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Knowledge, Attitudes and Practices of Filipino Adult Men on Andropause in Selected Barangays of San Pablo City

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Abstract: This study examined the knowledge, attitudes, practices, and symptom experiences related to andropause among Filipino adult men aged 40 to 65 years in selected barangays of San Pablo City. Specifically, it described the respondents' demographic and lifestyle profile; assessed knowledge, attitudes, and practices across the physical, psychological, and sexual domains; identified the most commonly reported symptoms and their age of onset; and tested differences in knowledge, attitudes, and practices according to selected demographic and lifestyle variables. A quantitative, cross-sectional, descriptive-comparative design was used. Data were gathered from 399 respondents through a bilingual structured questionnaire adapted from the Male Andropause Symptoms Self-Assessment Questionnaire. Findings showed low overall knowledge of andropause, with greater gaps in the physical and sexual domains than in the psychological domain. Attitudes were generally average, suggesting moderate openness to acknowledging midlife changes but continuing hesitation toward formal help-seeking. Practices were also uneven, with physical and sexual coping practices at an average level and psychological practices emerging as the weakest area. The most commonly reported symptoms included hot flushes or night sweats, irritability or mood changes, and decreased sexual performance or frequency, with onset clustering in the 46 to 55 and 56 to 65 age groups. Significant differences in knowledge, attitudes, and practices were associated more with selected demographic and lifestyle factors than with age alone. Overall, the findings support the need for stigma-sensitive, community-based health education and referral strategies for midlife men.

Keywords: *Andropause; Community Health; Health Education; Knowledge-Attitudes-Practices (KAP); Men's Health.*

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I. INTRODUCTION

Andropause, commonly used to describe age-associated changes in male hormonal and reproductive health, remains considerably less recognized and discussed than menopause, its perceived female counterpart. While menopause has gained widespread public recognition as a distinct stage of women's reproductive aging, changes in men's hormonal and reproductive health remain comparatively underrecognized. In clinical literature, some of these changes are discussed in relation to late-onset hypogonadism or testosterone deficiency, which may involve physical, psychological, and sexual manifestations [1], [2], [3]. However, unlike menopause, hormonal changes in men generally occur gradually and vary among individuals. This makes awareness and proper recognition important, particularly in distinguishing age-associated changes from symptoms that may warrant further clinical evaluation [4], [5].

Recognizing and addressing these changes may be challenging because symptoms associated with male hormonal aging can overlap with those of other health conditions or be dismissed as a normal part of aging. Moreover, concerns involving psychological well-being and sexual health may be less openly discussed due to embarrassment, stigma, and prevailing expectations surrounding masculinity. Previous studies have highlighted how these factors may influence men's willingness to acknowledge health concerns and seek professional assistance [6], [7], [8]. These concerns underscore the importance of examining not only men's awareness of andropause but also their attitudes and practices concerning the changes they may experience.

In the Philippine context, evidence concerning men's awareness and experiences of andropause remains limited. A study involving Filipino men in Bohol reported low

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awareness and described coping responses that did not consistently involve professional consultation [9]. Although this provides an important local perspective, further research in other communities is necessary to establish a broader understanding of men's knowledge, attitudes, practices, and experiences related to andropause. Examining these areas alongside demographic and lifestyle characteristics may help identify groups that require greater health education and support. Such localized evidence may also inform community health initiatives and guide healthcare professionals, particularly nurses and barangay health workers, in addressing men's midlife health concerns.

In view of these concerns, the present study assessed the knowledge, attitudes, practices, and symptom experiences related to andropause among Filipino adult men aged 40–65 years in selected barangays of San Pablo City, Laguna. Specifically, it described the respondents' demographic and lifestyle characteristics; assessed their knowledge, attitudes, and practices across the physical, psychological, and sexual domains; identified commonly reported symptoms and their reported age of onset; and examined differences in knowledge, attitudes, and practices according to selected demographic and lifestyle variables. By generating localized evidence on these areas, the study seeks to contribute to a better understanding of men's midlife health concerns and provide a basis for community-based health education, appropriate consultation, and referral initiatives.

II. METHODOLOGY

➢ *Research Design*

This study employed a quantitative, cross-sectional, descriptive-comparative design to describe and compare knowledge, attitudes, practices, and symptom experiences related to andropause across demographic and lifestyle subgroups. The interpretation of health-related behaviors was guided by the Health Belief Model and the Information-Motivation-Behavioral Skills Model [10], [11].

➢ *Participants and Sampling Technique*

The respondents were Filipino adult men aged 40–65 years residing in Barangays Del Remedio, San Francisco, and San Gabriel in San Pablo City, Laguna. Based on records from the San Pablo City Population Office, the total eligible population was 8,338, and a minimum sample size of 368 was computed using Raosoft (5% margin of error, 95% confidence level, 50% response distribution). A total of 399 respondents were included: 167 from Del Remedio, 121 from San Gabriel, and 111 from San Francisco.

Purposive sampling was used to select the study sites based on their eligible male populations, while non-probability convenience sampling was employed to recruit available and eligible respondents through house-to-house visits and Facebook Messenger. Inclusion criteria included being biologically male, aged 40–65 years, a resident of one of the selected barangays for at least six months, able to provide informed consent, and able to read Filipino and/or English (with assistance if needed). Exclusion criteria included those outside the age range, unwilling to participate, cognitively impaired, receiving testosterone therapy, or having conditions that may confound andropause-related symptoms.

➢ *Research Instrument*

Data were gathered using a researcher-adapted, bilingual (Filipino–English) questionnaire based on the Male Andropause Symptoms Self-Assessment Questionnaire (MASSQ) developed by Asadollahi et al. [19], with permission obtained from the original author. The questionnaire consisted of five sections: demographic and lifestyle profile, knowledge, attitudes, practices, and symptom experience and age of onset, organized across the physical, psychological, and sexual domains. The knowledge section comprised 22 items adapted from the MASSQ, while the attitude and practices sections each consisted of 15 researcher-developed items. Responses used five-point Likert or frequency scales, while the symptom experience section recorded whether respondents had experienced selected symptoms and their approximate age of onset.

The instrument was reviewed by the research adviser and validated by six experts: an endocrinologist, a urologist, a public health nurse, a nursing educator, a psychometrician, and a statistician. It obtained a content validity index (CVI) of 1.00. Following pilot testing, Cronbach's alpha coefficients across the knowledge, attitude, and practices subscales ranged from 0.720 to 0.873, indicating acceptable to good internal consistency.

➢ *Data Gathering Procedure*

After approval from the thesis panel, the Dean of the College of Nursing, and barangay chairpersons, data collection was conducted from December 2025 to February 2026. Eligible respondents were reached via Facebook Messenger and house-to-house visits, and the questionnaire was administered in paper format during in-person visits. Respondents were encouraged to answer independently and privately. For those with reading difficulties, interviewer-assisted self-administration was provided by reading the questions aloud in Filipino or the local dialect, using a neutral and non-leading approach.

Each questionnaire was assigned a code instead of personal identifiers. Completed forms were checked, encoded in a password-protected file, and securely stored with access limited to the research team.

➢ *Data Analysis Procedure*

Descriptive statistics were used to summarize the data. Frequencies and percentages described the respondents' demographic and lifestyle profiles, while weighted mean, mean, and standard deviation summarized knowledge, attitudes, and practices by domain and overall score. The Shapiro–Wilk test assessed the distribution of scores. Since the data were non-normally distributed, the Kruskal–Wallis test was used to examine differences across respondent groups, followed by Dwass pairwise comparisons when significant differences were found. Statistical values were reported to two decimal places, while p-values were reported to three decimal places, or as $p < .001$ when appropriate.

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➢ *Ethical Considerations*

Before participation, respondents received a brief consent statement in Filipino and English explaining the study purpose, voluntary participation, the right to skip questions or withdraw, and the absence of direct identifiers. Proceeding with the questionnaire indicated informed consent, a non-signature approach used to protect anonymity and reduce hesitancy on sensitive topics.

No names, addresses, or contact details were collected. Questionnaires were coded, securely stored, and reported only in aggregate. Participants answered privately, with neutral, nonjudgmental assistance when needed. Risks were minimal, mainly mild discomfort when reflecting on symptoms. Afterward, respondents received a brief health information handout on men's midlife health and consultation guidance.

III. RESULTS AND DISCUSSION

➢ *Respondent Profile*

Table 1 presents the demographic and lifestyle characteristics of the 399 respondents. The sample included men from different age groups, educational and occupational backgrounds, and lifestyle categories. Most were married (71.7%) and had attained at least some college education (60.4%). Although the majority had normal BMI (57.1%), current smoking was reported by more than half (56.4%), and over half were either insufficiently active or inactive (53.3%). These characteristics provide context for understanding the respondents' knowledge, attitudes, and practices regarding andropause, particularly when examining differences across demographic and lifestyle subgroups.

Table 1 Frequency and Percentage Distribution of Respondents According to Demographic and Lifestyle Profile

Demographic and Lifestyle Profile	**f**	**%**
Age Group		
40–45	118	29.6
46–50	61	15.3
51–55	70	17.5
56–60	74	18.5
61–65	76	19.0
Civil Status		
Single	32	8.0
Married	286	71.7
Separated	35	8.8
Widowed	46	11.5
Educational Attainment		
College graduate or higher	123	30.8
College undergraduate	118	29.6
Junior/Senior High School	92	23.1
Vocational/Technical	38	9.5
Elementary	26	6.5
No formal schooling	2	0.5
Occupation		
Retired	49	12.3
Self-employed	86	21.6
Skilled Labor	34	8.5
Employed (Government)	58	14.5
Employed (Private)	88	22.1
Unemployed	21	5.3
Informal Work	63	15.8
BMI Status		
Normal	225	57.1
Overweight	114	28.9
Obese	35	8.9
Underweight	20	5.1
Smoking Status		
Former smoker	101	25.3
Current smoker (occasional)	132	33.1
Current smoker (daily)	93	23.3
Never smoked	73	18.3
Alcohol Use		
4+ times per week	17	4.3
2–3 times per week	81	20.3

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2–4 times per month	71	17.8
Occasional	168	42.1
None	62	15.5
Physical Activity		
Highly active	33	8.3
Meets guideline	153	38.3
Insufficiently active	151	37.8
Inactive	62	15.5

➢ *Knowledge of and Ropause*

Table 2 shows that respondents had low overall knowledge of andropause (M = 2.62, SD = 0.80). Psychological knowledge had the highest mean and was rated average (M = 2.70, SD = 0.84), while physical (M = 2.59, SD = 0.83) and sexual knowledge (M = 2.57, SD = 1.01) were rated low. This suggests that respondents had a limited and uneven understanding of andropause, particularly its physical and sexual dimensions.

These findings are consistent with studies reporting that men may mistake symptoms such as fatigue, mood changes, sleep disturbances, and sexual difficulties for ordinary aging rather than concerns that may require assessment [6, 12]. Limited awareness among Filipino men has also been reported by Dumaran [9], while Mahmoodabad et al. [14] emphasized the role of health literacy in understanding andropause. These findings highlight the need for accessible, community-based health education that addresses the physical, psychological, and sexual aspects of men's midlife health.

Table 2 Summary of Respondents' Knowledge of and Ropause by Domain and Overall Score

Domain	Mean	SD	Interpretation
Physical Knowledge	2.59	0.83	Low
Psychological Knowledge	2.70	0.84	Average
Sexual Knowledge	2.57	1.01	Low
Overall Knowledge	**2.62**	**0.80**	**Low**

➢ *Attitudes Toward and Ropause*

Table 3 shows that respondents had an average overall attitude toward andropause (M = 3.27, SD = 0.66). All three domains were also rated average, with sexual attitude having the highest mean (M = 3.31, SD = 0.88) and physical attitude the lowest (M = 3.22, SD = 0.71). This suggests that respondents generally held neutral attitudes toward andropause, rather than strong acceptance or rejection.

However, neutral attitudes do not necessarily indicate willingness to seek help. Embarrassment, privacy concerns, and masculine expectations may still discourage men from discussing symptoms or consulting healthcare professionals. Previous studies have similarly identified stigma and masculine norms as barriers to men's health-seeking behavior [7], [8], [13]. These findings suggest that health education should not only improve awareness but also encourage open discussions and normalize professional consultation for men's midlife health concerns.

Table 3 Summary of Respondents' Attitudes Toward and Ropause by Domain and Overall Score

Domain	M	SD	Interpretation
Physical Attitude	3.22	0.71	Average
Psychological Attitude	3.28	0.75	Average
Sexual Attitude	3.31	0.88	Average
Overall Attitude	**3.27**	**0.66**	**Average**

➢ *Practices Related to Coping with Andropause*

Table 4 shows that respondents had an average overall level of coping practices (M = 2.78, SD = 0.86). Physical practices obtained the highest mean (M = 3.11, SD = 0.84), followed by sexual practices (M = 2.75, SD = 1.11), while psychological practices had the lowest mean and were rated low (M = 2.46, SD = 1.08). This indicates that respondents engaged in some coping behaviors, but these were not consistent across domains, particularly in addressing psychological concerns.

The limited use of psychological coping practices may suggest that respondents were less likely to seek counseling, formal support, or structured ways of managing emotional concerns. This is consistent with Dumaran [9], who reported that Filipino men often relied on personal strategies and family support rather than professional consultation. Studies of men's mental health help-seeking have similarly identified masculine norms and stigma as barriers to disclosing concerns or seeking professional support [7], [8], [13]. These findings highlight the need for community-based initiatives that promote stress management, normalize emotional support-seeking, and provide accessible referral options for men experiencing midlife health concerns.

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Table 4 Summary of Respondents' Practices Related to and Ropause by Domain and Overall Score

Domain	M	SD	Interpretation
Physical Practices	3.11	0.84	Average
Psychological Practices	2.46	1.08	Low
Sexual Practices	2.75	1.11	Average
Overall Practices	**2.78**	**0.86**	**Average**

➢ *Reported Symptoms and Common Age of Onset*

Table 5 presents the commonly reported andropause-related symptoms across the physical, psychological, and sexual domains. Hot flushes or night sweats were the most frequently reported physical symptoms (38.8%), while irritability or mood changes were most common in the psychological domain (31.8%). In the sexual domain, decreased sexual performance or frequency was reported most often (27.6%). These findings show that respondents experienced concerns beyond sexual changes, involving physical comfort and emotional well-being as well.

The reported age of onset varied across symptoms but generally fell within the 46–55 and 56–65 age groups. This is consistent with literature describing andropause-related changes as gradual and multidimensional, with manifestations that may become noticeable during midlife and later adulthood [20], [5]. Recognizing these symptoms across all three domains may help men seek appropriate assessment instead of automatically attributing them to normal aging.

Table 5 Most Commonly Reported and ropause-Related Symptoms by Domain, Frequency, Percentage, and Common Age of Onset

Domain	Symptom	f	%	Most Common Age of Onset
Physical	Hot flushes or night sweats	155	38.8	46–55
Physical	Weight gain around the abdomen	127	31.8	46–55
Physical	Sleep problems	105	26.3	56–65
Psychological	Irritability or mood changes	127	31.8	46–55
Psychological	Difficulty concentrating or memory problems	84	21.1	56–65
Psychological	Low mood or sadness	61	15.3	56–65
Sexual	Decrease in sexual performance or frequency	110	27.6	46–55
Sexual	Decreased sex drive	85	21.3	56–65
Sexual	Fewer morning erections	71	17.8	46–55

➢ *Differences in Knowledge by Demographic and Lifestyle Profile*

Table 6 shows significant differences in respondents' knowledge of andropause according to civil status, educational attainment, employment status, BMI, smoking status, and alcohol use. No significant differences were found according to age group ($p = .134$) or physical activity ($p = .157$). Post hoc comparisons showed that respondents with higher educational attainment, particularly college graduates, generally had higher knowledge scores than those with elementary or high school education. Differences were also observed across civil status and employment groups, with separated respondents generally scoring lower and government-employed respondents showing higher knowledge scores.

These findings suggest that awareness of andropause is socially patterned rather than evenly distributed across groups. Educational attainment appears particularly relevant, as men with higher health literacy may be better equipped to recognize and interpret symptoms as potential health concerns rather than simply attributing them to aging [14], [15]. Partner support and shared health decisions may also contribute to differences in symptom recognition across civil status groups [14], [15]. Accordingly, barangay-level health education should consider not only age but also differences in educational background and access to health information when addressing gaps in men's awareness of andropause.

Table 6 Summary of Differences in Knowledge of and Ropause According to Demographic and Lifestyle Profile

Profile Variable	p-value	Decision
Age Group	.134	Not Significant
Civil Status	< .001	Significant
Educational Attainment	< .001	Significant
Employment Status	.005	Significant
Body Mass Index	< .001	Significant
Smoking Status	.003	Significant
Alcohol Use	< .001	Significant
Physical Activity	.157	Not Significant

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➢ *Differences in Attitudes by Demographic and Lifestyle Profile*

Table 7 shows significant differences in attitudes according to educational attainment, BMI, smoking status, and alcohol use (all $p \leq .046$). No significant differences were found by age, civil status, employment status, or physical activity (all $p \geq .147$). Post hoc comparisons indicated that college graduates had more favorable attitudes than respondents with elementary education, while current occasional smokers had less favorable attitudes than former and never smokers. Respondents with normal BMI also had lower attitude scores than those who were overweight or obese.

These findings suggest that attitudes toward andropause may be related not only to health information but also to perceived vulnerability and lifestyle context. Higher educational attainment may support more favorable attitudes by helping men better understand and acknowledge health-related changes. Meanwhile, differences across BMI and smoking groups may reflect varying experiences or perceptions of health risks, although the cross-sectional findings do not establish these explanations as causal. Previous research has linked smoking, sleep disturbances, and psychosocial stress with greater andropause-related symptom burden [12], while heavier alcohol consumption has been associated with testosterone deficiency [21]. This highlights the importance of addressing misconceptions, reducing stigma, and encouraging open discussion of men's midlife health concerns.

Table 7 Summary of Differences in Attitudes Toward and Ropause According to Demographic and Lifestyle Profile

Profile Variable	p-value	Decision
Age Group	.758	Not Significant
Civil Status	.180	Not Significant
Educational Attainment	.038	Significant
Employment Status	.147	Not Significant
Body Mass Index	< .001	Significant
Smoking Status	< .001	Significant
Alcohol Use	.046	Significant
Physical Activity	.229	Not Significant

➢ *Differences in Practices by Demographic and Lifestyle Profile*

Table 8 shows significant differences in practices according to civil status, educational attainment, employment status, BMI, smoking status, alcohol use, and physical activity (all $p \leq .017$). No significant difference was found by age group ($p = .403$). Post hoc comparisons revealed that separated respondents and those with lower physical activity levels generally had weaker practice scores, while higher educational attainment was associated with stronger practice engagement.

These findings suggest that coping practices are shaped by social support, educational background, work conditions, and everyday health behaviors rather than age alone. Relational support may encourage men to adopt health-promoting behaviors, while educational attainment may influence their ability to understand and apply health guidance. Previous studies have similarly identified education, social support, and access to health services as factors influencing men's health behaviors [14], [15], [16], [17], [18]. This highlights the importance of addressing both social and lifestyle-related barriers when promoting appropriate coping practices among men experiencing midlife health changes.

Table 8 Summary of Differences in Practices Related to and Ropause According to Demographic and Lifestyle Profile

Profile Variable	p-value	Decision
Age Group	.403	Not Significant
Civil Status	.015	Significant
Educational Attainment	< .001	Significant
Employment Status	.017	Significant
Body Mass Index	< .001	Significant
Smoking Status	< .001	Significant
Alcohol Use	< .001	Significant
Physical Activity	.014	Significant

IV. CONCLUSION

This study found that andropause remains an underrecognized, multidimensional health concern among Filipino adult men in the selected barangays of San Pablo City. Respondents demonstrated low overall knowledge, average attitudes, and uneven coping practices, with psychological practices emerging as the weakest area. Symptoms were reported across the physical, psychological, and sexual domains, with commonly reported ages of onset generally falling between 46 and 65 years. These findings indicate that recognizing midlife changes does not necessarily translate into adequate understanding or consistent health-seeking and coping behaviors.

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Differences in knowledge, attitudes, and practices across selected demographic and lifestyle groups highlight the importance of considering social circumstances, educational background, and health-related behaviors in addressing men's midlife health concerns. For community health nursing, this points to the need for targeted, stigma-sensitive health education that improves symptom recognition, encourages open discussion of sensitive concerns, promotes practical self-care, and provides clear guidance for consultation and referral. The Andropause Awareness and Education Package developed from this study may serve as a resource for barangay health workers and community nurses in delivering these interventions.

The findings should be interpreted in light of the study's limitations, particularly its non-probability sampling, cross-sectional design, reliance on self-reported responses, and restriction to three selected barangays in San Pablo City. These factors limit the generalizability of the results and do not establish causal relationships between demographic or lifestyle characteristics and KAP outcomes. Future studies may include more diverse communities, larger and more representative samples, and longitudinal or intervention-based designs. The proposed education package should also undergo implementation and evaluation to determine its effectiveness in improving awareness, encouraging appropriate help-seeking, and strengthening coping practices among Filipino men.

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