



**Review Article**

# Understanding Female and Male Insights in Psychology: Who Thinks What?

Swati Mehta<sup>1,\*</sup>, Aksh Chahal<sup>2</sup>, Shikha Malik<sup>2</sup>, Richa Hirendra Rai<sup>3</sup>,  
Nitesh Malhotra<sup>4</sup>, Krishna Reddy Vajrala<sup>2</sup>, Mohammad Sidiq<sup>2</sup>, Abhishek Sharma<sup>5</sup>,  
Nidhi Sharma<sup>6</sup>, Faizan Zaffar Kashoo<sup>7</sup>

<sup>1</sup>Dukhbhanjni Charitable Polyclinic, Shri Guru Hargobind Sahib Sewa Society, Haryana, India,

<sup>2</sup>Department of Physiotherapy, School of Allied Health Sciences, Galgotias University Greater Noida, Uttar Pradesh, India,

<sup>3</sup>School of Physiotherapy, Delhi Pharmaceutical Sciences and Research University (DPSRU) Pushp Vihar, New Delhi, India,

<sup>4</sup>Department of Physiotherapy, Faculty of Allied Health Sciences, Manav Rachna International Institute of Research and Studies Faridabad, Haryana, India,

<sup>5</sup>Department of Physiotherapy, Arogyam Institute of Paramedical and Allied Sciences (Affiliated to H.N.B. Uttarakhand Medical Education University), Uttarakhand, India,

<sup>6</sup>Department of Health Science, Uttaranchal College of Health Sciences, Uttaranchal University, Uttarakhand, India,

<sup>7</sup>Department of Physical Therapy and Health Rehabilitation, College of Applied Medical Sciences, Majmaah University, Al Majmaah, Saudi Arabia

Received February 3, 2024

Revised February 21, 2024

Accepted February 22, 2024

\*Corresponding author:

Swati Mehta

Dukhbhanjni Charitable  
Polyclinic, Shri Guru Hargobind  
Sahib Sewa Society, Ambala,

Haryana 134003, India

Tel: +91-9306993599

E-mail:

mehtaswati246@gmail.com

Evolutionary psychology is the study of human psychological behavior. During childhood, men and women behave similarly; however, as a child approaches puberty, new physical and behavioral changes emerge. Behavioral psychology focuses on understanding the functioning and thought processes of the human mind. The general population lacks knowledge of basic behavioral differences between men and women, leaving them unaware of their role, limitations, societal responsibilities, resulting in an underestimation of their own natural talents and biology. Thus, people tend to follow societal norms rather than exploring and utilizing their natural talents. The current review was designed and conducted to enforce compression on behavioral psychology in both genders as well as to identify variations in hormonal activity and sexual preferences.

**Keywords:** Behavior, Classification, Humans, Psychology, Sex characteristics

© This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0>) which permits unrestricted noncommercial use, distribution, and reproduction in any medium, provided the original work is properly cited.



## INTRODUCTION

Since ages, understanding the human behavioral psychology (BP) has always been a topic of interest among researchers, which with research has led to timely understanding of human behavior. With newer understanding, opens further and deeper domains yet to be explored, which has led for thought of human's BP is one of the most difficult concept. Charles Darwin, the English naturalist proposed theory of biological evolution in 1859 [1], which stated, organisms of all species arise and develop by naturally selecting small, inherited variations to increase the ability to reproduce, survive and compete. The same theory led to evolution of new branch called evolutionary psychology (EP) [2].

EP studies the psychological behavior of human beings. The theory explains basic difference between the male and female trait [3]. Interestingly, during childhood both male and female gender exhibit not so different behavioral difference, but, as a child attains puberty, with physical changes comes in behavioral changes as well [4]. Furthermore, with an increase in testosterone level in males, increases their physical strength, and at times their aggressive behavior it compared to females. At times, males also pose antisocial behavior, while females are more agree-able in nature. Females do not prefer fight for achieving their goals, whereas males having masculine ego, achieve their goals at any cost [5]. Females, during puberty, reflect chances of increasing negative emotions leads to anxiety and depression [6]. As males believe in gadgets and machines, they are thought to be logical thinkers, whereas females believe in good relations, and thus, making them as creative thinkers. In general, females easily give up with their personal liking for saving a relationship. Interesting to know, intelligence quotient (IQ) in male and female is almost same, and both can further improve their IQ [7]. In the hierarchy, male reach at top with their intelligence, hardwork, success and skills whereas females reach on top of the hierarchy through intelligence, skills, hard- work and beauty. Females choose males with higher level in hierarchy than self, whereas males select females who have equal or lower to secure environment and a happy married life [6].

BP is a platform for research conducting and understanding functioning and thought process of human mind [8]. As the human mind is estimated to receive 6-8 million thoughts per day and around 2,500-3,300 thoughts per hour [9], a detailed assessment of these thoughts proposes 90% of the thoughts to be irrelevant [10]. Thought passes from our mind with a rapid speed that can easily distract our mind from attentive state and land up our mind in state of confusion. Thoughts can be useful and the quality of our thoughts can be improved if a person can meditate and keep his/her mind and body peaceful and tuned [11]. In contrast unne-

cessary thoughts create mental noise in our brain contributing to depression. Stream of thought is a speedy attainment, for controlling which a person needs huge efforts. Thought process can be controlled by implicating various behavioral and psychological therapies [12].

## PSYCHOLOGY OF FEMALE FROM MALE

Males and females pose different mental and physical status and stature. With passage of time, both evolve and groom with distinguishing priorities and both process and use information in different manner [6]. As cells influence hormones, male and female have their own talents, weaknesses and strengths. As most of people lack knowledge of the basic behavioral differences between male and female, leading to this unawareness about role, limits and natural talent in society [7]. This unawareness leads to underestimating talents of the other gender and their biology [8].

## FEMALE PSYCHOLOGICAL TRAITS

### 1. Females are holistic, whereas males think logically

Females have a greater holistic perception, meaning observing and dissecting information with logic and intellect. Male's trait is balanced by female intuition, which is known as highest form of intelligence [13]. A mentally strong female can have a personified vision to explore the world, it compared to a male. Though females do not focus on minute details of a concept, instead believe in gross results. In addition, females easily understand a concept by taking it as a gross and in connection which at times might be difficult task for a male. A female has neural junctions across each side of the hemispheres, which result in holistic thinking, intuitions and verbal ability [14]. "Clarrisa Pinkola Estes" mentions in her book (*Women Who Run with the Wolves*) that, 'If we make nature as our friend and teacher, then we not see the world only with our 2 eyes, rather see million eyes of intuition.' Any kind of over intellectualization suppresses the wild and instinctual nature of females.

### 2. Females offer better understanding towards feelings

The human brain consists of two emotional systems, mirror neuron system (MNS) and temporal parietal junction (TPJ). MNS is responsible for emotional empathy meaning feeling what other person feels, whereas TPJ is responsible for cognitive empathy meaning to detach from emotion of other person and to focus on the actual problem [14]. Females are filled with emotional empathy and males with

cognitive empathy [15]. A study exposed females were exposed to electric shock followed by their male counterpart. The females were explained that their partner is also exposed to the same kind of shock. Even though they don't see their partner, unconsciously the same pain areas show activation which activates during shock. But this response was absent in males [16].

### 3. Females showcase promising hearing ability

Female are blessed with 11% more neurons in their language and hearing centers when compared to males [14]. They not only pose promising better hearing ability, but also showcase interest towards one's emotional tone. This skill is an inbuilt feature to understand feeling of their children and understanding the emotions of a baby unable to speak. A study examined female and male children, being exposed to various noise, the study displayed female children to easily recognize crying sounds of infants [17].

### 4. Wider focus of female on relationship building

It is a common observation, wherein males enjoy games that are rough, competitive and requiring strength to show their powered dominance to develop hierarchy with their who play better them, whereas, girls focus on relationship building they change turns more than 20 times and give opportunity to others to play. They prefer to play mostly caring and relationship-based games [18]. Macaque monkey who are our close ancestors to humans, also display similar psychobiological behavior as humans. In macaque, males monkeys play 6 times more competitively and harsh, whereas female macaque monkeys prefer babysitting of young macaque.

### 5. Females express anger verbally

It is the difference in psychology between male and female, that female gender aggression verbally, whereas male demonstrate shows his aggression through actions. Males aggression pathway is closely connected to the areas responsible for physical strength, whereas female aggression pathway to the verbal functioning area [14]. Males have greater amygdale when compared to females which make them to face and act strongly in threatening situations, as females have a bigger pre frontal cortex as compared to males, it makes them to control their anger [14]. In males, right amygdale is more active, which is responsible to take actions towards reaction, whereas in females, left amygdale is more active justifying responsibilities towards commencing strong mental reaction [19]. Though usually females are small built structure when compared to males, it becomes

risky for being violent with a male of greater built, it leading to danger for the genetic legacy of female. This forms the basic reason for male fighting with actions whereas females fighting verbally with expressions. At some point of life (in pregnancy, when the baby is in the womb) females become vulnerable and dependent for protect.

### 6. Females pace greater intelligence in understanding intentions

A study by Adolphs [20], R stated females to read emotion of sadness 9 times of ten, whereas males recognize sadness 4 times than females. Females have instinct to identify fake facial expression, in comparison to male. The evolutionary sense behind this fact is that, female have to recognize the feelings of her baby through facial expressions [20]. The brain circuits of males use more testosterone and vasopressin whereas female's brain circuits use oxytocin and estrogen whenever a male is provided with even single of oxytocin, then he gains increase in ability of reading and perceiving emotional expressions [21].

### 7. Affection towards music

A study planned and executed to study the impact of music on girl infants found, infants to grow faster and with less health problems and discharged early from the children than infants who don't received music therapy. In contrast, male infant does not show such positive effects observed in girl [22].

## MALE PSYCHOLOGICAL TRAITS

### 1. Ignorance to selected voices

A study conducted in the year 2020 in Netherlands on 17-25 years observed females mind respond to both white noise and music, whereas males only to music and not white noise [23]. The reason behind is attributed to testosterone response, i.e., during development of brain in males, testosterone enter and block the auditory system for any unwanted and repetitious acoustic stimuli [24]. This evolutionary response exits in relationships, wherein females repeat their words which create an unwanted repetitive stimulus in males factoring which female complaint of males not listening message being given to males.

### 2. Males display consistency than females

Since males have minimal hormonal change throughout their life span, it is the female wherein hormonal changes

are frequent and intense, and this constant hormonal change reflects as reduced consistency. At the starting of a menstrual cycle, there exits growth in hippocampus area of brain, along with estrogen level increases significantly and one in last week of cycle, the secretion of progesterone in females make them irritable, stressed, unfocused and lazy [14]. Thus, the hormonal changes lead to temporary behavioral changes in females and present through sensitive, sentimental, stressed and unfriendly, leading to females to behave un-consistently in different weeks whereas males in comparison are emotionally stable and more consistent [24].

### 3. Males overestimate their abilities

Males overestimate their abilities as they feel motivated by doing easy things. Even if they are not much good, still one overestimates their actions, which may cause loss to them in personal whereas, females think patiently and know their actual abilities [16].

### 4. Affliction towards struggle

A male becomes wise and mature through resistance and good guidance, whereas a female becomes matured and wise through least resistance and good guidance. Studies from the past conclude that positive and excitatory hormones to be released at time of competition and physical fight [14]. Male push their limits to bring their best possible version in front of the world. Struggle makes a person strong, healthy, confident and better, leading to challenges can building strong character among males and this reasoning makes males to easily face difficult situations because of positive work by the mind, but in females after reaching at some height difficult situations become counter-productive and cause effect negatively on health [10].

### 5. Promising spatial abilities

Males showcase influential spatial beneficence to visualize position of the different places. These changes can be seen in even a 5-year-old male child. Females use landmarks for navigation, whereas males use distance and direction during navigation. This is the basic reason behind good driving and navigating ability among males [25].

### 6. Affection towards action scenes

Research observed girls females drawing persons, animals, plants and use warm colors, whereas boys males to draw action scenes, and not use more than 6 colors, and along with ability to recognize action scenes in daily life [26].

## 7. Males showcase as competitive players

Males are more passionate towards games. They play competitively by showing opulence to establish hierarchy. This behavior in male reflects evolutionary and social responsibility. Literature affirms, when a boy is more passionate in game and have a spirit to win then chances are that the person grows up with winning spirit [25,27-29].

## CONCLUSION

Both, male and female gender are mentally and physically distant from each other. With progression in age, both evolve characteristics and exclusive with priorities. Both, process and use information as per their respective choice. As cells are influenced by hormones, male and female have their respective talents, weakness and strengths. Most of the population lack knowledge of the basic behavioral differences, leaving them unaware of the roles, limits and natural talent of male and female in the society. In general individual follows the already being set trend in a society instead of following his/her natural talent. Authors of the current article would like to propose a consideration on individual difference, and specificity of gender differences. This review has made all efforts to broaden understanding of psychology of nature of the two genders, their evolution at the extent of comparison with animals, its development, physiological and neurological reasoning. Studies of gender differences explored during childhood can lend a supportive hand to identify and treat behavioral disorders in children to have a smooth and joyful psychological mindset through the course of one's life span.

## NOTES

- **ORCID**  
Swati Mehta, <https://orcid.org/0000-0002-1823-816X>  
Aksh Chahal, <https://orcid.org/0000-0003-2871-3697>  
Shikha Malik, <https://orcid.org/0000-0003-0713-838X>  
Richa Hirendra Rai, <https://orcid.org/0000-0003-0102-2773>  
Nitesh Malhotra, <https://orcid.org/0000-0003-4104-4520>  
Krishna Reddy Vajrala, <https://orcid.org/0009-0000-2810-0909>  
Mohammad Sidiq, <https://orcid.org/0000-0003-2448-8971>  
Abhishek Sharma, <https://orcid.org/0000-0001-5968-1910>  
Nidhi Sharma, <https://orcid.org/0000-0002-3177-0943>  
Faizan Zaffar Kashoo, <https://orcid.org/0000-0002-8272-674X>
- **Authors' contributions:** Shikha Malik, Swati Mehta, and A.C. participated in conceptualization. Shikha Malik, Swati Mehta, A.C., R.H.R., N.M., and K.R.V. participated in curated the data. A.C., M.S., A.S., N.S., K.R.V., and F.K.

participated in conducting the formal analysis. A.C., F.K., A.S., N.M., N.S., and R.H.R. participated in conducting the project administration. A.C., Shikha Malik, M.S., K.R.V., and F.K. supervised the study. F.K., N.M., A.C., A.S., M.S., and K.R.V. provided validation. N.S., A.C., F.K., R.H.R., and M.S. participated in drafting visualization. Shikha Malik, Swati Mehta, A.C., and R.H.R. wrote the original draft of the manuscript. M.S., Swati Mehta, F.K., A.S., K.R.V., and R.H.R. participated in writing – review & editing.

- **Conflicts of Interest:** No conflict of interest.
- **Funding:** None.
- **Acknowledgements:** None.

## REFERENCES

1. Roberts CS. Comments on darwinism. *Proc (Bayl Univ Med Cent)* 2012;25(1):48.
2. Liu Y. A new perspective on Darwin's Pangenesis. *Biol Rev Camb Philos Soc* 2008;83(2):141-9.
3. Lightman B. The many lives of Charles Darwin: Early biographies and the definitive evolutionist. *Notes Rec R Soc Lond* 2010;64(4):339-58.
4. Barrett HC, Kurzban R. Modularity in cognition: Framing the debate. *Psychol Rev* 2006;113(3):628-47.
5. Zhao Z, Su W, Hou J. The influence of resource-gaining capacity on mate preferences: An eye tracking study. *BMC Psychol* 2023;11(1):444.
6. Depue RA, Collins PF. Neurobiology of the structure of personality: Dopamine, facilitation of incentive motivation, and extraversion. *Behav Brain Sci* 1999;22(3):491-517; discussion 518-69.
7. Weisberg YJ, Deyoung CG, Hirsh JB. Gender differences in personality across the ten aspects of the Big Five. *Front Psychol* 2011;2:178.
8. Van Goozen SH, Cohen-Kettenis PT, Gooren LJ, Frijda NH, Van de Poll NE. Gender differences in behaviour: Activating effects of cross-sex hormones. *Psychoneuroendocrinology* 1995;20(4):343-63.
9. Grosse Wiesmann C, Friederici AD, Singer T, Steinbeis N. Two systems for thinking about others' thoughts in the developing brain. *Proc Natl Acad Sci (USA)* 2020;117(12):6928-35.
10. Bardi L, Desmet C, Nijhof A, Wiersema JR, Brass M. Brain activation for spontaneous and explicit false belief tasks overlaps: New fMRI evidence on belief processing and violation of expectation. *Soc Cogn Affect Neurosci* 2017;12(3):391-400.
11. Schurz M, Aichhorn M, Martin A, Perner J. Common brain areas engaged in false belief reasoning and visual perspective taking: A meta-analysis of functional brain imaging studies. *Front Hum Neurosci* 2013;7:712.
12. Beutel ME, Jünger C, Klein EM, Wild P, Lackner K, Blettner M, et al. Noise annoyance is associated with depression and anxiety in the general population- The contribution of aircraft noise. *PLoS One* 2016;11(5):e0155357.
13. Dane E, Pratt MG. Exploring intuition and its role in managerial decision making. *Acad Manag Rev* 2007;32(1):33-54.
14. Ruigrok AN, Salimi-Khorshidi G, Lai MC, Baron-Cohen S, Lombardo MV, Tait RJ, et al. A meta-analysis of sex differences in human brain structure. *Neurosci Biobehav Rev* 2014;39(100):34-50.
15. Christov-Moore L, Simpson EA, Coudé G, Grigaityte K, Iacoboni M, Ferrari PF. Empathy: Gender effects in brain and behavior. *Neurosci Biobehav Rev* 2014;46(Pt 4):604-27.
16. Han S, Fan Y, Mao L. Gender difference in empathy for pain: An electrophysiological investigation. *Brain Res* 2008;1196:85-93.
17. Belin P, Fillion-Bilodeau S, Gosselin F. The Montreal Affective Voices: A validated set of nonverbal affect bursts for research on auditory affective processing. *Behav Res Methods* 2008;40(2):531-9.
18. Fantasia V, Fasulo A, Costall A, López B. Changing the game: Exploring infants' participation in early play routines. *Front Psychol* 2014;5:522.
19. Seifritz E, Esposito F, Neuhoff JG, Lüthi A, Mustovic H, Dammann G, et al. Differential sex-independent amygdala response to infant crying and laughing in parents versus non-parents. *Biol Psychiatry* 2003;54(12):1367-75.
20. Adolphs R. Neural systems for recognizing emotion. *Curr Opin Neurobiol* 2002;12(2):169-77.
21. Gordon I, Zagoory-Sharon O, Leckman JF, Feldman R. Prolactin, oxytocin, and the development of paternal behavior across the first six months of fatherhood. *Horm Behav* 2010;58(3):513-8.
22. Cassidy JW, Ditty KM. Gender differences among newborns on a transient otoacoustic emissions test for hearing. *J Music Ther* 2001;38(1):28-35.
23. Le Moëne O, Ramírez-Rentería ML, Ågmo A. Male and female immediate fear reaction to white noise in a semi-natural environment: A detailed behavioural analysis of the role of sex and oestrogen receptors. *J Neuroendocrinol* 2020;32(10):e12902.
24. Basaria S. Reproductive aging in men. *Endocrinol Metab Clin North Am* 2013;42(2):255-70.
25. Fiori KL, Denckla CA. Social support and mental health in middle-aged men and women: A multidimensional approach. *J Aging Health* 2012;24(3):407-38.
26. Fuhrer R, Stansfeld SA. How gender affects patterns of social relations and their impact on health: A comparison of one or multiple sources of support from "close persons". *Soc Sci Med* 2002;54(5):811-25.
27. Diener E. Subjective well-being. The science of happiness and a proposal for a national index. *Am Psychol* 2000;55(1):34-43.
28. Mani A, Mullainathan S, Shafir E, Zhao J. Poverty impedes cognitive function. *Science* 2013;341(6149):976-80.
29. Grüsser OJ. Face recognition within the reach of neurobiology and beyond it. *Hum Neurobiol* 1984;3(4):183-90.