

Your Hormones Choose for You: Study of the Association Between Hormonal Imbalances on Career Choice from a Dermatological Standpoint

Yaiza Moreno Pérez* and Ramon Grimalt Santacana

Department of Biomedicine, Faculty of Medicine and Health Sciences, International University of Catalonia, Spain

*Corresponding author: Yaiza Moreno Pérez, Department of Biomedicine, Faculty of Medicine and Health Sciences, International University of Catalonia, Tel: +34932541800; E-mail: yaizamorenoperez@uic.es

Received: February 12, 2026; Accepted: March 31, 2026; Published: April 10, 2026

Abstract

This research delves into the multifaceted relationship between sub-analytic clinical hyperandrogenism in women and career choices, challenging traditional paradigms and addressing contemporary perspectives. Our investigation extends beyond the influence on personal attributes, impacting traits such as risk aversion and decisiveness in career-related decisions. Examining populations vulnerable to testosterone fluctuations, we investigate the hypothesis that individuals with higher testosterone levels, particularly females, are more inclined towards traditionally male-dominated professions. Positive correlations suggest a potential link between heightened testosterone levels, reduced risk aversion, and the cultivation of traits associated with a “masculine” personality, including assertiveness, independence, enterprising spirit, and initiative. This study offers a novel perspective on the interplay between hormonal dynamics and career choices, with a particular focus on the dermatological aspect. By evaluating hormone levels in women with disorders, we aim to contribute valuable insights to the literature, potentially reshaping our understanding of career decision-making from a dermatology perspective.

Keywords: *Hormones; Sub-analytic clinical hyperandrogenism; Testosterone; Career choice; Social roles; Human behaviour*

1. Introduction

1.1 Introduction to the previous appointment and new proposal

Throughout the course of human history, dating back to the earliest civilizations, social roles have often been assigned based on individuals' biological sex. Traditionally, females were expected to engage in activities that emphasized nurturing and caregiving, while males were often involved in physically demanding tasks [1]. However, it is essential to recognize that societal norms and expectations have evolved, challenging and reshaping these traditional roles [2].

Citation: Pérez YM, Santacana RG. Your Hormones Choose for You: Study of the Association Between Hormonal Imbalances on Career Choice from a Dermatological Standpoint. *Arc Clin Exp Dermatol.* 2026;8(1):191.

Drawing upon insights from prior literature, the conceptual framework introduced by authors such as Kuhn et al. (2022) has been named the “*things vs. people*” theory. This theory posits that male adolescents tend to occupy roles involving the creation or manipulation of objects (“*things*”), while their female counterparts exhibit a preference for positions involving direct interaction with the public, where clients or patients play a pivotal role (that is, “*people*”) [3].

This theory asserts that career choices can be influenced by androgens, giving rise to “*things vs. people’s*” psychological orientation, which manifested occupational interests based on “*gender*”. It argued why, on average, women were more inclined toward community-oriented fields and may be underrepresented in STEM (science, technology, engineering, and mathematics) careers. It is notable that among the few women who pursued STEM careers, there was a tendency to gravitate toward fields of human interest, such as medicine [4].

However, we believe this definition is somewhat archaic and needs to be updated to better align with the dynamics of our modern society. We find it challenging to classify trades according to whether they are “more masculine or feminine” considering the prior literature. For this reason, we propose categorizing occupations as either “*social*” or “*physical*”- a distinction we believe offers a fairer and more relevant perspective.

1.2 The term “pioneer” in the choice of profession

There is a certain controversy among the consulted literature that emphasizes those women who decide to dedicate their lives to more manual tasks (“*masculine*”, also known as “*things*”) [1,3].

Earlier authors have long employed the term “pioneer” to describe those women who wanted to pursue a job in a male-dominated field, in contrast to “*traditional*” ones who pursued more stereotypically female careers (such as teachers, secretaries, or nurses) [5,6].

But what is the reason that determines a person to choose one profession or another? While social influences shaped by individuals' prior experiences may seem essential, the literature suggests that external factors are not as relevant as they seem and the role of hormonal levels contributes considerably to decision-making [6].

1.3 Testosterone dynamics- linking career choices and risk aversion across history

Testosterone is an androgenic hormone produced in the adrenal gland for both sexes [7], found mainly in the testicles and in smaller amounts in the ovaries. Furthermore, the role of testosterone goes beyond developing sexual characteristics but also ends up influencing personal attributes and can even affect personality traits such as dominance [7,8].

It has been positively correlated that those individuals with higher testosterone levels tend to feel less risk aversion [9], being decisive in their profession [10,11].

Previous research has suggested that women with higher-than-average testosterone levels have a greater appetite for risk, often leading them to pursue traditionally masculine occupations and feeling somehow uninterested in more conventional tasks [4,7,8]. For this reason, it is believed that professional orientation in testosterone-rich females (with altered hormonal patterns) could suggest a more "*masculine*" personality, manifested in characteristics such as assertiveness, independence, enterprising, and initiative [8].

Nevertheless, opposing viewpoints exist, as proposed by Joel et al. (2010), who were unable to demonstrate a hormonal correlation [12].

So, it seems testosterone plays a highly relevant role in gender differences, even determining the choice of an occupation in populations more vulnerable to its fluctuations, such as adolescents [9,13]. So, we aim to demonstrate whether this is true or not.

2. Objective of the Article

2.1 The dual purpose of exploring hormonal influence on career choices from a dermatology perspective

The traditional classification of professions concerning the old idea of "things vs. people" has become obsolete. For this reason, we propose a more egalitarian framework, which we refer to as the "social vs. manual" theory.

Based on hormonal alterations, this theory seeks to discern the likelihood of individuals, whether men or women, pursuing specific occupations. The goal is to draw diagnostic insights based on biological inclinations, potentially facilitating preliminary dermatology assessments through brief questions about their profession.

This study aims to challenge prevailing assumptions about the influence of biological factors on career choices by employing dermatological diagnoses and evaluating hormone levels. The aim is to demonstrate the impact of those changes in women with sub-analytic clinical hyperandrogenism and explore the question of whether internal hormonal variability plays a role in shaping later career decisions.

This research also holds the potential to contribute to the literature by offering a valuable bibliography on the novel and controversial topic of career choice from a dermatology perspective.

3. Hypothesis

Based on the information provided, we propose the hypothesis that adolescents exhibiting sub-analytic clinical hyperandrogenism may be more inclined to pursue professions traditionally dominated by men. Therefore, could internal hormonal variability serve as a determinant for subsequent professional choices? Moreover, is it possible to identify this connection from a dermatological standpoint?

This line of inquiry motivates an exploration from a dermatological perspective. If such a connection exists, a targeted questionnaire could be developed to complement clinical examinations and facilitate diagnostics- thus enhancing our understanding of the link between hormonal levels and career preferences.

4. Materials and Methods

This study leveraged the "Grimalt Dermatologia" database for its execution. A screening process was implemented to identify patients with hormonal alterations, who were then contacted to participate in a survey regarding their condition.

Emphasizing the utmost importance of confidentiality, it is important to note that all information provided by participants remains confidential, and their involvement in the study was entirely voluntary.

5. Results

Based on the data provided by the patients, we can extract the following information: Our study includes a cohort of 33 patients diagnosed with sub-analytic clinical hyperandrogenism by Dr. Grimalt, a member of our team. The average age of these women is 31 years.

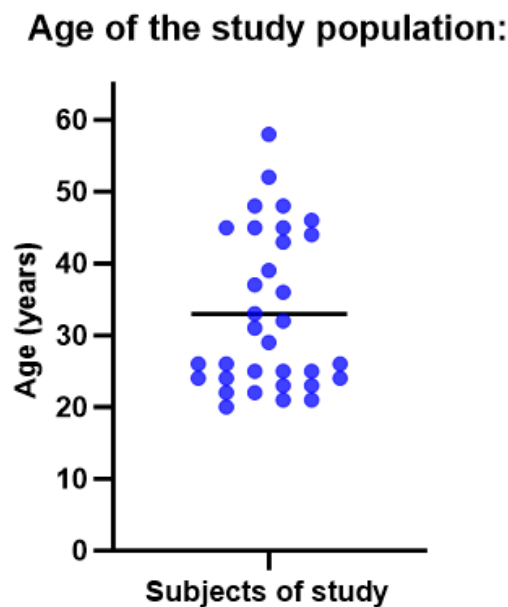


FIG. 1. **Age of the study population:** A graphical representation of the linear age distribution of the participants.

FIG. 2 illustrates the proportion of patients undergoing hormonal treatment for their dermatological condition compared to those not receiving hormonal treatments. It shows that two-thirds of the patients are undergoing contraceptive therapy, either alone or in combination with other treatments for related issues such as hair loss or acne.

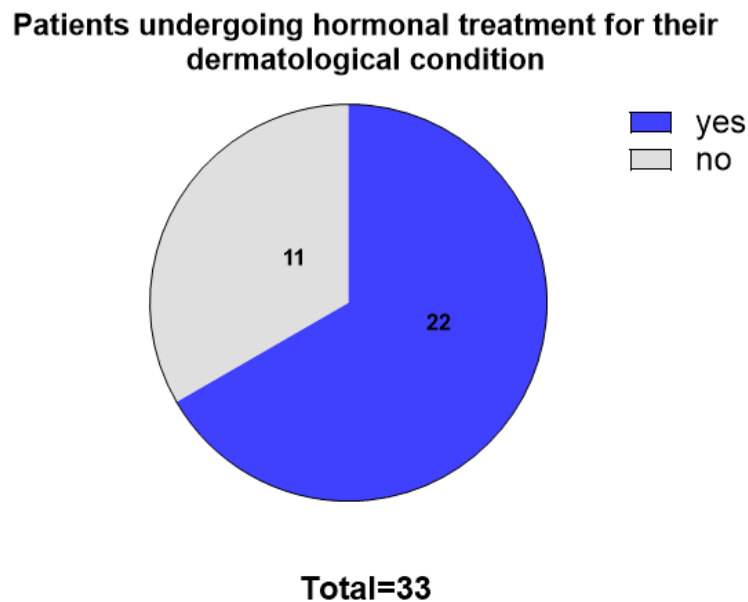


FIG. 2. Patients undergoing hormonal treatment for their dermatological condition.

Among the surveyed women, a preliminary classification of completed studies was conducted based on their respective fields, as exemplified in FIG. 3. While 23 respondents provided the requested information, 10 did not disclose the grade or level attained, and therefore, this data is not included.

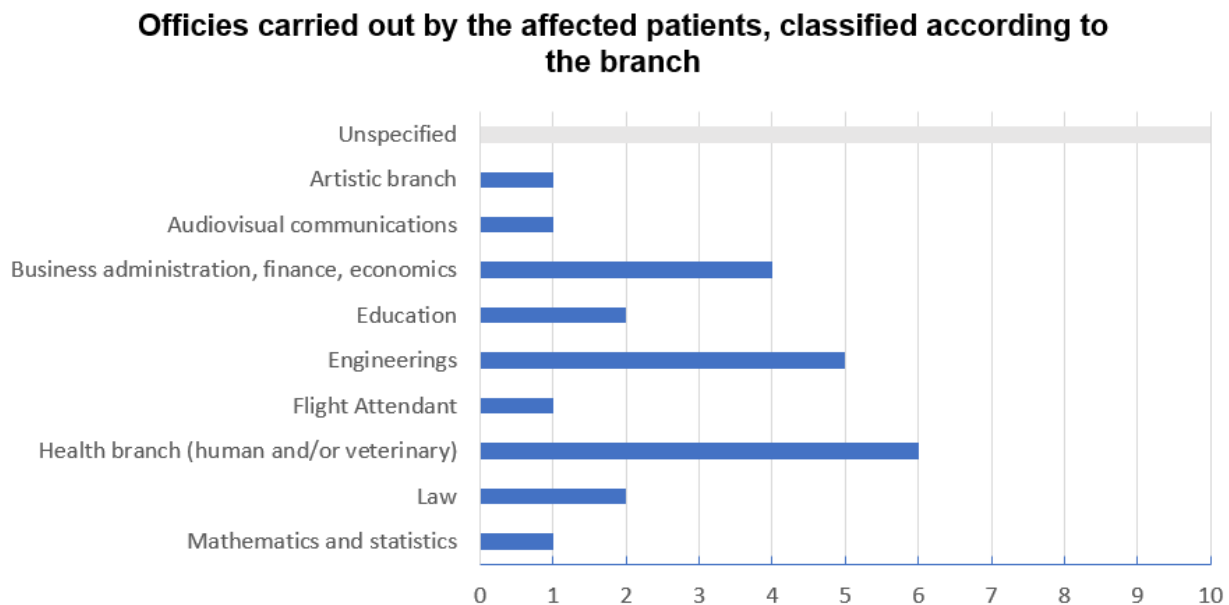


FIG. 3. Occupations held by affected patients, classified by field.

FIG. 4 presents a compilation of jobs that respondents expressed disinterest in. Interestingly, the majority did not specify any particular jobs they dislike.

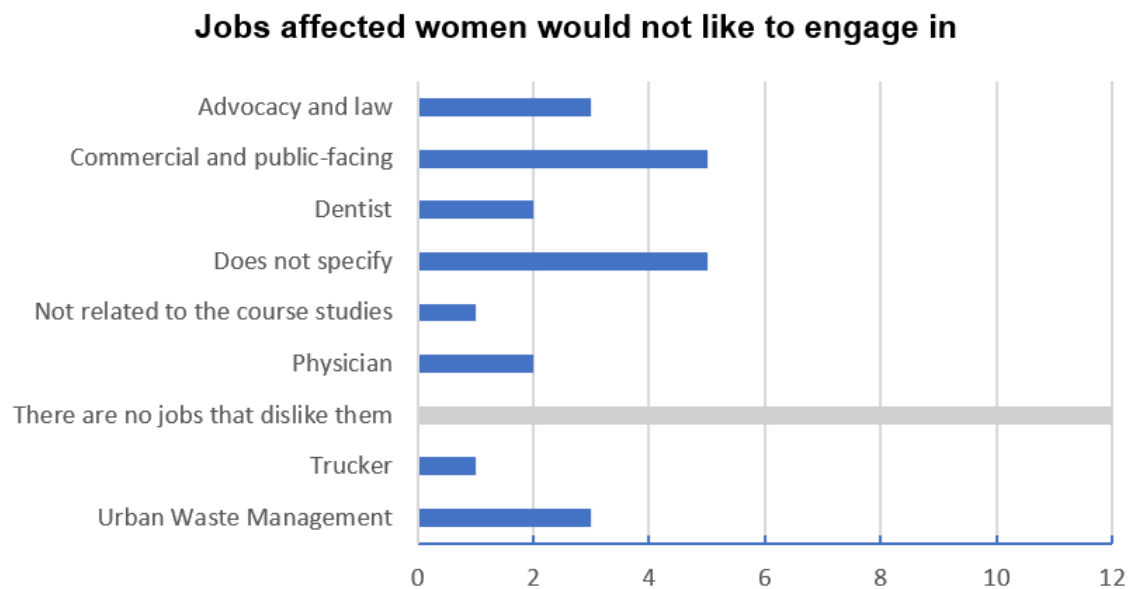


FIG. 4. Compilation of occupations that affected women indicated a preference not to pursue.

Conversely, our analysis also includes an examination of preferred occupations. The findings are presented in FIG. 5.

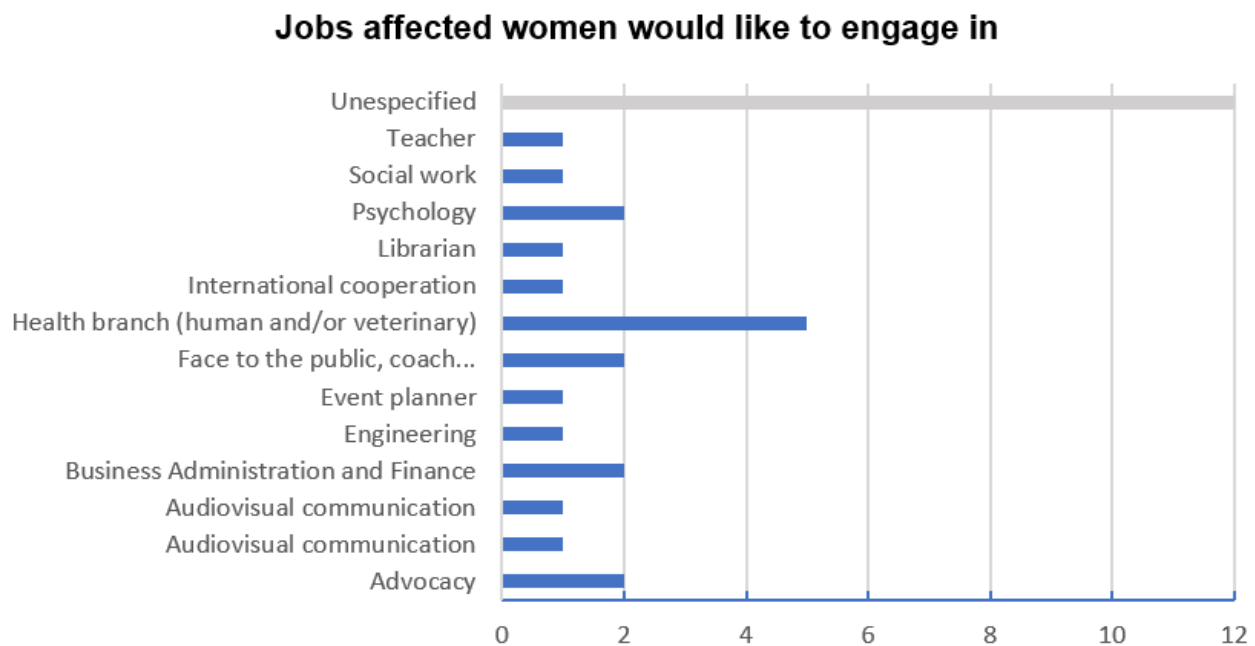


FIG. 5. Compilation of occupations that affected women expressed a preference to engage in.

Additionally, the study examines the participation of these women in sports and the types of sports they engage in, as shown in FIG. 6. Each respondent listed one or more sports, and their votes [1] were proportionally distributed into different percentages based on the frequency of each sport mentioned.

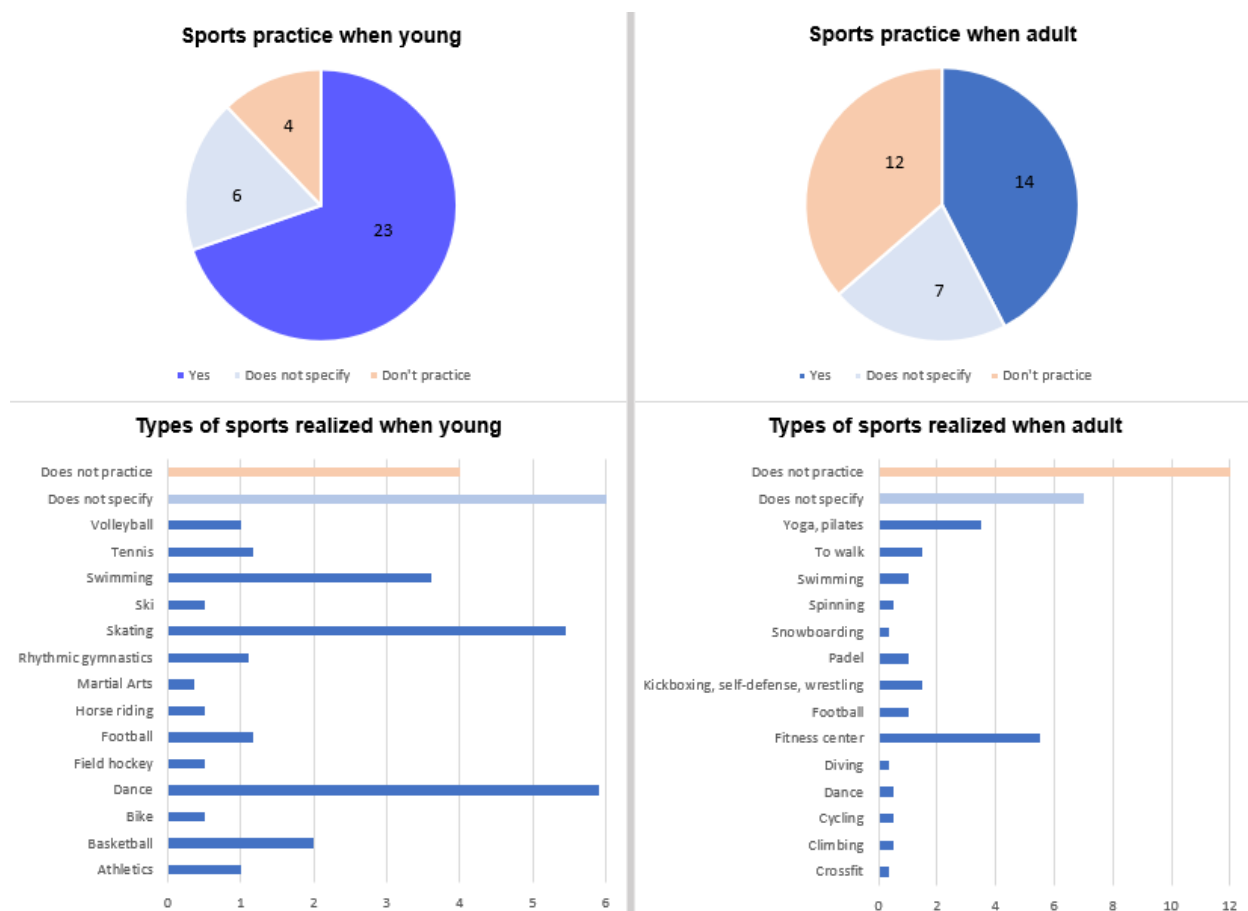


FIG. 6. Comparison of sports participated in during childhood versus adulthood.

In FIG. 7, we shift our focus to exploring the relationship between personality traits and hormonal levels. To this end, the surveyed women were asked to select three personality traits that they felt best represented them from a list of options.

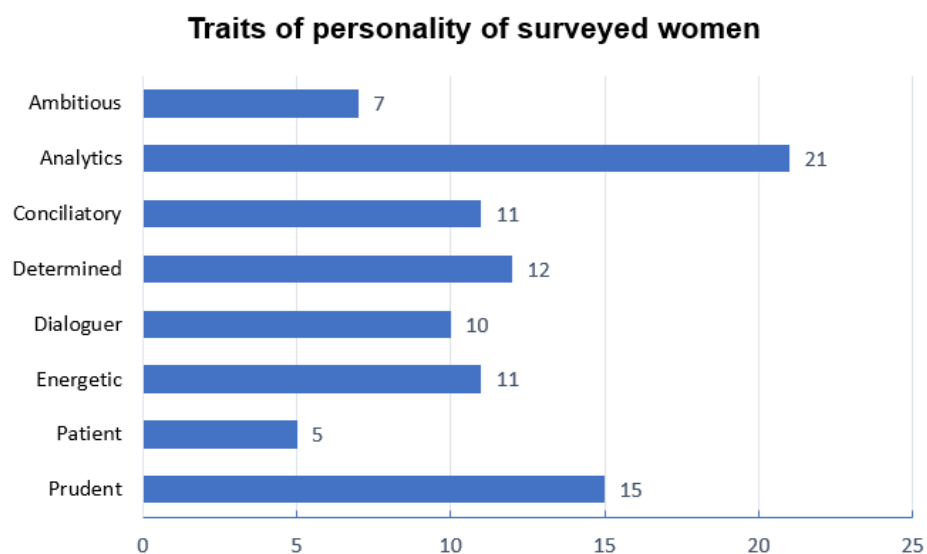


FIG. 7. Personality traits of surveyed women.

6. Discussion

Analyzing the data from FIG. 1 and 2, which represent pre-questionnaire information, we ascertain that our study population consists of women approximately 31 years of age. Among them, two-thirds of the participants are undergoing contraceptive treatment, either alone or in combination with other therapies targeting associated issues such as acne or hair loss.

Upon analyzing the study data, as depicted in FIG. 3, it becomes evident that this particular subpopulation of women tends to favor occupations traditionally associated with “*masculine*” tasks, such as finance or engineering, in line with findings from existing literature. Conversely, there is a lower inclination towards roles involving social interaction, artistic pursuits, or caregiving. Among those selecting healthcare professions, the focus is primarily on less conventional roles, such as medicine and research, rather than more traditionally female-dominated roles like nursing.

Subsequently, an analysis of their preferences and inclinations was conducted to gain insights into the thought patterns of this particular group of women. Notably, FIG. 4 reveals a trend where occupations involving interpersonal interactions (such as healthcare, law, sales, etc.) are less preferred, consistent with the observed inclination among women with sub-analytic clinical hyperandrogenism to favor occupations traditionally considered “*masculine*”. Additionally, there is a clear aversion to low-paid jobs and those associated with housekeeping or cleaning.

In FIG. 5, we aimed to examine the preferences of this group regarding occupations they desire to pursue. Unlike the previous analysis, the trend here appears less pronounced. Preferences lean towards health professions (both human and veterinary), finance, and engineering. Notably, our findings align with the established pattern where women with sub-analytic clinical hyperandrogenism, who tend to avoid roles involving interpersonal interactions, favor the health field—particularly professions like medicine. The absence of traditionally feminine roles, such as teaching, is and supports our initial hypothesis. It is also worth noting that certain professions, like social work or psychology, do not follow the observed trend.

Additionally, our investigation extended to analyzing sports participation trends across various fields, with the aim of gaining insights into the hormonal levels and tendencies of these women, thus contributing to the development of a comprehensive patient profile.

As illustrated in FIG. 5, a notable inclination towards sports engagement from an early age is evident. While exercise itself cannot be inherently labeled as “*masculine*”, the most popular activities include dancing, swimming, skating, and tennis. It is important to recognize that childhood sports preferences may be influenced by parental choices, reflecting the tastes of the parents rather than solely those of the daughters.

For this reason, participants were also asked about their engagement in sports during adulthood. There is a strong tendency toward sports participation, although this inclination generally decreases with age. The variety of sports is broader than in childhood, including activities with more “*masculine*” attributes. Notably, the gym emerges as the most preferred choice, encompassing both strength training and scheduled activities. The shift in preferences, moving away from childhood activities

like dancing, reflects the evolving personalities of the participants, with dancing transitioning from a primary choice to receiving fewer votes over time.

After analyzing the data from FIG. 7, which aimed to establish a correlation between personality traits and the concerned condition, we extracted the following information:

The four most frequently selected personality traits, ranked in descending order, were:

1. Analytical
2. Prudent
3. Energetic
4. Determined

Conversely, the least frequently chosen traits, ranked in descending order, were:

1. Conciliatory
2. Diplomatic
3. Ambitious
4. Patient

These findings align with our personality theory regarding women with sub-analytic clinical hyperandrogenism, showcasing a tendency towards traits traditionally associated with “*masculine*” characteristics. While most of the selected traits align with expectations, there is a notable deviation in the case of ambition. This divergence is particularly intriguing, as ambition is commonly linked to the energy and spontaneity often associated with tasks considered “*masculine*”.

In addition, other factors must be considered [6], such as the impact that stress has on hormonal levels [11,14].

Stress derived from our fast-paced lifestyle can negatively affect hormone regulation, leading to imbalances [15,16]- particularly in testosterone levels. Therefore, women who already suffer from hormonal disorders may be more susceptible to the side effects associated with uncontrolled testosterone levels [8].

This raises the question of whether our fast-paced lifestyle has altered our hormonal patterns [15], thereby contributing to broader cultural shifts that influence career choices [2]. In light of this, we endorse the notion of refraining from preconceived judgments regarding one's inclination toward a particular profession. Instead, we must help close the gender gap between occupations and foster an environment that enables children to recognize and achieve their full potential.

7. Conclusions

The process of career choice, as demonstrated in this study, is not as arbitrary as it may initially seem, being influenced by factors such as the social environment and hormonal levels.

Notably, we observed a clear relationship between sub-analytic clinical hyperandrogenism and a preference for less conventional professions among the women in the study.

This hormonal connection presents an opportunity to enhance dermatological diagnosis. By providing physicians with valuable insights, it can help differentiate conditions and potentially establish diagnostic patterns. Acting as a 'clue,' this information could streamline consultations and facilitate quicker dermatological diagnoses.

However, we acknowledge certain limitations in our study, particularly the sample size. To strengthen our conclusions, we recommend future research utilizing larger datasets.

REFERENCES

1. Eagly AH. Sex Differences in Social Behavior. New York: Psychology Press, USA; 2013.
2. Gonäs L, Wikman A, Vaez M, et al. Changes in the gender segregation of occupations in Sweden between 2003 and 2011. *Scand J Public Health*. 2019;47(3):344-7.
3. Kuhn A, Wolter SC. Things versus People: Gender Differences in Vocational Interests and in Occupational Preferences. *J Econ Behav Organ*. 2022;203(4):210-34.
4. Beltz AM, Swanson JL, Berenbaum SA. Gendered occupational interests: Prenatal androgen effects on psychological orientation to Things versus People. *Horm Behav*. 2011;60(4):313-7.
5. Ehrhardt AA, Ince SE, Meyer-Bahlburg HFL. Career aspiration and gender role development in young girls. *Arch Sex Behav*. 1981;10(3):281-99.
6. Sandberg DE, Ehrhardt AA, Ince SE, et al. Gender Differences in Children's and Adolescents' Career Aspirations. *J Adolesc Res*. 1991;6(3):371-86.
7. White RE, Thornhill S, Hampson E. Entrepreneurs and evolutionary biology: The relationship between testosterone and new venture creation. *Organ Behav Hum Decis Process*. 2006;100(1):21-34.
8. Grant VJ, France JT. Dominance and testosterone in women. *Biol Psychol*. 2001;58(1):41-7.
9. Sapienza P, Zingales L, Maestripieri D. Gender differences in financial risk aversion and career choices are affected by testosterone. *Proc Natl Acad Sci*. 2009;106(36):15268-73.
10. Nofsinger JR, Patterson FM, Shank CA. Decision-making, financial risk aversion, and behavioral biases: The role of testosterone and stress. *Econ Hum Biol*. 2018;29:1-16.
11. Sherman GD, Lerner JS, Josephs RA, et al. The interaction of testosterone and cortisol is associated with attained status in male executives. *J Pers Soc Psychol*. 2016;110(6):921-9.
12. Joel D, Tarrasch R. The risk of a wrong conclusion: On testosterone and gender differences in risk aversion and career choices. *Proc Natl Acad Sci*. 2010;107(5):E19.
13. UChicago News. Study shows link between testosterone and women's choice to enter finance careers. *UChicago News*. 2009.
14. Ranabir S, Reetu K. Stress and hormones. *Indian J Endocrinol Metab*. 2011;15(1):18.
15. Magomedova A, Fatima G. Mental Health and Well-Being in the Modern Era: A Comprehensive Review of Challenges and Interventions. *Cureus*. 2025;17(1):e77683.
16. Saquido M. Work-Related Stress and Its Psychodermatological Impact on Nursing Professionals. *Int J Res Sci Innov*. 2025;12(8):1357-70.