group) and those with LBP (LBP group). Participants completed a questionnaire on their sports habits and health before undergoing active thoracic rotation ROM measurement.
- **Results:** Pain levels were assessed using the Visual Analogue Scale (VAS), Athletes Disability Index Questionnaire (ADI), and Graded Chronic Pain Scale (GCPS). Statistical analysis showed no significant differences in thoracic rotation ROM between groups ($p > 0.05$). Correlation analysis revealed weak, non-significant associations between thoracic rotation and pain measures.
- **Conclusion:** The pilot study found no evidence of differences in thoracic rotation ROM related to LBP, highlighting the need for more extensive research to explore this relationship.

Table 1. Variables for LBP group (N=6) and nLBP group (N=7)

Variable	Groups		Statistical and probability values
	LBP (n=6)	nLBP (n=7)	
Gender (number)	M=2, F=4	M=5, F=2	$\chi^2=1.887$; $P=.17$
Mean age \pm SD (y)	25.5 \pm 2.17	26.5714 \pm 6.32	$t=-.394$; $P=.701$
Types of sports			$\chi^2=3.745$; $P=.154$
Volleyball	4	1	
Badminton	1	3	
Handball	1	3	

Table 2. Comparison of active thoracic rotation range of motion (measure in degree) between LBP and non-LBP Group

	Grouping		two-sided p-values	t
	LBP	nLBP		
	Mean ROM \pm SD	Mean ROM \pm SD		
Thoracic Rotation in the dominant side	58.5 \pm 8.71	58.57 \pm 6.90	0.987	-0.017
Thoracic Rotation in the non-dominant side	61.5 \pm 11.02	62.43 \pm 9.24	0.872	-0.0165
Total Thoracic Rotation	120 \pm 15.03	106.71 \pm 44.06	0.498	0.701

SD: Standard deviation

Table 3. Correlation Between Thoracic Rotation Range of Motion and Low Back

Pain Outcome Measures

		VAS	ADI	Pain Score
Thoracic Rotation in the dominant hand	Pearson Correlation	-0.169	-0.323	-0.054
	Sig. (2-tailed)	0.581	0.282	0.86
Thoracic Rotation in the non-dominant hand	Pearson Correlation	0.069	-0.181	0.039
	Sig. (2-tailed)	0.824	0.554	0.901
Total thoracic rotation	Pearson Correlation	0.166	0.024	0.214
	Sig. (2-tailed)	0.588	0.938	0.482

Qualitative exploration of how breast cancer survivors live and cope after treatment

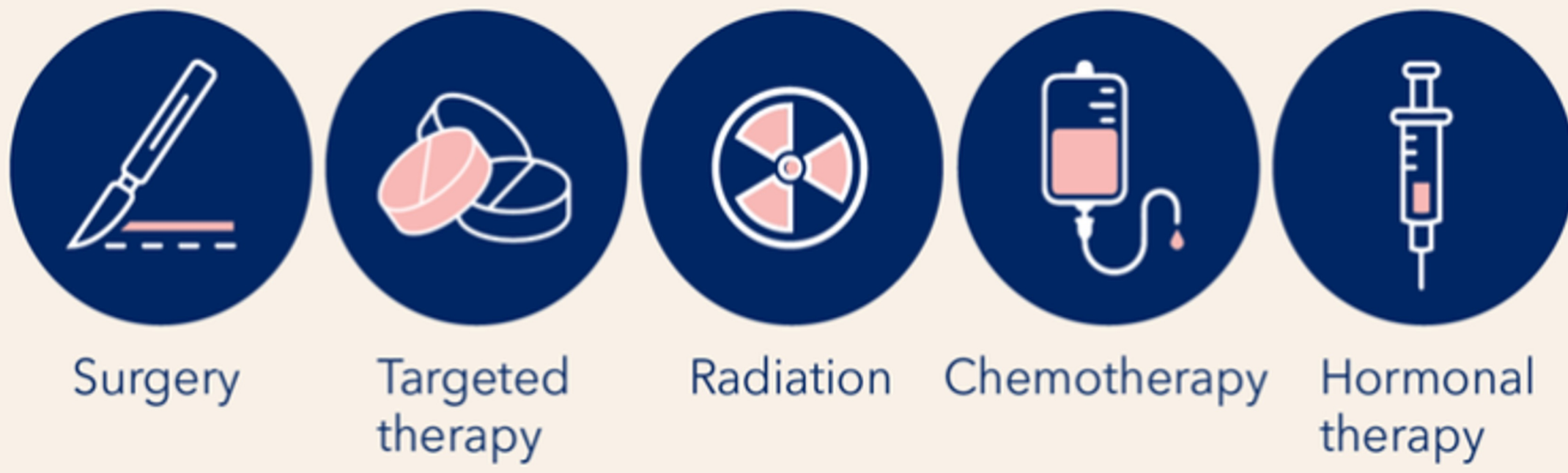


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Background

Breast cancer (BC) is a common and burdensome disease with *high morbidity and mortality* worldwide. Despite the high incidence of BC, there are still a significant number of *survivors* show no signs of cancer after treatment. BC patients need to make their *own treatment decisions* based on their doctor's advice. After received the treatment, they need to *face the challenges associated with treatment*, such as side-effects, fear of recurrence, body image issues, and sexual dysfunction. This study explored how BC survivors *cope with difficulties* and *resume normal life* after receiving treatment.



Aim and objectives

To examine how BC survivors' treatment choices affected how they coped and resumed normal life after breast cancer treatment.



Participants

	Participant 1	Participant 2	Participant 3
Living with family	No	Yes	Yes
Marital status	Married	Married	Widowed
Have children	Yes	Yes	Yes
Treatment received for breast cancer	<ul style="list-style-type: none"> • Surgery • Chemotherapy • Radiotherapy 	<ul style="list-style-type: none"> • Surgery • Radiotherapy • Hormone therapy 	<ul style="list-style-type: none"> • Surgery • Radiotherapy • Hormone therapy

Methods



- Qualitative descriptive research design
- Purposive sampling
- Semi-structured interviews
- Inductive thematic analysis

Making treatment choices

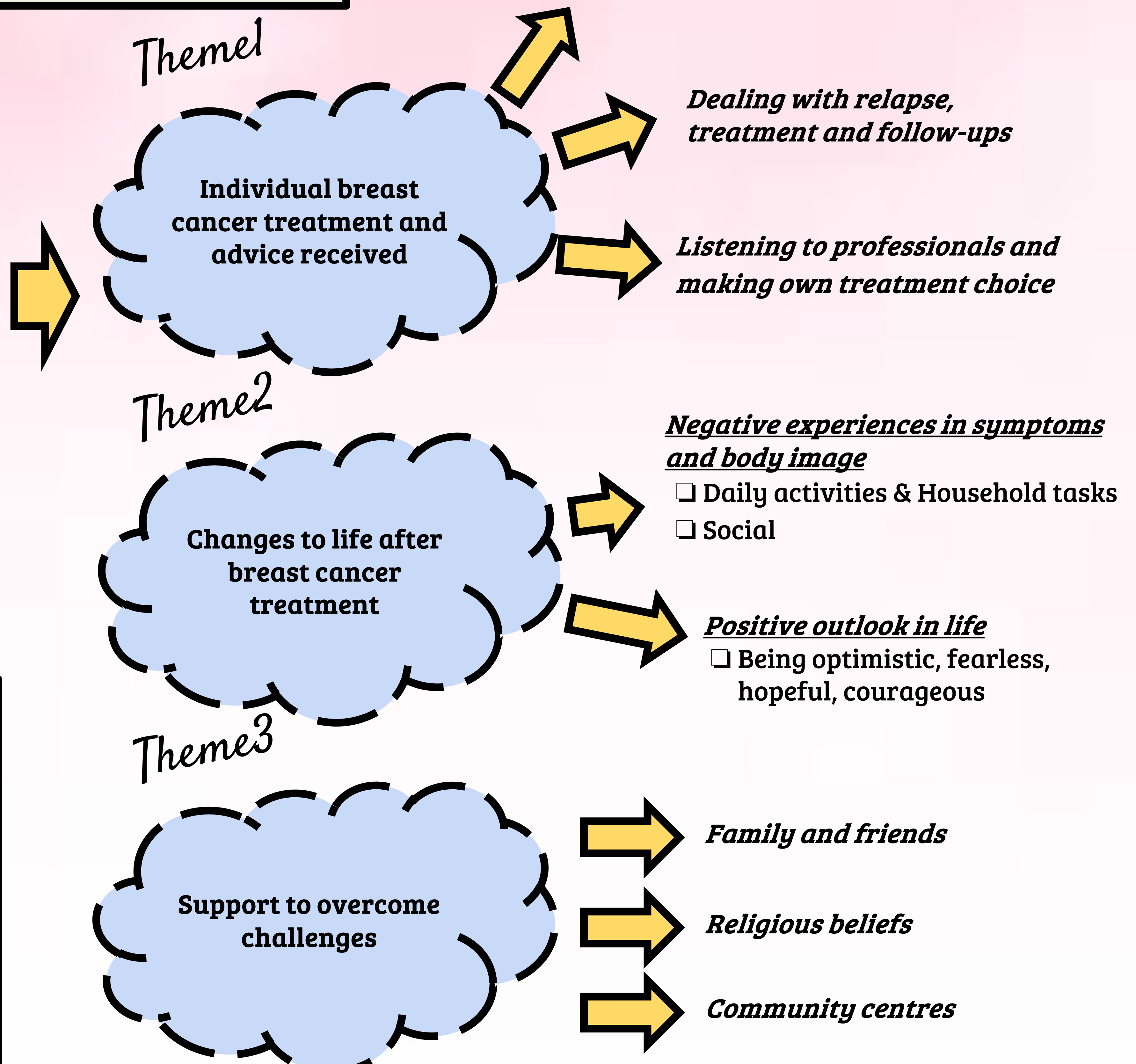
- Private vs. Public hospital
- Which doctor
- Followed doctor's advice → Scientific
- Traditional Chinese medicine
- relieve side-effects of treatments

Results

Our study illustrated the impacts of different treatments and major challenges faced by BC survivors. The data reflected their feelings and attitudes after treatments and the support they received in coping with the difficulties of returning to normal life.

Conclusion

- ★ BC survivors encounter significant challenges after various treatments
- ★ Increase focus on *treatment-related information* as this can help BC survivors make their own treatment choices
- ★ *Strengthening support* for BC survivors to overcome their challenges



Knowledge and Attitude towards Blood Donation in Nursing Students: A Cross-sectional Study

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Background

Blood transfusion saves lives and improves health. However, there has been a global blood shortage and a significant disparity in blood donation worldwide in recent years. As future healthcare professionals who educate and promote blood donation, nursing students' knowledge and attitude are paramount to improving future motivation and engagement.

Aims and Objectives

This study aimed to (1) explore Hong Kong nursing students' knowledge and attitudes toward blood donation and (2) identify the factors that influence the willingness of nursing students to be blood donors.

Methods

This cross-sectional online survey study was conducted in a self-financing university using a questionnaire comprised of three parts: socio-demographics with blood donation-related items, a knowledge scale on blood donation, and a Blood Donor Identity Survey. Before study implementation in November 2023, ethical approval was sought. Participants' demographic characteristics were summarized with descriptive statistics. When the continuous variables were normally distributed, an independent-sample t-test was used to compare any significant difference between blood and non-blood donors. The Pearson Chi-square test or Fisher's Exact test was used for categorical data to determine the statistical significance in different groups.

Results

720 undergraduate nursing students were recruited, and 650 valid questionnaires were received. Among 650, 484 (74.5%) were female, and their mean age was 20.84 (SD=2.26) years. Participants' socio-demographics with blood donation-related items are shown in Table 1. The total knowledge mean score was 9.55 (SD=1.32) out of 12, and blood donors (9.77±1.28) were higher than non-blood donors (9.46±1.33), with a significant difference (p=0.006) (Table 2). Table 3 shows the students' motivations (attitudes) in blood donation. Nursing students who have religion, are older, have prior experience receiving blood, know someone who has donated blood, and have higher scores of identified regulations are more likely to be blood donors (OR>1). Nursing students who had long-term medication taken and a higher amotivation score are less likely to be blood donors (OR<1) (Table 4).

Conclusions

Overall, nursing students have a good knowledge of blood donation. Blood donors possess a better understanding of blood donation than non-blood donors. Strategies to improve amotivation could be considered in the future.

Acknowledgment

The authors would like to express their gratitude to Prof. Christopher France and Dr. Judy Siu for their approval of using the questionnaires.

Table 1. Participants' socio-demographics with blood donation-related items

Variable	Total (N=650)
	N (%) / Mean±SD
Gender	Male 166 (25.5%)
	Female 484 (74.5%)
Age (years)	20.84±2.26 (N=643)
Study year	Year 1 196 (30.2%)
	Year 2 151 (23.2%)
	Year 3 132 (20.3%)
	Year 4 83 (12.8%)
	Year 5 88 (13.5%)
Religion	Yes 89 (13.7%)
	No 561 (86.3%)
Chronic illness	Yes 43 (6.6%)
	No 607 (93.4%)
Chronic illness (parents)	Yes 247 (38.0%)
	No 403 (62.0%)
Have medication	Yes 49 (7.5%)
	No 601 (92.5%)
Regular follow-up	Yes 83 (12.8%)
	No 567 (87.2%)
Know someone who has ever received blood	Yes 202 (31.1%)
	No 448 (68.9%)
Prior experience of receiving blood	Yes 50 (7.7%)
	No 600 (92.3%)
Any clinical experience	Yes 184 (28.3%)
	No 466 (71.7%)
Any part-time work	Yes 476 (73.2%)
	No 174 (26.8%)
Has part-time temporary nursing job	Yes 147 (22.6%)
	No 503 (77.4%)
I was refused a blood donation	Yes 73 (11.2%)
	No 577 (88.8%)
Known someone who had donated blood	Yes 551 (84.8%)
	No 99 (15.2%)
Self-report health status (0-100)	65.28±15.31

Table 2. Knowledge score of blood donors and non-blood donors

Items	Total (N=650)	Non-blood donor (N=465)	Blood donor (N=185)	p-value
	N (%) / Mean±SD	N (%) / Mean±SD	N (%) / Mean±SD	
1. All donated blood being tested for the presence of HIV antibodies				
Yes#	546 (84.0%)	395 (84.9%)	151 (81.6%)	0.297
No	104 (16.0%)	70 (15.1%)	34 (18.4%)	
2. Person under 16 years can donate blood				
Yes	169 (26.0%)	122 (26.2%)	47 (25.4%)	0.827
No#	481 (74.0%)	343 (73.8%)	138 (74.6%)	
3. Pregnant woman can donate blood				
Yes	121 (18.6%)	91 (19.6%)	30 (16.2%)	0.322
No#	529 (81.4%)	374 (80.4%)	155 (83.8%)	
4. All people with diabetes or hypertension can donate blood				
Yes	61 (9.4%)	44 (9.5%)	17 (9.2%)	0.914
No#	589 (90.6%)	421 (90.5%)	168 (90.8%)	
5. All patients with cancer with the risk of metastasis can donate blood				
Yes	29 (4.5%)	19 (4.1%)	10 (5.4%)	0.462
No#	621 (95.5%)	446 (95.9%)	175 (94.6%)	
6. Woman with menstruation can donate blood				
Yes#	245 (37.7%)	158 (34.0%)	87 (47.0%)	*0.002
No	405 (62.3%)	307 (66.0%)	98 (53.0%)	
7. There is an age limit for blood donation				
Yes#	601 (92.5%)	430 (92.5%)	171 (92.4%)	0.986
No	49 (7.5%)	35 (7.5%)	14 (7.6%)	
8. Breastfeeding woman can donate blood				
Yes	315 (48.5%)	227 (48.8%)	88 (47.6%)	0.774
No#	335 (51.5%)	238 (51.2%)	97 (52.4%)	
9. It is necessary for the donated blood be used within 24 hours				
Yes	67 (10.3%)	46 (9.9%)	21 (11.4%)	0.581
No#	583 (89.7%)	419 (90.1%)	164 (88.6%)	
10. Hepatitis B carriers can donate blood				
Yes	13 (2.0%)	11 (2.4%)	2 (1.1%)	0.368
No#	637 (98.0%)	454 (97.6%)	183 (98.9%)	
11. Person having fever on the day of donation can still donate blood				
Yes	39 (6.0%)	34 (7.3%)	5 (2.7%)	*0.026
No#	611 (94.0%)	431 (92.7%)	180 (97.3%)	
12. Smoker can donate blood				
Yes#	429 (66.0%)	290 (62.4%)	139 (75.1%)	*0.002
No	221 (34.0%)	175 (37.6%)	46 (24.9%)	
Total score	9.55±1.32	9.46±1.33	9.77±1.28	*0.006

*p<0.05. #correct answer. Continuous variables were analyzed by independent-samples t test. Categorical variables were analyzed by Pearson Chi-square test or Fisher's Exact test.

Table 3. Participants' motivations (attitudes) in blood donation

Items	Total (N=650)	Non-blood donor (N=465)	Blood donor (N=185)	p-value
	Mean±SD	Mean±SD	Mean±SD	
Amotivation	11.04±3.25	11.61±3.28	9.60±2.69	*<0.001
Q1 I really do not think about donating blood.				
Q7 Blood donation is something I rarely even think about.				
Q13 I really do not have any clear feelings about blood donation.				
External regulation	8.74±3.51	8.70±3.46	8.83±3.65	0.675
Q2 I donate blood for thank-you gifts, such as T-shirts or water bottles.				
Q8 I donate blood for the refreshments, such as drinks or snacks.				
Q14 I donate blood to get a donor sticker.				
Introjected regulation	8.89±3.31	8.78±3.26	9.15±3.44	0.201
Q3 I would feel guilty or ashamed of myself if I did not donate blood.				
Q9 I would feel bad about myself if I did not donate blood.				
Q15 I would regret it if I did not donate blood.				
Identified regulation	14.34±3.58	13.95±3.55	15.34±3.46	*<0.001
Q4 Donating blood is an important choice I really want to make.				
Q10 Donating blood is very important for the health of others.				
Q16 Blood donation is an important thing to do.				
Integrated regulation	12.48±3.75	12.02±3.73	13.64±3.56	*<0.001
Q5 I have carefully thought about it and believe donating blood is very important for many aspects of my life.				
Q11 Donating blood is consistent with my life goals.				
Q17 Donating blood is very important to me.				
Intrinsic regulation	12.53±3.50	12.08±3.44	13.68±3.40	*<0.001
Q6 I enjoy donating blood.				
Q12 For me, being a blood donor means more than just donating blood.				
Q18 Blood donation is an important part of who I am.				

*p<0.05. Continuous variables were analyzed by independent-samples t test.

Table 4. Factors influence the willingness of nursing students to be blood donors

Variables	OR (95% CI of OR)	p-value
Age	1.222 (1.122-1.332)	<0.001
Religion (reference group: No religion)	1.807 (1.067-3.059)	0.028
Have medication (reference group: No medication)	0.238 (0.089-0.632)	0.004
Prior experience of receiving blood (reference group: No prior experience of receiving blood)	5.808 (2.923-11.541)	<0.001
Known someone who had donated blood (reference group: not know someone who had donated blood)	2.625 (1.288-5.350)	0.008
Amotivation	0.832 (0.776-0.891)	<0.001
Identified regulation	1.151 (1.085-1.222)	<0.001

OR-Odds Ratio. CI-Confidence Interval. By Hosmer and Lemeshow goodness-of-fit: Chi-square=2.674, df=8, p=0.953.

The unspoken burden: Exploring turnover intentions among junior nurses in Hong Kong

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Background: The nursing shortage in Hong Kong’s healthcare system places immense pressure on new graduates to fill workplace gaps. However, junior nurses face numerous challenges during their first year, contributing to high turnover rates. This study explores the factors influencing resignation intentions among this vulnerable group..

Objective: This study aimed to explore the perspectives of junior nurses in Hong Kong regarding their intention to leave the profession, focusing on their perceptions of nursing and their work environment.

Methods: Utilizing snowball sampling, five junior nurses participated in individual semi-structured interviews. Thematic analysis, as described by Braun and Clarke (2006), was used to analyse the interview transcripts. Ethical considerations, including informed consent was maintained throughout the study.



Results: Four key themes emerged as significant challenges faced by junior nurses:

Theme 1: Heavy workload

“I frequently work two hours of overtime because my workload isn’t completed during my regular shift.”

(P5, female)

“My work is constantly on my mind, even on my days off. This constant worry about errors or missed tasks prevents me from relaxing and enjoying my time away from the hospital.”

(P2, female)

Theme 2: Change of role and responsibility

“The transition from student nurse to RN has been significant. As a student, I was mainly focused on assisting with tasks.

Now, I’m responsible for the care of my own patient load and it’s a much bigger responsibility.”

(P5, female)

Theme 3: Lack of support

“The short training and orientation program haven’t adequately prepared me for the stress of being a new RN. I’m finding it hard to manage, and while peer support is offered, I’m hesitant to use it. I think I could benefit from additional support.”

(P4, female)

Theme 4: Negative workplace culture

“The gossiping in the workplace creates a negative atmosphere that I find difficult to be around.”

(P1, female)

“I feel like I’m being unfairly blamed for small mistakes, like forgetting things, by some of the nurses and patient care assistants.”

(P3, male)

Conclusion: The identified themes, including inadequate training and high levels of workplace stress, significantly impacted job satisfaction, and contributed to increased turnover intentions among junior nurses in Hong Kong. Addressing these challenges is crucial to enhance retention and strengthen the nursing workforce.

Keywords: challenges, intention to leave, job satisfaction, junior nurse, new graduate nurse, turnover and job retention

Reference:

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.

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