A Qualitative Exploration of Diet-Related Noncommunicable Diseases from the Perspectives of Thai Buddhist Monks in Chiang Mai Province, Thailand

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Abstract

The global increase in noncommunicable diseases, particularly in Thailand, is attributed to changes in lifestyle and diet. This qualitative study focuses on Thai Buddhist monks whose diets have shifted from traditional plant-based foods to unhealthy options. Through in-depth interviews with 37 Thai Buddhist monks in Muang District, Chiang Mai Province, it is revealed that Thai Buddhist monks are aware of noncommunicable diseases like hypertension and diabetes mellitus but lack understanding of diet's role in these diseases. The study highlights Thai Buddhist monks' concerns about the nutritional quality of alms food, which is primarily processed and lacking in nutrients, and the challenges faced due to monastic precepts. Strategies suggested include nutrition education for monks and lay donors and collaboration with health organizations to mitigate noncommunicable disease risks. This research emphasizes the necessity for targeted interventions and policy reforms to enhance Thai Buddhist monks' dietary health and prevent noncommunicable diseases. Additionally, the study reveals gaps in monks' knowledge about noncommunicable diseases and dietary health, suggesting the importance of targeted nutrition education and policy interventions. It emphasizes the role of monks as influential figures in shaping societal eating habits and the potential of monk-led initiatives in promoting healthier dietary practices in Thai communities.

Keywords

Buddhist monks; diet; noncommunicable diseases; nutrition

Introduction

Noncommunicable diseases (NCDs) such as cardiovascular disease, cancer, chronic respiratory disease, hypertension (HT), and diabetes mellitus (DM) have become the foremost causes of mortality and morbidity worldwide. According to the World Health Organization (2023), NCDs account for over 40 million deaths globally every year, representing 71% of all deaths. The rising NCD burden has been driven by urbanization, economic growth, and related changes in lifestyles and diets that have occurred rapidly across the developing world (Mo-suwan et al., 2014; Saklayen, 2018). Unhealthy diets now represent one of the major modifiable risk factors contributing to the global epidemic of NCDs (Mo-suwan et al., 2014; Wungrath et al., 2022). Studies estimate poor dietary habits, including low intake of whole grains, fruits, vegetables, nuts, and seeds and high consumption of processed red meats, sugars, salt, and trans fats, accounted for 11 million deaths and 255 million disability-adjusted life years globally in 2017 (Muka et al., 2015). This reflects a significant rise in the consumption of cheap, convenient, tasty, and calorie-dense processed foods and a decline in traditional diets rich in fiber and micronutrients (Lee et al., 2015).

In Thailand, rising rates of obesity, type 2 DM, HT, ischemic heart disease, and certain cancers over recent decades have signaled the impact of these global nutrition and lifestyle transitions at the population level. From 1975 to 2014, the total energy derived from dietary fat increased from 12.5% to 24.7% among Thai adults (Aekplakorn et al., 2018; Lim et al., 2012). Rates of overweight and obesity surged from 5% to 37% in men and 24% to 47% in women over the same period (Aekplakorn et al., 2018; Mo-suwan et al., 2014). The prevalence of DM escalated from 2% to 8%, HT rose from 5% to 20%, and metabolic syndrome increased from 18% to 41% (Mo-suwan et al., 2014; Phulkerd et al., 2021). Diet-related NCDs now cause a high number of deaths in Thailand, posing significant health and economic challenges (Aekplakorn et al., 2018; FAO et al., 2020).

Thai Buddhist monks hold esteemed roles as spiritual leaders and community role models in Thailand. With an estimated population of over 300,000 monks residing in temples nationwide, the Buddhist clergy's practices and perspectives influence societal values and behaviors (National Office of Buddhism, 2021; Srimantayamas et al., 2020). As ascetics are dedicated to spiritual development, monks rely entirely on alms food, and temple offerings for their daily meals. Traditionally, monks maintained a simple plant-based diet, consuming whatever was donated by lay followers (National Office of Buddhism, 2021). However, in recent decades, rising affluence and changing consumption patterns have led to more high-fat, high-sugar processed foods entering the alms trade (Srimantayamas et al., 2020). One national survey of monks in Thailand found that most of the food consumed daily by Thai Buddhist monks comes from alms, which limits their ability to control the type, quality, and nutritional content of the food (McDaniel, 2010). Only 21% of Thai Buddhist monks reported consuming the recommended daily servings of fruits and vegetables (Kwancharoen et al., 2019). Monks' diets were low in fiber and micronutrients and high in sugars, salt, and saturated fats, putting them at risk for obesity, DM, and cardiovascular diseases (Srimantayamas et al., 2020).

Studies show that Thai Buddhist monks in Thailand have a much higher prevalence of NCDs like HT and obesity compared to the general Thai population and global averages. For example, one study found an HT prevalence of 76% among Thai monks, compared to 24.7% in the overall Thai population and 31% globally (Jeamjitvibool et al., 2022; Mo-suwan et al.,

2014). Another study reported that 62% of monks were overweight, with a body mass index over 25 kg/m² (Jeamjitvibool et al., 2022; Srimantayamas et al., 2020). These strikingly high rates of obesity, HT, and other diet-related illnesses have prompted research into the scale of this health crisis among the Buddhist clergy community. However, findings vary widely between studies, likely due to differences in study locations and methods. More comprehensive multi-site studies are needed to fully understand the magnitude of NCDs among Thai Buddhist monks across Thailand.

Thus, Thai Buddhist monks in Thailand seem to be undergoing nutrition and lifestyle changes mirroring the general population, with potential health consequences (Phulkerd et al., 2021). However, despite their influential role, monks' perspectives on diet-related health issues have been little studied. Many studies have surveyed monks' knowledge, attitudes, and behaviors about preventing obesity, DM, and HT (Srithong et al., 2021). Findings indicate some awareness of disease risks but poor compliance with clinical guidelines for healthy eating and physical activity (Kamkokgruad et al., 2019). However, no previous studies have specifically investigated the Thai Buddhist perspective's insights, food choices, and concerns regarding the links between diet and the emergence of NCDs. This qualitative study aims to address this gap through in-depth interviews with monks in Chiang Mai province, Thailand's second-largest city. Its urban setting, where the lifestyles of monks are closely intertwined with the dynamics of a large city. The influence of urbanization on dietary habits and health behaviors makes this location particularly relevant for exploring the challenges and opportunities for promoting healthy eating among monks, with implications primarily for urban communities. By eliciting perspectives of influential Buddhist clergy, findings can help inform policies and programs promoting healthy eating among monks and in communities nationwide.

Methods

Participants and setting

This study was conducted in Muang District, Chiang Mai Province, between November 2023 and January 2024. Muang District is an urban district and capital of Chiang Mai Province, Northern Thailand. There were 1,059 Thai Buddhist monks from 135 temples in Muang District, according to data from the register of Thai Buddhist monks in Muang District, Chiang Mai Province, obtained from the Chiang Mai Provincial Buddhist Office.

The criteria for selecting the residents included being aged between 20–69 years, having been ordained as a Buddhist monk for at least 1 year, going on alms rounds as part of their daily routine, and accepting invitations for religious services from lay people as usual. They were required to communicate effectively in Thai and express willingness to participate in the study. Information letters were distributed to all temples in Muang District, Chiang Mai Province. Thai Buddhist monks interested in participating were asked to fill out a form indicating when and where they could be interviewed. Interview times and locations were scheduled based on their preferences. Subsequently, interviews were conducted with all monks who agreed to participate. Sampling continued until saturation was reached, as determined by the interviewer. In total, 37 Thai Buddhist monks from the district participated in the in-depth interviews.

In-depth interview procedure

In-depth interviews were conducted to explore perspective insights, food choices, and concerns regarding the links between diet and the emergence of NCDs. The research team created interview questions. After developing the interview questions, they underwent testing and quality assurance using the Index of Content Validity, also known as the Index of Item-Objective Congruence (IOC) method. Three qualified individuals reviewed and provided feedback on the guide, which was then revised based on their suggestions to ensure cultural appropriateness and sensitivity. The IOC was more than 0.5 in all questions. The questions were pre-tested with five Thai Buddhist monks in Chiang Mai province to ensure they were clear, understandable, and relevant. Each interview was about 1 hour long and conducted by the same interviewer. All interviews were audio recorded and transcribed word-for-word to facilitate analysis. The theme and sub-themes are shown in Table 1.

Table 1: Theme and Sub-Themes From In-Depth Interviews

Theme	Sub-themes
Monks' Perspectives on Noncommunicable Diseases (NCDs)	- Awareness of NCDs: Understanding and misconceptions regarding diseases like hypertension (HT), diabetes mellitus (DM), obesity, and others. - Causes of NCDs: Perceptions about the origins of NCDs, including intrinsic factors versus lifestyle factors.
Nutritional Quality of Alms Food	- Quality Concerns: Nutritional value of donated food, including deficiencies and excesses. - Changes in Food Donations: Shifts from traditional diets to modern, less healthy options.
Food Selection Practices	- Mindful Selection: These are strategies monks use to choose healthier food options. - Challenges in Food Choices: Difficulties faced due to monastic precepts and the nature of food donations.
Monastic Precepts and Dietary Barriers	- Dietary Constraints: How monastic rules affect monks' ability to make healthy food choices. - Spiritual vs. Health Needs: Balancing the need for adherence to precepts with health considerations.
Strategies for Improving Monastic Diets	- Educational Initiatives: Proposals for enhancing monks' and lay donors' nutrition awareness. - Community Involvement: The role of public health organizations and community support in improving diet quality.

Data analysis

Thematic analysis was used to analyze the focus group and interview data, following standard qualitative methodology. First, audio recordings were transcribed word-for-word. Transcripts were checked against the original audio for accuracy. Transcripts were closely reviewed to identify key concepts and themes. Statements expressing similar ideas were categorized into overarching themes reflecting the core messages in the data. A second researcher also independently coded all transcripts to reduce bias. Any differences in theme allocation between the two coders were discussed and resolved by consensus. This open coding thematic analysis allowed for systematically identifying salient themes related to perspective insights, food choices, and concerns regarding the links between diet and the emergence of NCDs.

Trustworthiness

The interviews and transcriptions were done in Thai, and the English translations and edited quote reproductions were cross-checked with the research team and verified against the original recordings for semantic compatibility. The methodology and context have been thoroughly described to help readers evaluate applicability. A rigorous audit trail was maintained through extensive memos and field notes per research standards. Data triangulation was done by conducting interviews with diverse participants across locations, supplemented by field notes and memos. These steps helped validate findings and reduce the risk of misrepresentation.

Result

Participants' sociodemographic information

The study included a total of 37 participants. The average age of the participants was 46.7 years. The educational levels of the participants were diverse: Two participants (5.41%) had completed lower secondary education, five participants (13.51%) had completed upper secondary education, 13 participants (35.14%) held a diploma or equivalent qualification, 11 participants (29.73%) had a bachelor's degree, and two participants (5.41%) had a postgraduate degree. Regarding the duration of ordination, nine participants (24.32%) had been ordained for 1–5 years, 11 participants (29.73%) for 6–10 years, 14 participants (37.84%) for 10–15 years, and three participants (8.11%) for more than 16 years. Regarding NCD status, 28 participants (75.68%) had NCDs, while nine participants (24.32%) did not. Among those with NCDs, 14 participants (48.28%) had diabetes, 18 participants (62.07%) had hypertension, seven participants (24.14%) had cardiovascular diseases, and 22 participants (75.86%) had more than two diseases, as shown in Table 2.

Table 2: Participants' Sociodemographic Information

Characteristic	Number of Participants (%)
Total Number of participants	37
Average age (years)	46.7
Education level	
Lower Secondary Education	2 (5.41)
Upper Secondary Education	5 (13.51)
Diploma or Equivalent	13 (35.14)
Bachelor's Degree	11(29.73)
Postgraduate Degree	2 (5.41)
Duration of Ordination (years)	
1–5	9(24.32)
6–10	11(29.73)
10–15	14(37.84)
>16	3(8.11)
Noncommunicable Diseases (NCD) Status	
Has NCD	28 (75.68%)
No NCD	9 (24.32%)
Noncommunicable Diseases Present (1 person can have more than 1 disease)	
Diabetes	14 (48.28%)

Characteristic	Number of Participants (%)
Hypertension	18 (62.07%)
Cardiovascular Diseases	7 (24.14%)
More than 2 diseases	22 (75.86%)

Thai Buddhist monks' perspectives on chronic noncommunicable diseases

The interviews revealed that most participants were familiar with NCDs and could provide accurate examples of diseases in this category. As a result, HT and DM were the most cited examples of NCDs by the participants. However, the majority did not recognize that other conditions like obesity, dyslipidemia, and hypercholesterolemia were also classified as NCDs, indicating some gaps in knowledge. Additionally, most participants did not demonstrate an understanding that improper health behaviors, including poor diet, can contribute to developing NCDs. The standard perspective among the participants was that NCDs are primarily caused by bodily abnormalities or defects rather than lifestyle factors. There was also a prevalent view that NCDs are more prevalent in older populations compared to younger age groups. During the interviews, it became clear that many of the participants did not fully understand the connection between diet and the development of NCDs.

> *"I know about DM and high blood pressure being NCDs, but I did not realize obesity could be considered one."*
>
> (32-year-old Thai Buddhist monk)

> *"These diseases like DM seem to be caused by something going wrong in the body as you get older, not by how you live."*
>
> (41-year-old Thai Buddhist monk)

> *"Monks my age don't have to worry about NCDs. It's the older monks who get sick with these conditions more often."*
>
> (23-year-old Thai Buddhist monk)

> *"I was unaware that the types of food we eat regularly could increase our risk for illnesses like DM and HT. I always assumed these diseases were caused by intrinsic problems or defects within the body rather than extrinsic factors like nutrition."*
>
> (41-year-old Thai Buddhist monk)

Monks' perspectives on the nutritional quality of donated and alms foods

As participants who rely on donated or alms foods, the nutritional quality and value of these meals was a concern expressed in the interviews. Many participants were uncertain whether their food contained adequate nutrients and healthy options. Some noted donated dishes or alms offerings often consist of white rice, refined carbohydrates, and fried foods, which lack dietary fiber, protein, and micronutrients. However, others argue that traditional alms foods like fresh fruits and vegetables could be wholesome if appropriately prepared. Perspectives varied on the impacts of modernization, with some participants lamenting a shift away from traditional staples while others welcomed increased variety. Nevertheless, most agreed

monastic diets are now higher in processed ingredients, salt, oil, and overall calories compared to the past. These changes, coupled with a lack of choice over meals, may put some participants at higher risk of obesity and NCDs.

> *"I am grateful for any food offerings we receive, but sometimes I wonder if the meals have enough vegetables, fruits, and protein compared to lots of rice and oily curries."*
>
> (51-year-old Thai Buddhist monk)

> *"Nowadays, we seem to get more sweets, junk food, and instant noodles from some lay people, especially young folks. This is convenient but not always healthy."*
>
> (28-year-old Thai Buddhist monk)

> *"Alms rounds used to mean getting more fresh fruits and traditional vegetables straight from villagers' gardens. But urbanization has changed people's eating habits."*
>
> (46-year-old Thai Buddhist monk)

> *"As monks, we don't have much choice in our diet. But with rising rates of obesity and DM, I do worry modern food offerings are part of the problem."*
>
> (33-year-old Thai Buddhist monk)

Monks' approaches to selecting from multiple food offerings

When presented with various donated dishes or alms offerings, most participants reported trying to choose foods mindfully to create a balanced meal that aligns with Buddhist teachings on moderation. Many participants said they first looked for vegetable, protein, and fiber-rich carbohydrate options to accompany white rice or noodles. Some participants said they deliberately skip very oily, sugary, or highly processed items, instead favoring simpler, plant-based choices they perceive as healthier. However, participants emphasized not wanting to appear ungrateful or picky, so they often taste small token portions of rich curries, sweets, or fried items offered, even if they do not promote health. A minority of participants said they eat whatever combination of foods is available without strong preferences or to balance nutritious options. All participants noted that devotees' abundance of food far exceeds their daily needs, leading to wastage. Allowing participants to politely request or graciously refuse certain dishes could improve nutrition while reducing waste.

> *"When we receive a lot of food after alms rounds, I try to pick the vegetables and tofu first to get more protein. But I'll still take a spoonful of each curry or dessert, too, so donors don't feel bad."*
>
> (53-year-old Thai Buddhist monk)

> *"I don't want to waste food by refusing it, so even if lay people give very oily dishes, I will have a taste. But I focus on eating more of the simpler rice and vegetable items for my main meal."*
>
> (60-year-old Thai Buddhist monk)

"We are taught not to be picky eaters, so I don't fuss too much over what foods I'm given. Whatever combination of items I receive, I mix and eat without strong preferences."

(39-year-old Thai Buddhist monk)

"Even if the food is very oily or sweet, I will take a small portion to show appreciation to the donors."

(45-year-old Thai Buddhist monk)

"I try to eat a little bit of everything offered to me, even if it's not healthy, to avoid offending the laypeople."

(37-year-old Thai Buddhist monk)

Monastic precepts on eating and potential barriers to healthy choices

Buddhist monastic codes contain some precepts related to diet and food consumption. For example, monks should eat only what is offered, not request special foods, and not eat after noon. Some participants felt these could present barriers to healthy eating. The requirement to accept whatever is donated means little control over the nutritional balance. The prohibition of afternoon meals may disrupt blood sugar regulation. However, most said the issues were surmountable with lay education and mindful selection from plentiful offerings. They also noted that the rules have spiritual purposes, including restraint, discipline, and detachment from cravings.

Additionally, the precept to not waste food may compel monks to overeat offerings exceeding their nutritional needs. The restriction on handling money prevents purchasing healthier groceries. However, most participants viewed the precepts as wise frameworks for mindful, moderate eating rather than rigid obstacles to health. They can guide monks and laity to uphold tradition while supporting well-being with proper understanding.

"We cannot be picky and must eat whatever food is offered with gratitude. This makes it hard to ensure nutritional balance sometimes."

(28-year-old Thai Buddhist monk)

"Not being able to eat after midday is part of our discipline, but I do worry it may affect blood sugar control and metabolism."

(33-year-old Thai Buddhist monk)

"The rule against waste means we feel compelled to eat all of the large food offerings given, even if it's too much. We don't want to offend donors."

(56-year-old Thai Buddhist monk)

"Of course, the precepts have a good purpose in cultivating mindfulness and restraint. With skillful understanding. They guide us—not block us—from moderate, healthy eating."

(39-year-old Thai Buddhist monk)

The perspective of Buddhist monks on Strategies to Improve Monastic Diets and prevent the risk of NCDs

Participants proposed several approaches they could follow to obtain nutritious foods that minimize NCD risk. These included mindfully selecting healthier options when given variety and politely educating lay donors on providing balanced diet offerings. However, challenges remain in following monastic precepts while promoting health. Most participants indicated that continued nutrition education campaigns with health agencies can reinforce messages to improve diet and health. Workshops, pamphlets, and integrating nutrition concepts into regular teachings can remind the intervention group about the impact of food choices on NCDs. Collaborations with health organizations allow the utilization of external expertise, such as dietitians, for skills sessions. Carefully crafted, culturally sensitive modern adaptations to traditional eating practices may also better align with nutritional needs. Ongoing education, health partnerships, and pragmatic modernization can create environments providing optimal nutrition despite dependence on donated monastic meals.

> *"If monks were educated about nutrition and diet by experts like nutritionists, doctors, and nurses, it would equip us with sufficient understanding to select appropriate foods to eat. This could minimize our risks of developing NCDs and other illnesses."*
>
> (28-year-old Thai Buddhist monk)

> *"Teaching lay people what types of foods we monks should eat would lead to donations that better align with our nutritional needs. The health department should conduct campaigns to inform Buddhist devotees."*
>
> (22-year-old Thai Buddhist monk)

Discussion

This qualitative study explored Thai Buddhist monks' perspectives on NCDs, the nutritional quality of donated and alms foods, approaches to food selection, and potential barriers and strategies for healthy eating within monastic guidelines. The findings reveal important insights that can inform future nutrition education and policy efforts to promote health among monks.

While participants could accurately identify common NCDs like HT and DM, gaps existed in recognizing other relevant conditions like obesity, dyslipidemia, and hypercholesterolemia as NCDs. This aligns with previous literature demonstrating uneven understanding and knowledge deficits related to NCDs among Thai Buddhist monks and the general public in Thailand (Srimantayamas et al., 2020). Targeted educational campaigns led by health agencies coordinating with temples could help address these knowledge gaps by increasing monks' awareness of the full spectrum of diseases classified as NCDs (Jongsuksomsakul, 2022; Suksatit et al., 2019). Health promotion materials and teachable moments during regular interactions with monks can emphasize that beyond just DM and HT, conditions like excess weight gain, high cholesterol, and lipid disorders also fall under the umbrella of NCDs (Jongsuksomsakul, 2022; Wungrath & Autorn, 2021).

Additionally, most participants did not recognize the role of modifiable lifestyle factors and improper health behaviors like poor diet in developing NCDs. Instead, they expressed perspectives aligned with fatalistic views documented in prior studies, mainly that NCDs stem from intrinsic bodily abnormalities or defects that emerge with aging (Tseng et al., 2022). This could be attributed to factors like lack of nutrition education, strong cultural beliefs that promote fatalistic views of health dictated by Tseng et al. (2022), limited exposure among cloistered monks to modern health concepts emphasizing modifiable risks, ageist assumptions that discount younger monks' risks, present-focused Buddhist outlooks that deter thoughts about long-term impacts, undervaluing of preventive care, and biased observations of older monks developing NCDs (Tseng et al., 2022).

This finding points to a need for more extensive nutrition education among monks to correct misconceptions about disease causality and make clear the impacts of suboptimal diets on increasing NCD risk (Jeamjitvibool et al., 2022). Health agencies can collaborate with temples to implement informational workshops, provide pamphlets and resources, and integrate key messages into existing teaching moments to reshape causal beliefs from primarily intrinsic to incorporating more extrinsic, modifiable determinants of NCDs (Southard, 2022). Increased awareness of how dietary quality directly influences disease development may motivate monks to take more deliberate preventive and protective actions through food choices (Singh et al., 2022).

In discussing the typical foods received through alms and donations, participants articulated concerns about potentially inadequate nutritional quality regarding excessive refined carbohydrates and insufficient fruits, vegetables, and protein (Chouraqui et al., 2021). Several studies corroborate these qualitative perceptions, demonstrating through quantitative dietary analyses that Thai Buddhist monks in Thailand often consume nutritionally poor diets dominated by white rice and energy-dense foods that lack adequate fiber, micronutrients, and protein (Rimpeekool et al., 2017). Participants also noted apparent shifts toward more processed, convenience food items than traditional staple patterns reflected in literature, citing the impacts of nutrition transition and globalization on monastic diets (Kang et al., 2021).

At the same time, monks aim to choose healthier options when available, mindful that they feel obliged to accept all food offerings without appearing ungrateful. Moving forward, initiatives could focus on identifying culturally appropriate strategies for monks to politely communicate basic nutritional needs and preferences to laypeople and donors when tactfully asked while still showing gratitude (Phrakhru Phisitthammanites & Waseeweeras, 2022). For example, temples could work with health promotion experts to develop sample scripts monks could use to graciously request more fruits, vegetables, legumes, nuts, and whole grains when offered primarily refined rice dishes and fatty curries. Educational campaigns led by nutritionists can also teach lay patrons about the most beneficial, nutritionally balanced vegetarian dishes to donate (Phra Maha Saiyan Wisatho & Wichuma, 2023). This two-pronged approach of empowering both monks and laity can shift social norms and behaviors to improve dietary quality from the ground up (Chanwikrai et al., 2022; Parinyano et al., 2020).

Buddhist monastic codes, or *Vinaya*, regulate monks' dietary habits. Monks must only consume what is offered and cannot request specific foods. They are also prohibited from eating after noon, which can affect nutrient intake and blood sugar regulation (Timothy & Ron, 2015). These rules promote spiritual discipline but can lead to challenges in maintaining a balanced diet, as monks rely solely on donations that may be high in calories and low in essential nutrients. Understanding these precepts helps to contextualize the dietary issues

faced by monks. Educating laypeople on the nutritional needs of monks can help ensure that food offerings support the monks' adherence to their precepts and health needs. Including an explanation of these monastic rules will aid readers in comprehending the dietary challenges and health implications for monks (Kalra et al., 2018; Thich, 2019).

The Buddhist monastic precepts and rules governing eating did not necessarily constitute rigid barriers to healthful diets (Zhan, 2023). Instead, they felt the guidelines could foster mindful, moderate eating if applied judiciously. However, some specific precepts may inadvertently promote unhealthful patterns for those vulnerable to NCDs. For example, the injunction to eat whatever is offered with gratitude limits monks' agency in ensuring balanced nutrition. The prohibition on consuming solid foods after noon may disrupt glycemic regulation in prediabetic individuals who would benefit from small snacks. Proscriptions against food waste could cause monks to overeat offerings exceeding their energetic needs (Show, 2023). However, the monastic precepts are strict rules that monks must adhere to (Jansen, 2015; Vermeersch, 2016); for those monks who have health limitations or risks, especially risks of developing NCDs, some flexibility and prudent adaptations should be permitted as appropriate without severely violating the precepts. This is so that monks who need special allowances for health reasons can still follow the precepts while maintaining well-being. With compassionate discernment, minor accommodations could be made. The Buddha's Middle Path incorporates wisdom and balance, not rigid dogma, at the expense of wellness. With thoughtful modifications, the precepts can still guide monks toward moderation and restraint without jeopardizing health (Wasnik, 2020).

Participants advocated several approaches grounded in community education, multisectoral collaboration, and skill-building for mindful dietary choices to overcome present nutritional challenges. Specifically, they proposed nutrition education from health experts to increase monks' knowledge and teach lay donors about optimal vegetarian offerings, cooperation with public health agencies on promotion campaigns, and monks modeling Middle Path principles when selecting foods (Khunluek et al., 2019). The literature affirms engaging diverse stakeholders across temples, health systems, and communities as an impactful strategy for nutrition interventions in the Thai Buddhist context, given monks' cultural influence (Sararuk et al., 2017; Xiao et al., 2014). Allowing reasonable exceptions to monastic purchasing restrictions could also facilitate accessing healthier foods like fresh produce when donations lack variety. Such multi-component, settings-based approaches align with established frameworks for comprehensive NCD prevention in Thailand.

Limitations and future research

This qualitative study provides beneficial initial insights into Thai Buddhist monks' perspectives on diet and health issues relevant to NCD prevention. However, limitations should be acknowledged. The small sample size of monks from one geographic area and qualitative design prevent statistically generalizing findings to the broader monk population. Furthermore, the location of the study is also in an urban area, which reflects the health behaviors of urban residents, which may be different from those in rural areas. Additionally, self-reported data from interviews can involve inherent biases and subjective interpretations. To build on these preliminary discoveries, future studies could apply quantitative or mixed-methods approaches with larger representative national samples of monks using surveys, structured questionnaires, and objective dietary assessment tools.

Detailed epidemiologic data could strengthen the empirical evidence base to inform nutrition policies and programs tailored for the monastic community. More research is also needed to explore the perspectives of diverse Buddhist lay stakeholders, who play central roles in supporting monks through donations. Their input and collaboration will be key to implementing successful interventions that account for cultural and religious nuances. Moreover, although our study provides valuable insights, it is unable to fully address the existing gaps in understanding the magnitude of NCDs among Thai Buddhist monks across Thailand. Therefore, future studies should focus on conducting more comprehensive multi-site investigations to provide a clearer picture of the prevalence and impact of NCDs in this population. These studies should encompass a broader range of geographic regions and include larger sample sizes to ensure more generalizable findings, ultimately contributing to more effective interventions and policy development.

Conclusion

This study sheds valuable light on how Thai Buddhist monks view issues around diet, health, and monastic eating practices relevant to addressing the pressing problem of NCDs. The results can help guide culturally appropriate education, adaptation of traditions, and community-centered collaboration to promote nutrition and well-being among this influential population. By skillfully balancing tradition and modern health, interventions informed by these findings may support monks in upholding their spiritual precepts while reducing NCD risks.

Ethical consideration

The study received ethical approval from the Research Ethics Committee of the Faculty of Public Health, Chiang Mai University, Thailand, with reference number ET052/2023.

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