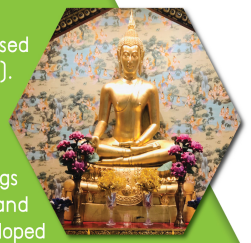
NON-COMMUNICABLE DISEASES IN BUDDHIST MONKS : AN INTEGRATIVE REVIEW

King Chulalongkorn Memorial Hospital
The Thai Red Cross Society

Thanakrit Jeamjitvibool BNS,RN*
Thitipong Tankumpuan PhD,MNS, RN**
Nada Lukkahatai PhD, MSN, RN, FAAN***
Patricia M. Davidson PhD, MEd, RN, FAAN***

*Nursing Department, King Chulalongkorn Memorial Hospital, Thai Red Cross Society, Bangkok, Thailand
** Faculty of Nursing, Mahidol University, Bangkok, Thailand
*** School of Nursing, The Johns Hopkins University, Baltiemore, MD, USA

BACKGROUND :



Non-Communicable Diseases (NCDs) are associated with increased mortality and impact adversely on disability-adjusted life years (DALYS). In Asia, due to the where there are limited resources this burden is pronounced. Buddhist monks have unique lifestyles that are shaped to support their spiritual practice. All Buddhist monks have restrictions impacting on their cardiovascular health. For instance, they are dependent on food offerings from donations and unable to exercise regularly due to the religion duties and obligations. Hence, Buddhist monks are vulnerable for NCDs which gradually developed in long term. Despite an interest in the health burden of NCD in Buddhist monks is increased, the general characteristics, prevalence and influenced factors remain unclear.

OBJECTIVE :

The aims of the integrative review was to identify the general characteristic, prevalence, factors related with health outcome and burden of NCDs in Thai Buddhist monks.

METHODS :

The integrative review guided by the Whittemore and Knaft framework in 2005. The MeSH term,essential keywords included "Thai Buddhist monk" "non-communicable Disease" "prevalence" "chronic illness" "factor". This review included studies between May 2006 and August 2018 in English and Thai language identified through searching PubMed, Science Direct, CINAHL and hand searching. The exclusion criteria are intervention studies, qualitative studies, literature review articles, unpublished manuscripts and conference abstracts.

RESULTS :

Fourteen articles were included the analysis. We found a high prevalence of NCD in Thai Buddhist monk including hypertension, diabetes, cancer, dyslipidemia, musculoskeletal problems such as back pain, knee osteoarthritisand foot and ankle problems, eye problems such as cataract and glaucoma, pulmonary disease, and overweight. The factors relating high prevalence of NCD included food consumption, activity of daily life and life style associated with religious practices.

Referene	Design (study)	Setting	Patients (n)	General characteristics									Prevalence of NCDs								
				Age Mean (SD)	Smoking (%)	Edu. (%)	U/D (%)	BW Mean (SD)	BP (%)	Ordain Time Mean (SD)	Waist Cir. Mean (SD)	FPG (mg%)	OA	Resp.	DM	HT	DLP	Obesity	Cardio.	CA	CKD	others
Suvithan Patthana bandit et al	participatory action research	Khon-Kaen	165	-	-	-	-	-	-	-	-	-	✓	×	✓	✓	✓	×	×	×	×	✓
Sararuk et al.	Cross-sectional	Ubon-ratchatani	218	-	-	Primary 34.4	33	-	<140/90:74.31	-	-	-	×	×	✓	✓	✓	✓	×	✓	×	×
Norasigha et al.	Retrospective cohort	Ayut-thaya	895	49.8 (17.4)	-	Primary 59.8	-	-	<130/85: 25.9	8.4 (10.03)	>90 cm 20.3%	>100 :33%	×	×	✓	✓	✓	×	×	×	×	✓
Junsamlee et al.	Cross-sectional	Samutprakarn	283	(>45 years: 45.6%)	-	-	-	-	-	(1-5 years: 30.7%)	-	102 ± 47.8	×	×	×	×	×	✓	×	×	×	✓
Potranan et al.	Cross-sectional	Bangkok	222	(20-39 years: 55.4%)	-	Bachelor 39.20	36.6	-	-	(1-5 years: 37.8%)	-	-	×	×	×	×	×	✓	×	×	×	×
Rerkluenrit et al.	Cross-sectional	Nakornnayok	310	43.7 (17.7)	49.7 (Exist 25.3)	Primary 37.5	34 (>1: 3.8)	63.7 (11.8)	-	7.6 (11.7)	32.9 (8.2)	-	✓	✓	✓	×	×	×	✓	×	×	✓
Phachan & Muk-tabhant	Cross-sectional	Khon-Kaen	184	(36-59 years: 46.2%)	-	Primary 29.9	-	-	-	-	>90 cm 25.0%	-	×	×	×	✓	×	✓	×	×	×	✓
Tangtrakulwanich et al.	Cross-sectional	Songkhla	261	60.4 (12.7)	38.1	-	-	-	-	16.9	-	-	✓	×	×	×	×	✓	×	×	×	✓
Suphunnakul et al.	Cross-sectional	North region	380	(50-59 years: 55.4%)	-	Primary 51.3	-	-	-	(>20 years: 67.9%)	-	>130 :50%	×	×	✓	×	×	×	✓	×	×	✓
Kuramsuwan et al.	Cross-sectional	Chantaburi	415	54 (11.8)	-	Primary 64.8	-	-	>130/85: 27.2	15.9 (12.5)	71.9 (10.1)	-	×	×	✓	✓	×	✓	×	×	×	✓
Vaseenon et al.	Cross-sectional	North region	209	39 (-)	-	-	24.8	-	-	(1-5 years: 29.7%)	-	-	×	×	×	×	✓	✓	×	×	×	✓
Yiengprugsawan et al.	Retrospetive cohort	Thai Chort	711	(20-29 years: 50.9%)	-	-	-	-	-	-	-	-	×	×	×	×	✓	×	×	×	✓	✓
Tangtrakulwanich et al.	Cross-sectional	South region	261	60.4 (12.7)	38	-	80	-	-	44.4 (17.6)	-	-	✓	×	×	×	×	✓	×	×	×	×
Bhumisawasdi et al.	Cross-sectional	BKK	1,122	34.1 (-)	13.76	primary 28.61	54.90	-	-	13.8 (-)	-	-	×	✓	✓	✓	✓	✓	✓	✓	✓	✓

Abbreviation: Edu. = Educational level, U/D = Underlining Disease, BW = Body weight, BP = Blood pressure, Waist Cir. = Waist circumference, FPG = Fasting plasma glucose, OA = Osteoarthritis, Resp. = Respiratory, DM = Diabetes mellitus, HT = Hypertension, DLP = Dyslipidemia, Cardio. = Cardiology, CA = Cancer, CKD = Chronic kidney disease

CONCLUSION :

Buddhist monks are vulnerable to develop NCDs with complicated complication. Future intervention should focus on health education, holistic healthcare addressing both the individual and community level.

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