Revisiting BMI Standards for Filipinos: A Critical Analysis of Applicability and Health Implications

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ABSTRACT: The Body Mass Index (BMI) has long been a seemingly simple, universal tool for assessing weight and health risk. However, for a population as distinct as Filipinos, this one-size-fits-all approach is deeply flawed, failing to capture a complex physiological reality. This report critically examines how the universal application of BMI can lead to dangerous oversights, as many Filipinos, both at home and in the diaspora, face significant health risks at BMI values that are considered "normal" by Western standards. Their tendency for higher central and visceral adiposity for a given BMI makes them uniquely vulnerable to conditions such as type 2 diabetes and hypertension, often without the visible cues of overweight or obesity. The evidence presented necessitates a paradigm shift in health assessment. It reveals that a nuanced, multi-faceted approach is required, one that moves beyond a single number to incorporate ethnicity-specific BMI cut-offs, alternative anthropometric measures like waist circumference, and a deep understanding of socio-cultural and environmental factors like dietary acculturation. The failure to adopt these tailored guidelines is not merely a scientific inaccuracy; it is a clinical and public health failure that perpetuates health disparities and results in missed diagnoses, delayed interventions, and a misallocation of resources. By adopting a forward-thinking, evidence-based approach that acknowledges the unique realities of the Filipino population, healthcare systems can move toward a more equitable and effective model of care.

KEYWORDS: Obesity, Ethnicity-Specific BMI, Visceral Adiposity, Type 2 Diabetes

I. INTRODUCTION

For decades, healthcare professionals have relied on this straightforward measurement because it's easy to use, costs nothing, and doesn't require invasive procedures. This accessibility has made BMI a go-to tool for tracking weight-related health patterns across different populations and remains fundamental in both community health monitoring and individual patient care, helping doctors identify people who might be underweight or at risk for weight-related health problems (World Health Organization, 2020).

However, using the same BMI standards for everyone worldwide has become increasingly controversial. Even the World Health Organization now acknowledges that their original guidelines—marking overweight at ≥25 kg/m² and obesity at ≥30 kg/m²—don't work equally well for all ethnic groups (WHO Expert Consultation, 2004). This realization has grown from mounting research showing that different ethnic backgrounds naturally have varying body compositions, fat storage patterns, and health risk profiles. Asian populations, for instance, often face health complications at lower BMI numbers than people of European descent, forcing researchers to question whether these one-size-fits-all standards actually make sense (Araneta et al., 2015). Filipinos, whether living in the Philippines or elsewhere, typically carry more belly fat and internal organ fat at the same BMI levels compared to other groups, putting them at higher risk for heart disease and diabetes (Nazare et al., 2012; Van Haute et al., 2020).

This report examines whether current BMI guidelines actually work for Filipino populations. By reviewing recent medical research, it highlights why applying identical health standards to everyone might miss important health risks or incorrectly classify people's health status. The analysis looks specifically at research involving Filipinos and other Asian American communities, suggesting more personalized approaches to health assessment and public health planning. Covering issues from malnutrition to obesity, including related conditions like type 2 diabetes and certain cancers, this report seeks to provide a clearer picture of how BMI should be understood and applied within Filipino communities.

II. METHODOLOGY

This critical review was carried out using a focused literature search spanning 2010 to 2024. The main databases consulted included PubMed, Google Scholar, PubMed Central (PMC), and institutional reports such as those from the Food and Nutrition Research Institute (FNRI) under the Department of Science and Technology in the Philippines (FNRI–DOST, 2022). To ensure comprehensive coverage, the search combined keywords such as "BMI," "Filipinos," "Asian Americans," "waist circumference,"
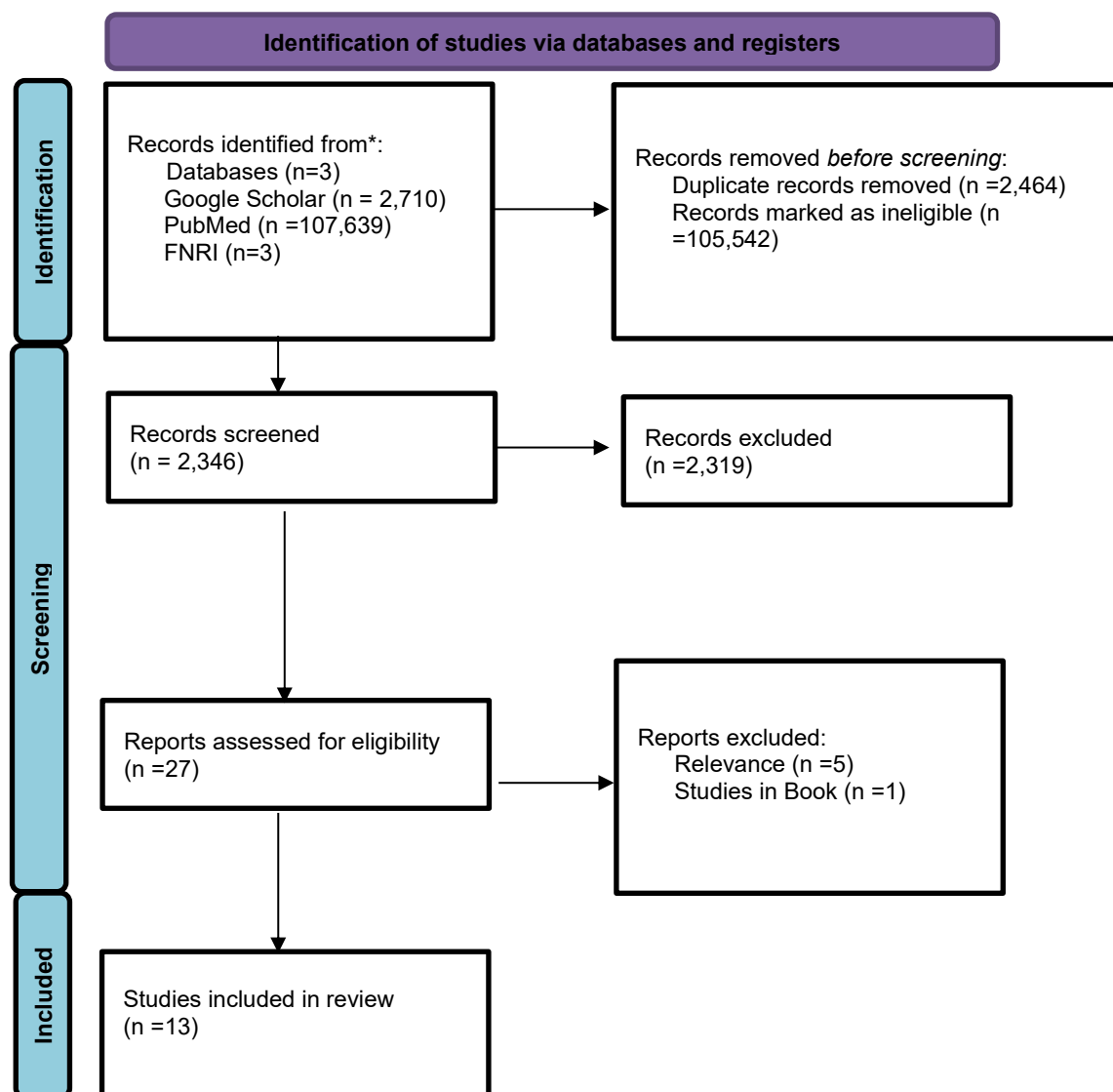
"mid-upper arm circumference (MUAC)," "visceral adiposity," and "diabetes." Additionally, relevant reference lists from key studies were manually reviewed to identify supplementary sources. The selection of studies followed defined inclusion and exclusion criteria, summarized in the corresponding screening table that served as the foundation for this review.

Table 1. Inclusion and Exclusion criteria of the literature search.

INCLUSION	EXCLUSION
The study designs included cohort, cross-sectional, diagnostic, or imaging studies that were pertinent to metabolic risk or undernutrition.	Does not focus on Filipino populations
Studies published in the years 2010-2024	Articles where the full-text was not available
They focused on Filipino populations, whether residing domestically or in the diaspora, or were Asian-American studies that provided disaggregated data specifically for Filipinos.	Published before 2010.
They reported anthropometric cut-points or performance metrics relevant to health assessment	

III. RESULTS

A total of thirteen studies met these inclusion criteria and were subsequently synthesized narratively. Data extracted from these studies included sample characteristics, specific anthropometric cut-offs, sensitivity and specificity values for diagnostic tests, effect estimates (e.g., odds ratios, hazard ratios), and their main conclusions.

Identification of studies via databases and registers

Identification

Records identified from*:
 Databases (n=3)
 Google Scholar (n = 2,710)
 PubMed (n =107,639)
 FNRI (n=3)

Records removed *before screening*:
 Duplicate records removed (n =2,464)
 Records marked as ineligible (n =105,542)

Screening

Records screened
(n = 2,346)

Records excluded
(n =2,319)

Reports assessed for eligibility
(n =27)

Reports excluded:
 Relevance (n =5)
 Studies in Book (n =1)

Included

Studies included in review
(n =13)

Source: Page MJ, et al. BMJ 2021;372:n71. doi: 10.1136/bmj.n71.
Figure 1. PRISMA 2020 flow diagram.

IV. DISCUSSION

The reliance on universal BMI cut-off points for health assessment presents significant challenges when applied to ethnically diverse populations, particularly those of Asian descent. A growing body of evidence indicates that physiological and health risk differences necessitate a more nuanced approach, as adverse health outcomes manifest at lower BMI thresholds in these groups.

Physiological and Health Risk Differences at Lower BMIs

Research consistently shows that Asian populations, including Filipinos, are more likely to develop health problems related to excess body fat, such as type 2 diabetes and heart disease, even at BMI levels considered "normal" or "healthy" by Western standards (Li et al., 2023). This is substantially due to different patterns of fat distribution. People of Asian descent often have a higher percentage of body fat and a greater tendency for central fat accumulation (visceral fat) at the same BMI compared to Caucasians (Nazare et al., 2012). Imaging studies, for example, have shown that Asian women tend to have more visceral fat at a given BMI than White women, which helps explain their higher risk for metabolic issues (Nazare et al., 2012). The importance of this difference is emphasized by studies that clearly state, "Asian Americans develop health complications at lower BMIs than other racial/ethnic groups" (Mui et al., 2018). This key finding supports the idea of using ethnicity-specific BMI guidelines, as it directly questions the idea of a universal link between BMI and health risk.

Evidence from Asian American and Filipino Cohort Studies

Longitudinal and cross-sectional studies involving Filipino and broader Asian American populations offer strong empirical evidence that common BMI cut-offs are inadequate. These studies highlight unique patterns of overweight, obesity, and related disease rates that emphasize the need to re-evaluate current standards. While most Asian groups showed higher rates of overweight using Asian-specific BMI adjustments compared to non-Hispanic White (NHW) men, Filipinos were an exception in one notable way. Filipino men not only had a higher obesity rate than NHW men, but also surpassed other Asian subgroups—including Chinese, Asian Indian, and Other Asians—when it came to obesity (Mui et al., 2018). This underlines that "Asian" isn't a single category when assessing health risks; in fact, unique patterns emerge within subgroups. For Filipinos, a broad Asian-specific guideline might overlook these crucial differences. Public health efforts and clinical screenings, therefore, should move beyond a generic approach for "Asians" and instead target specific subgroups like Filipinos, who face distinct health challenges. National data from the Philippines reinforce this view: recent surveys have documented rising rates of both overweight and obesity alongside a considerable number of cases classified as "normal-weight central obesity" (NWCO) (FNRI - DOST, 2022; Toledano et al., 2022). NWCO, defined by a waist circumference of at least 80 cm for women and 90 cm for men, is particularly concerning because it greatly increases the chances of hypertension (about 2.2 times higher odds) and diabetes (about 2.7 times higher odds), even for those whose BMI falls within the normal range (Toledano et al., 2022). Long-term studies of Filipino women highlight how these problems are growing. One cohort tracked from 1998 to 2015 saw sharp increases in women with BMI over 25 kg/m², enlarged waistlines, high blood pressure, and type 2 diabetes. Alarmingly, by 2015, just one in five women in this group was free from all of these conditions (Adair et al., 2018). Delving deeper, the climbing diabetes rates paralleled increasing waist sizes and appeared closely tied to aging, rising incomes, and urbanization—all signs of changing lifestyles (Adair et al., 2018). Waist circumference thus emerges as a particularly sensitive gauge of metabolic risk for Filipinos, sometimes proving more telling than BMI alone. Social and environmental shifts are also central in shaping these trends. Ultimately, for Filipinos, relying solely on BMI isn't enough—it's important to consider other body measurements and the influence of modern living habits.

For a side-by-side view of how general and Asian-specific BMI guidelines differ, see the comparison presented in Table 2.

Table 2: Comparison of BMI standards from WHO Cut-Offs and Asian- Specific BMI Cut-offs.

BMI Classification	Standard WHO Cut-offs (kg/m²)	WHO/Asian-Specific Cut-offs (kg/m²)
Underweight	< 18.5	< 18.5
Normal Weight	18.5 - 24.9	18.5 - 22.9
Overweight	25.0 - 29.9	23.0 - 27.4
Obese Class I	30.0 - 34.9	≥ 27.5
Obese Class II	35.0 - 39.9	(Further sub-classification within ≥ 27.5 may vary)
Obese Class III	≥ 40.0	(Further sub-classification within ≥ 27.5 may vary)

Note: Obesity cut-offs tailored for Asian populations commonly use a unified threshold of ≥27.5 kg/m² to indicate increased risk, though specific subcategories vary across different guidelines. This approach reflects recognition that Asian groups tend to experience greater health risks at lower BMI values, as highlighted in the referenced studies (Araneta et al., 2015)

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Suggested BMI Thresholds and Alternative Measurement Methods for Filipinos
Acknowledging the shortcomings of universal BMI standards has encouraged research focused on improving assessment methods for particular groups, such as Filipinos. This has led to recommendations for modified BMI cut-off values and the investigation of other body measurement techniques to better identify health risks.

Implications of Inappropriate BMI Standards for Filipinos
Using BMI standards that don't fit the unique traits of the Filipino population can lead to serious problems for both individuals and broader public health efforts. These problems include missing important health diagnoses and making it harder to provide fair and effective care for everyone.

Risk of Missed Diagnoses and Delayed Interventions
Relying on standard BMI cut-offs for groups like Filipinos—who may face health risks at lower BMI numbers—can result in major gaps in patient care. People who actually have health problems but whose BMI looks "normal" according to Western benchmarks might not get the proper screening or early treatment for serious conditions such as type 2 diabetes, high blood pressure, or unhealthy cholesterol levels. In fact, research found that if doctors used a BMI of 25 kg/m² to screen Asian Americans for diabetes, they would overlook about 36% of people who actually have the disease (Araneta et al., 2015). This means many cases would go unnoticed and untreated, making it harder to stop chronic illnesses before they get worse.

The limitations of BMI don't stop at metabolic health. For example, a study focused on Filipino women showed that larger waistlines—not BMI—were linked to a higher risk of breast cancer (Leon Guerrero et al., 2017). This challenges the idea that BMI can signal every health risk and shows that, for some conditions and groups, other body measurements might do a better job. It becomes clear that doctors shouldn't rely only on BMI; instead, they should consider measurements like waist circumference and pay attention to risk factors that are specific to each ethnic group. This approach is necessary to deliver quality care and also highlights the need for more research into why health risks differ between populations.

Challenges in Public Health Interventions and Equitable Care
Using BMI standards that don't fit the Filipino population can waste public health resources and make it harder to design effective programs for those who actually need help. When many Filipinos at risk for problems related to obesity are labeled as "normal weight" under general guidelines, campaigns aimed at preventing disease may miss these people completely or underestimate their health risks. Because of this, important interventions might not happen in time, or resources could be sent to less urgent groups instead.

Setting guidelines that match the realities of different subgroups isn't just about getting the science right—it's an ethical responsibility to offer fair care. As one study put it, health systems need to recognize differences among subgroups to make sure Asian American men—and by extension, groups like Filipinos—get the care they truly need (Mui et al., 2018). Without precise data and customized strategies, healthcare providers risk ignoring the specific challenges these communities face, which can make existing health inequalities even worse.

Impact on Overall Health Status and Disease Prevention Strategies
Continuing to use one-size-fits-all BMI standards could seriously harm the long-term health of Filipino communities. This problem may lead to more chronic diseases, higher medical expenses, and lower quality of life for individuals while reducing overall community productivity. Research on Filipino American immigrants shows how cultural changes affect health in ways that standard BMI measurements might miss. As these immigrants adapted to American eating habits, they experienced "increased risks including increased BMI, waist circumference and increased fat intake," which hurt their overall "health status" (Vargas & Jurado, 2015). This demonstrates that health issues stem from more than just genetics—they're deeply connected to environment and culture. When assessment tools aren't accurate, these important influences on health can be missed or poorly managed, leading to worse outcomes.

The problem also affects people who are underweight. Studies looking at using mid-upper arm circumference (MUAC) to check for malnutrition in sick Filipino patients found that poor nutritional assessment—often because BMI doesn't work well in hospital settings—can harm vulnerable patients (White et al., 2019). This shows that inappropriate BMI standards create problems across the entire spectrum of nutrition, affecting both patient care and efforts to prevent disease.

V. LIMITATIONS OF THIS REVIEW
This review brings together valuable research on BMI standards for Filipinos, but there are some limits to what it covers and how the information was collected that should be kept in mind.

- **Generalizability of Included Studies:** Several studies included in this review, particularly cross-sectional or imaging studies, may have limitations in their generalizability due to specific sample sizes or specialized cohorts. For instance, a study on under-nutrition in a TB ward in the Philippines, while valuable, may not be fully generalizable to the broader Filipino population (White et al., 2019).

- **Potential for Bias in Primary Studies:** As noted in the risk-of-bias appraisal, some primary studies exhibited moderate risks of bias, including potential selection bias, recall bias in case-control designs, and measurement differences or residual confounding in large survey data. Self-reported dietary measures, for example, may introduce bias (Vargas & Jurado, 2015).
- **Limited Temporality in Cross-sectional Data:** Cross-sectional analyses, while providing snapshots of prevalence, offer limited insight into the temporal relationships between factors and health outcomes (Toledano et al., 2022).
- **Scope of Literature Search:** While comprehensive within its defined parameters (2010-2024 and specific databases), this review may not capture all relevant research outside of these criteria.
- **Need for Further Validation:** The review itself highlights the ongoing need for nationally representative validation studies to define truly Filipino-specific cut-points for anthropometric measures and to link these measures to hard clinical outcomes like incident diabetes, cardiovascular disease, and mortality. This indicates that current evidence, while strong, still requires further local validation.
- **Data Disaggregation:** The review emphasizes the importance of disaggregating data by sex, age, and diaspora status to refine guidelines (Mui et al., 2018). While this review attempts to highlight such differences where data is available, the depth of analysis for all possible subgroups may be limited by the available primary research.

These limitations highlight that scientific knowledge is always evolving, and there's a constant need for strong, contextually relevant research to improve health guidelines over time.

VII. RECOMMENDATIONS

In the information gathered, it is clear that there is a pressing need to develop and implement BMI guidelines tailored specifically for Filipinos. Addressing this challenge requires a comprehensive approach that combines further research, detailed data analysis by sub-group, and public health strategies designed to meet the unique needs of this population. While progress has been made in recognizing that universal BMI standards don't fit all Asian groups, much work remains—especially for subgroups like Filipinos. Future research shouldn't just focus on setting new BMI cut-off points but should rigorously validate them across different Filipino communities, considering whether they live in the Philippines or abroad, their socioeconomic status, and their level of cultural adaptation. These factors play a significant role in health outcomes and must be included in any assessment.

Additionally, exploring other physiological markers and more detailed body composition methods could give a better picture of health risks than BMI alone. The idea of an "ideal" BMI isn't fixed; it needs to evolve alongside new scientific insights and changes in population health. Some studies point out inconsistencies in how BMI, diet, and health markers relate, showing that these connections may vary depending on different ecological and social environments (Araneta et al., 2015). This suggests that simply adopting a fixed new BMI cut-off might not be enough. Instead, developing more nuanced risk assessment models that combine BMI with other factors like waist circumference, body fat percentage, and genetics will be more effective. These models should be continuously updated as populations and environments change. For example, more research is needed to understand how well alternatives to BMI predict health outcomes, especially in critically ill patients, emphasizing the need for precise and context-specific tools (White et al., 2019).

To create fair and effective health guidelines, it's crucial to use detailed health data broken down by specific Asian subgroups rather than lumping all Asians together. This helps reveal distinct risk factors and health patterns that broad categories might miss. Support for "data disaggregated by Asian American subgroup" is vital for accurately reflecting overweight and obesity rates and related health risks (Mui et al., 2018). It's also important to consider how environmental and cultural factors influence health. For instance, dietary changes due to Western acculturation among Filipino American immigrants have raised BMI, waist size, and fat intake, clearly showing the impact of external factors on health. Therefore, any BMI policy must factor in these social and cultural influences.

The creation of new, ethnically specific BMI standards should be part of wider public health efforts tailored to the Filipino population's unique physiological, dietary, and cultural context. This means developing culturally sensitive health education, targeted screening using appropriate BMI and alternative measures, and accessible interventions that address Filipino-specific health challenges.

The long-term study on Filipino women tracking increases in BMI, waist circumference, blood pressure, and type 2 diabetes reveals the urgent need for public health programs focused not just on refined BMI standards but also on lifestyle changes and disease management (Adair et al., 2018). Only through these integrated efforts can scientific insights be turned into real improvements in the health of Filipino communities.

VIII. CONCLUSION

This research clearly shows that using the same BMI standards for everyone doesn't work well for Filipinos. The evidence demonstrates that Filipinos face health risks at different BMI levels compared to other populations, which means current guidelines can miss important health problems or misclassify people's actual risk levels.

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The findings make it clear that we need BMI guidelines designed specifically for Filipinos. This isn't just about changing a few numbers—it requires ongoing research to make sure these new standards work across different Filipino communities, whether they're living in the Philippines or abroad, and across different income levels and cultural backgrounds. Health indicators aren't set in stone; they need to evolve as we learn more and as populations change.

Healthcare providers and policymakers need to work together to put these insights into practice. This means collecting detailed health data that separates different Asian groups instead of treating them as one category, creating health education programs that respect Filipino culture and values, and developing screening and treatment programs that address the specific challenges Filipinos face.

What's really needed is a forward-thinking approach based on solid evidence that recognizes how Filipino biology and culture uniquely affect health. Without this, we'll continue to see rising rates of diabetes, heart disease, and other chronic conditions in Filipino communities that could have been prevented or caught earlier. By taking action now to develop better assessment tools and targeted interventions, we can significantly improve health outcomes for Filipinos around the world.

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