

# The Learning Curve

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Department of Psychology  
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# THE LEARNING CURVE

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# ABOUT THE REVIEWERS

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# Gender Ambiguity Through the Ages: Exerpts from The Mahabharata

*Abhilasha Mansata, Divyanshi Pandey, Harshita Bajaj*

## **ABSTRACT:**

*Masculinity asserts dominance.*

*Femininity fosters nurturance.*

*We see the spaces where the lines blur.*

*The question around gender and sexuality is not only modern, Western or liberal. This subject has been a matter of much discussion and deliberation since time immemorial; still we are grappling with a foreboding sense of uncertainty when it comes to gender fluidity. We have no definitive answers. However modern and Western we think the current discourse is, these issues have been explored even in ancient Indian epics; be it the Puranas, The Ramayana or The Mahabharata.*

*Drawing specifically from the ever-powerful text of Mahabharata written in the atavistic Dwapar Yug, and the timeless figures, we wish to move a step closer towards finding the answer to the ambiguity surrounding gender and sexuality that continues to plague our society even today.*

*We explore the story of the warrior who abandoned his bow and arrow, and lived a life as Brihannala, who taught the art of dancing which he learnt from the Apsaras themselves. This shift in the sexuality of Arjuna, resurrects the ambiguity that has become a discourse in the modern contemporary world.*

*The tragic story of Amba who was reborn as princess Shikandi, but raised as a son and later became a man to satisfy her wife, is the very picture of gender and sexual ambiguity. This is not to say that ambiguity is partial to the biological realm; it also extends into social and cultural dimensions. The ever-mesmerizing and charming Krishna, born a male, exhibits traditionally feminine virtues, forcing us to redraw the binaries and readjust the boundaries of gender and identity.*

*In this paper, we aim to go beyond the conceptualization of The Mahabharata as a Hindu mythological text, by exploring the intricacies of the characters and situations, and drawing parallels with the contemporary scenario, both in India and the Western world. We do this by deconstructing and placing in current social contexts, the characters of Arjuna, Amba and Lord Krishna.*

Deviance from what is considered the majority has always been categorized as Abnormal. As humans we tend to see things and place them into binary oppositions of good or bad, white or black, and similarly of man or woman. Any non-conformity to these strict boundaries is obliterated.

Our society, more now than ever, is constricting itself to these binaries by viewing only a singular path, be it gender ambiguity or sexual orientation. Such rigid notions, expectations and roles of what it means to be a man & woman is cultivated by our cultural social structures. These have inscribed through institutions, social practices for how men and women should speak, act and even internalize their identities. Any variation is viewed not just as

abnormal but a threat to our society at large. We are now dawning towards a re-realization that reality doesn't walk hand in hand with our norms; the realities of the non-normative experiences such as ambiguity in gender identities, flexibility in sexual orientation and experimentation in sexual practices continually contest our norms. These realities have always existed and will continue to do so.

The next question that needs addressing is our own history. Why are we so uncomfortable with issues related to gender deviation and sexuality? Has it not been accommodated in our own past histories, mythology or even folk lore? Or is it an idea far too foreign and liberal for us? Was gender and sexuality muted in our own culture?

There has been considerable focus on the cultural construction of gender. Shelly Errington (1990) defines 'Gender' as a cultural system of meaning pertaining to all the differences and similarities between men and women as they live, and are interpreted in particular contexts. She refers to sex as our human bodies and gender to what different cultures make of sex. Human bodies are our sex bearer of culture's idea of gender ideology. However, a person assigned to a particular gender may not hold on to it indefinitely. While sex is by and large binary, gender is a wide spectrum ranging from completely masculine, to completely feminine, with many shades and combinations in between.

Within the Hindu culture, the distinction between the male and female binaries are very highly marked in the case of ordinary people. However, such a distinction between the two genders, isn't as highlighted in the realm of extraordinary people like saints, gurus, renunciants and even Gods. In fact, they are seen in the light of a different gender, a third gender, that's why certain male and female holy people are seen as more like each other than they are like other men and women. This is believed to be a consequence of a process of renunciation. The Theravada Buddhist society in South-east Asia believes that a man emerges from the renunciant initiation process with an ambiguous gender identity, "a sexual-social identity that is in tension or conflict with an ideal male religious identity".

Even within the Tantric and Advantic frameworks, the ambiguity of gender of these extraordinary personalities is seen as a conceptualization of the path to self-realization i.e. reaching the potentials of our sexual identity. This is a reflection of the dualistic, limited world into the realm of ultimate reality that is envisioned as having either a perfectly balanced male-female gender (the union of Shiva and Shakti) or a formless, sexless gender (nirguna brahmana).

Taking evidence from the physical statue of Shiva Ardhnari which is a portrayal of two sexes in a single body, such a distinction is present even at the gross physical level where only when both the male and female elements are completely developed and are complementing each other in the same individual, the soul is fully realized. This brings us to two evidential conclusions - either the presence of a completely third gender which is neither male nor female or existence of a being which is encompassing of both.

According to A.K. Ramanujan (1995) in the poem “The Highway Stripper”, the lines between the two genders are drawn and redrawn multiple times in the lives of a bhakti saint. Many male bhakti saints express a desire to become a woman so as to achieve the intimacy with Lord Shiva or Krishna that the other female saints enjoy. Evidence of many such saints exist, like the Vaishnava saint Chaitanya, who cultivated a kind of androgyny so that he could experience what it would be to make love to both Krishna and Radha, while dressing as a woman and retiring each month during menstruation.

In more recent times, Mahatma Gandhi curtailed the importance that was placed on the discrepancy between the two genders. In few of his letters, he was found describing the soul as neither male nor female, neither young nor old. Mahatma himself is known as a one of the very few men who have attained a balance of masculine and feminine characteristics. This points us towards a very important direction. What we strive for is never a perfect masculine or feminine character but a perfect blend of both. Society too promotes a balance between both. This is evident from the ever-old conceptualization of Ardh nareshwar or Shiv ardhnari. In fact, even the Chinese conceptualization of the yin yang talks about the harmony of two complementing forces; the two genders complementing each other to reach accord.

Drawing from the Mahabharata, such an ambiguity that is present in the Hindu tradition leads us to the ambiguity that is present about the gender of Devtas and God. Most of the time, God is seen as a third androgynous, balanced male-female gender like Shiva-Shakti or Krishna-Radha so much so that they ultimately become one genderless form of energy.

To further delve into such a past, let us examine our Mahabharata to find traces of such ambiguity which is a controversial issue of contemporary times. Existing within the Mahabharata, there exist stories of men who became women, women who became men, of men who create children without women and women who create children without men and of beings who are neither this nor that, but a little bit of both. It is common to either deny the existence of

such fluidity in our stories or simply locate them in the realm of the supernatural or point to law books that beside endorsing patriarchy and casteism also frown upon queer behaviors (Pattnaik, 2012) “the Mahabharata is one of the definitive, cultural narratives in the construction of masculine and feminine gender roles in India” (Brodbeck & Black, 2012).

But is gender stable or a spectrum? Let us explore this in the light of the characters of Shikhandi, Arjuna and Krishna.

The notion of transsexualism has been very well depicted in this epic through the story of Shikhandi. In her previous life, Shikhandi was Amba, the eldest daughter of the king of Kashi (one of the three sisters who had been abducted by Bhishma). The king of Panchala, Draupada wanted a son and was promised the same by Lord Shiva. But, a daughter was born to him. He was told by oracles that later in life she would acquire the body of a man and hence, he raised her as a boy. She was taught all the skills reserved for men and she grew up believing that she was a man. She was also given a wife. But, on the wedding night the wife ran saying that her ‘husband’ had a body of a woman. Humiliated, Shikhandini ran to the forest to end her life where she met a Yaksha called Sthuna. The Yaksha offered her his manhood for a day to prove to his wife that “he was no woman”. However, the next day when Shikhandini went to return the manhood, she found that the Yaksha had been cursed and now the manhood would return to him only after Shikhandini dies. And this is how Shikhandini became Shikhandi, or from female to male, just as it had been predicted.

In modern day terms, this shift in gender identity of a person would be termed as female- to- male transsexual. This pattern of transsexualism often involves a change in the biological and genital makeup of the sexes, which found no place in the epic. The story of Shikhandi also highlights a very important aspect of Gender Identity Disorder. If this story was to be seen in today’s time one would equate the characteristics and behaviour of Shikhandi such as cross dressing, discomfort with one’s own sex, participation in stereotypical games and pastime of males as falling under the category of Gender Identity Disorder.

Another issue that this story raises is the social aspect or the distinction of falling under the two binary gender of male and female. The fact that Shikhandi was involved in stereotypical male behaviour and was “raised” as a boy shows us how the upbringing and social environment influences the individual to identify themselves of the gender they want.

This can be seen in the argument put forward by Judith Bulter (1999) which goes as far as to argue that

gender, as an objective natural thing, does not exist: “Gender reality is performative which means, quite simply, that it is real only to the extent that it is performed.” Gender according to Butler, is by no means tied to material bodily facts but is solely and completely a social construction, a fiction, one that, therefore, is open to change. Gender is, thus, a construction that regularly conceals its genesis.

The idea that there can be a shift in the gender identity of a person, puts forward the very question of how gender can be seen as a fluid spectrum and not as something with fixed boundaries. It is this gender fluidity that we fail to recognize in today’s world and therefore view it as a disorder.

*It is important in today’s world to appreciate the gender fluidness that exists outside the rigidities of the two categories.*

Arjuna – the great warrior, the greatest archer, undefeatable, the very image of masculinity. While spending time with his father, Indra, in Amaravati, he was cursed by the celestial apsara Urvashi, for rejecting her advances. Insulted on being rejected by a mere mortal, she burst out

“Because you will not welcome me, when I am under the control of desire and have come to your house with your father’s (Indra’s) permission, therefore Partha (another name for Arjuna) you shall wander as a dancer among women, bereft of prestige, reputed to be unmanly like a eunuch.” [Mahabharata, Critical Edition, Volume 4, page 1052]. She declared that Arjuna would never be able to enjoy a woman’s company, however on Indra’s request she limited her curse to a period of one year. Arjuna was, with one curse, bereft of his manhood, now deemed to live the ‘unprestigious, unmanly’ life of a eunuch for a year. It is important here to distinguish between a eunuch and a hermaphrodite. Whereas a eunuch is an “altered male”, not born that way, possibly castrated in youth, a hermaphrodite is a person who manifests the sexual characteristics of both male and female (having often a penis and vagina).

Arjuna thus spent the thirteenth year of the Pandavas’ exile as Brihannala, a eunuch who taught music and dance to Princess Uttara, in King Virata’s Matsya kingdom. He apprised the king of his fine singing and dancing skills, which he had learnt under Chitrasena, a Gandharva at Indra’s abode. Brihannala stayed at the palace for women, moving about and making friends with other maids and princess’ friends. It is interesting to note that transgenders and eunuchs have

traditionally been attendants and maids to queens, ranging from the Mahabharata, to the Mughal courts. One argument for this is that they were highly regarded, and seen in the role of a ‘protector’, and thus trusted with the royal women. Another explanation may be that their impotency deemed them fit to live among and closely relate with the women of the court, as Arjuna did. It is plausible that both these explanations have some truth in them, as eunuchs have very ancient functions in India. One of these, appearances at the birth of a child, can be traced back to *Atharvaveda*. Another function, which might seem more recent until one finds evidence of it in the Mahabharata, is to appear at weddings. In both of these circumstances, as well as more generally and pervasively, there seems to be little doubt that eunuchs are regarded as “impure”, or at the very least, out of the ordinary. But what is interesting is that despite their impurity, their appearances at births and weddings can be either auspicious or inauspicious. They hold the power to bless or curse, and, in today’s India, they may bless with song and dance if appropriately paid, or may shower abuse till paid to leave. This superstitious fear held by many is indicative of the stigma they attach to the third gender.

The Sanskrit word for people of the third sex is “kliba”. It is used throughout Vedic texts to describe many different types of people who belonged to a “gender-ambiguous” and neutral third sex. These people were not considered to be ordinary males and females, and they did not experience attraction for the opposite sex or engage in sexual reproduction. They were taken to be a combination of both the male and female natures, yet at the same time neither one. We are today familiar with this third sex today as transgenders, intersexes, and other types of persons who do not neatly fit into traditional male and female roles. In Vedic times, the third sex category served as an important tool for the recognition and peaceful accommodation of such persons within society. In the karmic worldview, one is queer because of their karma, it may be a boon or curse. In the one-life worldview, one is queer because one chooses to do so, to express their individuality or to defy authority.

It is significant to note that today, there are very few laws in place to protect the rights of transgender and intersex people, and they are widely regarded as outliers to society. The little regard they are begrudgingly given comes more out of fear than acceptance. Even in the Mahabharata, Draupadi tells Arjuna that his disguise is one that is “despised by the world.” As a society, we do not seem to have come very far in our efforts towards inclusion, which in this case has been further stalled by the exclusionary language of colonization, in British India. This act of ostracizing the unknown or the unusual is also manifested in our refusal to even

acknowledge that Lord Krishna could be anything other than a man.

Aside from the distinction created between the two sexes in essence of their physical anatomy, there exists another dimension to classify the two genders, which is a product of our hardwired social conditioning and societal norms. There has never been a question on Krishna's biological sex, but we would want to move a step forward and raise a question on the gender identity of Lord Krishna.

There are certain points to be kept in mind while discussing the identity of Krishna. Krishna was no ordinary human being, but an incarnation of Lord Vishnu himself. There are evidences of a concept of God, as neither male nor female, or both, or neither in different cultures especially the monistic perspective. A sculpture in the temple of Jagannath (a form of Krishna worshipped in Orissa) says, *"Krishna of the Raas-Lila wears everything that women wear. Not just nose-rings but also earrings and a long plait. His eyes are lined with kohl and his feet are painted with alta and made red like a dancer. He is God who is comfortable in female attire."*

In temples across India, amongst the many attires of Krishna is one called Stri-vesha, where he dresses as a woman. Krishna is shown wearing a sari and women's jewelry. Some identify this as a form of Mohini, the divine enchantress, an avatar of Vishnu and Krishna. There also exist stories of Krishna dressing up as like Yashoda, his mother, just to amuse her. Other say, Krishna was actually punished by the Gopikas. The women grab Krishna and make him wear a skirt and blouse and paint his hands and feet with alta. To their surprise instead of being angry Krishna heartily enjoys and participates win the activity with much vigor. "More jewelry," he demands, "and better make up." Thus, what begins as a punishment ends up as a joyful activity, a game, a leela. In another story known as "gore gvala ki leela" (the game of the fair cowherd), Radha and Krishna one day exchange each other's clothes. Krishna dresses up as Radha and Radha dresses up like Krishna. They do so because Radha insisted she wanted to feel like Krishna. But she soon realizes that even though she wears Krishna's clothes her heart is still Radha's. "Oh Krishna, you can look like me but you will never know the pain in my heart when we separate." To remember his beloved Radha, some say, Krishna wears Stri-vesha. Evidence of such vagueness exists in the lyrics of the song "Nar ko Nari banao" (make the lad a lass) which is a popular Thumri composition.

There is yet another explanation for Stri-vesha (cross dressing). It is said that after a night of intimacy, when it was daybreak, Radha and Krishna hurriedly put on their clothes only to find

that they had worn the other's. And everyone in the village wondered who this beautiful new dark milkmaid was and who was this handsome new cowherd. In Tamil Nadu, amongst the local transvestites and eunuchs known as Alis, exists the story of Aravan. He was a warrior who was to be sacrificed on the eve of the battle at Kurukshetra. Aravan was deeply upset as he did not want to die without getting married as then there wouldn't be anyone who would weep over his dead body. Since there was no woman who wanted to marry him, Krishna's feminine form Mohini married him and wept for him on his death. This event is enacted till today, each year near Pondicherry in the temple of Koothandavar. The mood that Krishna evokes with this feminine adornment is one of love and affection and play, a breakaway from the rigidity of those who control and comment on society today. Little wonder then that the poet-saint, Tukaram referred to Vithal, Krishna's form popular in Maharashtra, as Vitha-ai, Mother Vithal.

Drawing from all these stories, one questions the validity and reliability of gender behavior and classification of such behavior into gender roles. Krishna is one such excellent example of defiance as well as an amalgamation of these boundaries that are viewed so strictly in the time of Indian 21<sup>st</sup> century.

The Mahabharata was way ahead of its time. The Mahabharata is not simply an epic with a foregrounding in religious texts. According to Gurcharan Das (2010) in his novel 'The Difficulty of Being Good', an exposition of the dilemmas and ambiguities inherent in the Mahabharat, he quotes "What is found everywhere will be found here too, and what is to be not found in this book cannot be found anywhere else." The Mahabharata at every point explores the choices and decisions of people, weighing the good against the bad of every situation, every occurrence. Gender ambiguity too, is explored, and reacted to differently in varying situations, which we can parallel with how it is viewed in India and Western societies today. Lord Krishna's breaking of stereotypes, and feminine qualities made him charming and desirable to women. Today such ambiguity would perhaps not be accepted in a biological male. However this brings us to the question of whether the problem lies within the person, or with the society in which s/he lives. Whether it really is a 'problem', as the fields of psychology and politics often claim. Arjuna's year as a eunuch, though eventually beneficial to him as a disguise, was in the first place a curse, given in a moment of anger and humiliation. Arjuna's first reaction to this curse - horror and despair, is reflective of the place given in societies to eunuchs, though they are essential to the functioning of courts. They have always found a place in history, but over the years we have eroded their place in our societies today. Non-heteronormative relationships too, are constricted to the margins of society, and are not understood with the nuances they present. If we are to try

and understand the sexual orientation of Shikhandi, it becomes important to then classify this being as belonging to one sex - the one born with, or raised as. We cannot classify Shikhandi as heterosexual or homosexual, as we are not even certain of the biological sex. The idea of homosexuality is introduced when Shikhandi, despite still being a woman, was married to a woman instead of a man. However this is again disputable, as to satisfy her wife's desire, she transformed herself into a male at that point. This is also a comment on the supposed 'transferability of manhood', and the multidimensional spectrum on which gender must be viewed. So at every step, the traditional notions of male, female, homosexual and heterosexual are questioned, torn apart and merged.

Having explored and understood these instances of the past from a contemporary lens, one is forced to rethink one's notions of what the limits are, and till what extent we are willing to expand the horizons of our thinking to include people of every gender, caste, colour, sexual orientation, community, religion and belief. We have been so busy chasing the idea of modernization that imitates the West, that we have neglected to trace back our roots and find answers closer to home.

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# Effect of Aggressive and Misandrous/Misogynous Music on Human Affect and Cognitions

*Aarti Polavarapu, Manveen Kaur, Nainika Garg and Ruth Lalneizawn*

## Abstract

The purpose of the study was to investigate the effect of aggressive and misandrous/misogynous music on human affect and cognitions. This was a one-time research study carried on a sample consisting of young adult female and male population aged 18 to 21 years of age, with 19 years being the mean age for the female population and 20 years being the mean age for the male population in the study. The sample consisted of 106 males and 106 females belonging to the relatively upper middle-class socio economic status background. A between subject research design was used, with sample being selected on the basis of convenient sampling and participants being randomly assigned to either the research condition or the controlled condition. The tools used were the Word Completion Task (for assessing cognitions) and PANAS X (for assessing affect). Independent t statistical tool was used to arrive upon the differences between the research and controlled groups of males and females. A positive relationship was established between aggressive and misogynous music and aggressive cognitions in males though a relationship between aggressive and misandrous music and aggressive cognitions was not established for females. It was also seen that aggressive and misandrous/misogynous music leads to a lower positive affect in females and males respectively.

## Introduction

The field of psychology has always been concerned with the study of human behavior and has always focused on understanding and explaining all kinds of behavior that an individual participates in. The uniqueness and individuality of human beings in respect to the kind of affect and cognitions they possess is of great importance too. Of particular importance in understanding the human behavior is the influence or impact of the environmental factors. There have been decades of research to better understand the aspect of sensation and perception in human beings. While a lot of breakthrough has been made in this field, a lot of questions are still left unanswered. One such question which needs to be looked at is the effect of music on human

beings.

Music is an integral part of an individual's life. There won't be any human being who hasn't been exposed to music of different kinds. Music affects individuals in various ways which require psychological explanations.

Aristotle defined emotions as "all those feelings that so change men as to affect their judgments, and that are also attended by pain or pleasure. Such are anger, pity, fear and the like, with their opposites." Different theories of emotions have been formulated over the years which include evolutionary theory of music, James Lange theory of emotion, Cannon-Bard theory of emotion, Schachter-Singer theory of emotion, Lazarus theory of emotion, with the most famous conceptualization being the one given by Robert Plutchik of the wheel of emotions.

Music is omnipresent in everyday life and the role played by music hence, requires special attention. Human beings spend a considerable amount of time listening to music and its influence is definitely linked with their day to day lives and can also lead to changes in their emotional state and personality traits over a period of time. Hence, this study specially focuses on carrying out this research on young adults who are more prone to be influenced by music given the fact that they spend a major amount of time listening to music, that they are still in their developmental age which makes them impressionable and susceptible to be influenced by the environmental and contextual factors around them like music.

## **Review of Literature**

The field of Psychology has given extreme importance to the area of Sensation and Perception. Over the years, research has been carried out to gain deeper understandings for the same. One of the most important concerns of psychologists and researchers is to understand the collateral relationship that exists between sensation and perception; how it may help in controlling certain kinds of behavior by avoiding certain kinds of music. Auditory sensations, particularly in the form of music, have had varying forms of influence on the human behavior which have been taken into consideration over decades. There are innumerable researches that have been carried out that have analyzed and explained the connection between music & emotions, cognitions and the consequent behavioral changes.

Music is that entity which can be found in every known culture, past and present, varying widely between times and places. Since all people of the world, including the most isolated tribal

groups, have a form of music, it may be concluded that music is likely to have been present in the ancestral population prior to the dispersal of humans around the world. It's association to mankind is ancient. Studying how certain kinds of music affects us will help in dealing with issues like stress, pain etc.

It is not a hidden fact that music has been considered to have certain magical powers. This is testified by the fact that Orpheus, a legendary Greek musician could make stones dance to his music. The stories of Tansen and Baiju Bawra are not unknown to us. They could light lamps, melt stones, blossom flowers in autumn, cause rain just by the accurate use of the 'accurate tune'. Thus, the importance of music in our lives cannot be under emphasized. It has a soothing and healing power. Just as the use of any pain reliever which helps to cure of its aches and tension, so music can relax the tense muscles of our body. The melodious notes of music have the capacity to cure the mental or physical fatigue of a weary person. It is considered to be one of the most engaging and emotive human experiences. Research suggests that early music training can develop areas in the brain which are associated with reasoning and learning (Rauscher & Shaw, 1993). A number of studies also suggest that music influences behaviour. For example, Anderson and Bushman (2002) hold that exposure to violent song-texts and aggressive musical tones, have been associated with "vicarious release", that is, the depletion of anger through listening or creating music (Arnett, 1991). Music plays an important role in many social contexts such as weddings, funerals, and parties as well. It affects us in ways that are personal and require psychological explanation: music energizes, surprises, soothes, delights, and otherwise shapes our emotional states. Research in cognition and neuroscience supports the idea that pleasure and emotions are key motivations for listening to music. Not only does music activate "pleasure centers" in the brain (Blood and Zatorre 2001), it can communicate and induce a range of powerful emotions (Juslin and Sloboda 2001). This latter capacity—to communicate and induce emotional states—has been the subject of intense scientific investigation.

Music is a strong socialization authority which defines and illustrates people's lives especially the lives of the younger generation (Bennett, 2001). This type of medium suggests authentic and appropriate responses to every day decisions, complications and opportunities which society at large face. As seen through the eyes of many, music helps in giving a definition to life, behavioral norms, values, as well as attitudes and social and gender roles (Sciberras, 2010).

Music's importance to society can also be measured by taking a look at the hours spent listening to it. With the fast growing industry of technology, music can be accessed anytime, anywhere therefore it makes it easier to spend a number of hours listening to it. In a study about media and its effects on youths, it was found that young adolescents listened to approximately 21 hours of music per week. This was compared to the 25 hours of television per week (Gentile, Lynch, Linder, & Walsh, 2004). It may be the case that such studies underestimate the amount of time people spend listening to music. This might be because music is often used in the background while studying, driving, eating and reading. With this in mind, one might conclude that exposure to music is even higher to that of television (Roberts et al., 2003).

Indian music is one of the oldest musical traditions in the world. India's classical music tradition is millennia long and remains important to the lives of Indians today as a source of religious inspiration, cultural expression, and entertainment.

The music history of the United States includes many styles of folk, popular and classical music. Some of the best-known genres of American music are blues, rock and roll, and country. The music of these people was highly varied in form, and was mostly religious in purpose.

With the invasion (what we call colonisation today) of large numbers of Europeans from European countries like France, Spain, Scotland, England, Ireland, and Wales came Christianchoirs, musical notation, broadsides, as well as large numbers of West Africans enslaved by Europeans.

However, both indian and western songs have undergone a drastic change. This evolution of the music industry has been extremely rampant over the past few years. Indian songs no more can be boastfully spoken about for their beautiful poetry and rhyme. They now focus in 'Sheila's jawani' or the pelvic thrusts of 'silky smooth Chameli' informing all of the 'pauaa shot of intoxicant she has just consumed'. Indian songs are becoming outrageously sexist and women hating. Similarly an outflow of the various english songs with the choicest of abuses are what is a matter of concern today. A similar situation persists in the west where in actuality, rap music started in the early 1980's as a method of trying to warn young people to avoid drugs, alcohol and other degrading materials. Once black entertainers, looking to make millions, caught on to its popularity, it took a 180 degree turn and virtually every lyric and sentence now embellishes the use of illicit sex, drugs and alcohol at the same time sexually degrading women and attempting to intimidate and to emasculate those who do not subscribe to the raw life being spread out on

the airwaves, internet, boom boxes or car speakers.

This change, in the kind of lyrics and music has not been supported much by recent researches. For example, a research states that there are valid reasons to worry about potentially harmful effects of violent music lyrics. Numerous studies have shown that aggressive words can prime aggressive thoughts, perceptions, and behavior (e.g., Anderson, Benjamin, & Bartholow, 1998; Bargh, Chen, & Barrows, 1996; Bargh & Pietromonaco, 1982). Indeed, such effects can occur even when the stimulus has not been consciously recognized (e.g., Bargh et al., 1996, Experiment Furthermore, listeners are capable of recognizing themes of music (i.e., violence, sex, suicide, and Satanism) even when it is difficult to comprehend specific lyric content (Hansen & Han- sen, 1991). In addition, An accumulating body of scientific research spanning 4 decades supports the hypothesis that exposure to violent media is causally related to subsequent expression of aggression in both short- and long-term time frames (e.g., Anderson & Bushman, 2002; Berkowitz, 1993; Bushman & Anderson, 2001).

Several studies have examined how music videos and lyrics affect an individual's aggressive attitudes and beliefs. For example: Anderson, Carnagey, and Eubanks (2003) examined the effects of violent lyrics on aggressive thoughts and hostile feelings. The randomized experiment utilized five experiments designed in order to avoid certain problems pertaining to directness and music genre encountered in previous work.

The power of television, films, the Internet as well as music in everyone's lives is abundant and in recent years, media and government authorities expressed their concern about the great amount of aggression, violence, and antagonism our minds are absorbing from our television sets, computers and iPods. The effect of exposure to aggression transmitted by media has a harmful effect on humans. The Internet has provided access to violent content that in the past was not easily available such as snuff movies. A number of researchers point to the fact that aggression in media has become a social problem. Media aggression has become a very important element of our entertainment. Sociologists have also shown that there are several links between media aggression and aggression happening in our lives (Anderson, Berkowitz, Donnerstein, Huesmann, Johnson, Linz, Malamuth, and Wartella, 2003).

Within the spectrum of media violence it thus becomes essential to comment on the role of violent musical lyrics and videos and their possible influences on individuals. In regards to media violence it is important to distinguish between the different types of aggression that are

measured and develop working definitions in order for clarification.

Freud (1964) has explained aggressive behavior as a death instinct (Thanatos), a reservoir of aggressive tendencies, which is aimed at self-destruction, but is redirected toward others. Lorenz (1976) proposed the existence of an inherited fighting instinct that ensures that the strongest survive. Berkowitz (1989) proposed that frustration leads to aggression because of a basic relationship between negative affect and aggressive behavior. Frustration-aggression hypothesis suggests that frustration is a very powerful determinant of aggression.

According to Lazarus (1991), anger is when an individual responds to a threat or an apprehension of a threat against a person or a group of persons. These threats can either be physical in nature or psychological in nature.

Dr. Robert Sternberg's theory of anger consists of three components. Anger is first triggered by avoiding people whom we don't like therefore this leads us in having lack of communication to be able to understand the other person. Without the ability to communicate with our enemies, we wouldn't have the possibility to fully understand their actions. The second part of the anger theory according to Sternberg is the frantic anger and disrespect towards the enemy. Such feelings are "conditioned responses which our brain doesn't check for accuracy" (Tucker-Ladd, 2004). The final part is a belief system which triggers anger even further and it justifies our actions of avoiding, condemning and ruining our enemy.

Long term or short term aggression can also be detected with the realm of music. The General Aggression Model (GAM) tries to explain the causes of aggression through a social - cognitive model that includes situational, individual, and biological factors that interact to produce a variety of cognitive, emotional, physiological and behavioral outcomes (Anderson & Bushman, 2002; Anderson & Carnagey, 2004). In any individual act of aggression, there are two basic classes of input variables: situational and individual. The former may include such stimuli as provocations or cognitive cues. The latter may include individual variation in terms of personality and attitudes and in biological makeup. These input variables interact to prime three routes to aggression: cognitive (e.g., aggression-related scripts or schemas), affective (e.g., hostile feelings, expressive motor responses), and physiological (e.g., increases in heart rate or blood pressure). Variables traversing these routes in turn influence a person's immediate appraisal of the situation. This immediate appraisal occurs automatically, and includes an interpretation of the situation and an interpretation and experience of affect. Once an immediate

appraisal of the situation has been made, reappraisal may occur. Reappraisal is a thoughtful, effortful, and conscious process in which the individual considers additional information concerning the situation, alternative behavioral responses to the situation, feasibility of the various alternatives, and consequences of carrying out the various alternative behavioral responses. This GAM model draws on empirical and theoretical contributions from several research groups, most notably the social-cognitive work of Bandura (1986), Berkowitz (1993), Crick and Dodge (1994), Geen (1990), Huesmann (1988), and Mischel (1973).

Most of the researches conducted seem to be inclined towards proving the adverse effects of extreme music and have concentrated on proving the same, with only success in a few cases which has left a lot to be answered. A lot of studies are underway to propound this relationship between extreme music and aggression but in contrast to this belief, the opposite has also been proven where extreme music has been suggested to provide with better ability of processing anger and aggression.

Hence, over the decades, the general effect of music on human cognition and emotion has been studied by various researchers but a lot of research is still needed to completely understand the effect of aggressive music with misogynous lyrics so that the causes can be delineated and consequently controlled for improvement and better development of individuals. According to the GAM Model of Aggression and other models of aggression too, it is a popular belief that even though misogynous music does influence and affect various aspects of the individual including the affective, and cognitive aspects, appraisal of information provided by the music as being aggressive and invoking violent behavior is often associated with the cognitive processes of the individual which may in turn evoke various associations which lead to the individual feeling and behaving in a particularly aggressive manner. Also, more studies are necessary to propound this relationship between misogynous music and aggression because contradictory studies which show a relationship with better anger processing and extreme music bring a new aspect of the situation to attention. A lot of other variables other than just the content of the music are also thought to be important like individual characteristics, the contextual characteristics, the groups an individual belongs to among other factor. A beginning direction for propounding a relationship between misogynous music and aggressive behavior may have been laid, albeit not without questions being raised and criticism being faced. More research is required in this field because the present researches still leave a lot of questions unanswered and have left space for questioning and curiosity. Because there hasn't been any profound theories in

this area with only a few studies trying to lay the groundwork for the same, it is necessary to examine and explain the causal relationship while keeping in mind all the moderating and intervening variables which may be essential to the relationship and necessary for laying down theories in this field based on research carried out in a meticulous manner.

### **Rationale of the Study**

*“Without music, life would be a mistake.”*

— Friedrich Nietzsche

Every individual encounters one or the other kind of music almost every day, and due to this widespread prevalence of music and the exposure that individuals have to it, it is necessary that music and its consequent influence on human behavior is studied in great detail with meticulously carried out researches.

Leo Tolstoy, a Russian writer who is regarded as one of the greatest authors of all time, once said that “Music Is the Shorthand of Emotion.” This quote is sufficient to state and explain what kind of a profound impact music has on all human beings, and it clarifies precisely why it is important to study how music alters emotional states of an individual, on the basis of a strong relationship they seem to be sharing. In the past, a number of researches have been carried out with the motive of establishing exactly what kind of a relationship exists between music and behavior. However, most of the researchers in this area have focused on explaining and examining usually the positive changes brought about by music (like in the field of music therapy) and not much attention has been paid to the adverse or negative effects brought about in behavior by music. While violence, aggression, anger, and several devastating behaviors are on the rise, more specifically beginning during the teenage years, it does not however negate the aggressive behavior amongst other age groups as well. Since youngsters in today’s times spend almost 4-16 hours per day while listening to music, with more specifically rap, high metal songs, punk being preferred in this age group, therefore it could be a very influential factor in aggressive behavior of today’s generation. It is necessary to look at all kinds of effects exuded by music. This is one of the main reasons why the current study is necessarily being carried out because understanding the negative effects of music is essentially as important as understanding the positive effects of music. As Ludwig Van Beethoven once said “Music can change the world”, so this study is necessary to make sure that music doesn’t change the world for worse by keeping in check its negative effects.

The present study, therefore, carries out the research on a population of young adults, both males and females, to understand how they are influenced by songs with misogynous lyrics and how it leads to a rise in aggression amongst them.

Some researches have been carried out in the past few years which tried to explain and understand the negative influence of music (for instance, negative influence of music has been dealt with in studies carried out by Barongan and Hall, 1995; Warburton, Wayne, Gilmour, Lana, Laczkowski, Peta, 2008; Bensimon and Bodner, 2011; Coyne and Padilla-Walker, 2015). However, even though these researches were successful in laying the groundwork for this particular direction of influence of music, they were in no way sufficient enough to explain the whole paradigm. The only spoke a little bit in general about what kind of a negative influence music might have in leading individuals to behaving in an aggressive manner but did not explain the phenomena in its entirety. These researches also did not focus on or understand the effect of other varying factors like the type of music being played, the lyrics of the songs, the personality characteristics of the individuals etc. The current research, hence, tries to fill in these gaps and take into consideration all such specifications and particulars which had been previously missed out, and tries to provide a holistic picture which is necessary and isn't available at the moment.

Also, even though most of the studies conducted to understand the negative influence of music have concentrated on proving the same and are inclined towards this belief, but however contrary to this belief, the opposite of this also has support from some studies conducted which suggest that music enables better processing of anger and enables to have a better grip over aggression (for instance, studies conducted by Choi, Lee and Lee, 2010; Sharman and Dingle, 2015 explain how music enables control over aggressive behavior). But it contradicts to the previous notion where soft music works significantly in relaxation therapy. In the same line the present study hypothesizes that music, especially songs with misogynous lyrics, increase aggression levels in individuals and seeks to contradict studies which stand to prove such a hypothesis wrong and are of the belief that such a negative influence of music leading to greater aggression levels does not exist. Hence, the current study is necessary to establish a causal relationship and establish the connection between music (songs with misogynous lyrics) leading to increased levels of aggression, and to prove that such a relation indeed does exist and has to be carefully be studied so that it can be controlled to avoid the adverse effects that it is likely to entail.

Another important reason to conduct this study is the fact that most of the researches conducted so far in this area have focused solely on perhaps the type of music and the influence it has on human beings, and not a lot of studies have concentrated and tried to explain the importance and impact of the lyrics of the songs. (for instance, the studies conducted by Lennings and Warburton, 2011; Coyne and Padilla-Walker, 2015 focused majorly on the effects of music on behavior and did not speak at all about the kinds of lyrics the songs had). Music may play a major role in affecting the emotional state of the individual, but the lyrics of the such songs also need to be carefully examined to explain the effect they have on human beings. This hasn't been done in the previous researches and is therefore necessary to be included. Our present study, hence, puts special focus on the lyrics of the songs and carefully takes this aspect of the songs into consideration.

Lastly, almost all of the researches dealing with the influence of songs with misogynous lyrics on aggression have been conducted in a non-Indian context. There isn't a single study which specifically deals with the Indian context. However, it is the need of the hour to conduct such a study in the Indian context because lately a lot of music has been coming up with non-sensical and misogynous lyrics which have been widely accepted and enjoyed by most of the population, especially the young adults. Any sort of censoring or filtering of such songs hasn't been taking place and exposure to such songs has been quite frequent. Also, the aggressive behavior among the young adults in India has been on an exponential rise (Study by Sharma and Marimuthu (2014) studying the prevalence and psychosocial factors of aggression among youth found out that the mean aggression score of the Indian youth had reached 17.7% as compared to 8.3% in 2000). This indicates that there is an increase in the general level of aggression amongst the Indian population which makes it extremely important for us to study and delineate all factors that are leading to this increased aggression. Music might be subliminally communicating messages which have led to increased aggression and this needs to be studied in detail. Therefore, the present study is being carried out in the Indian context because this hasn't been previously done and it is necessary to carry out this research in this context.

The present study tries to fill in the gaps and cover up the parts where the previous researches seem to lack. It is necessary to carry out this research to propound a relationship between songs with misogynous lyrics and aggressive behavior so that this relationship can be kept a check upon and the adverse affects of such music can be controlled and modified for better development of individuals.

To conclude with as to why this research is absolutely necessary, a quote by Friedrich Nietzsche which says “Without music, life would be a mistake” should be focused upon which states that life would be a mistake without music, but more importantly if the widespread impact of music isn’t kept a check on and it’s negative influences aren’t controlled and modified, then life with music would also be a mistake indeed.

## **Methodology**

### **HYPOTHESES**

(a) Males exposed to aggressive and misogynous music (research group) will have higher aggressive cognitions than males who listened to neutral music (control group).

(b) Females exposed to aggressive and misandrous music (research group) will have higher aggressive cognitions than females who listened to neutral music (control group).

(a) Males exposed to aggressive and misogynous music (research group) will experience lower positive affect than males who listened to neutral music (control group).

(b) Females exposed to aggressive and misandrous music (research group) will experience lower positive affect than females who listened to neutral music (control group).

### **EXPERIMENTAL DESIGN**

The research study followed a between-subjects design, with participants (males and females taken separately) randomly assigned to either the research condition, exposed to opposite-gender-hating and aggressive song lyrics or to the control condition, exposed to neutral song lyrics. Participants were made to hear four songs, two Hindi and two English, in each condition, and asked to rate their liking and recommendation for each song. In addition, they answered some filler questions with regard to their general music preferences and how much music do they listen to on an average per day. After listening to the songs, aggressive cognitions (word-completion task) and negative affect (PANAS-X) were measured. Afterwards, participants were thoroughly debriefed about the aim of the study. It was ensured that the participants did not experience distress or any negative emotions when they left the laboratory.

### **VARIABLES**

#### Independent Variable:

Type of song lyrics (misandrous/misogynous and aggressive vs neutral)

### Dependent variables:

Aggression-related cognitions

Negative affect

### Control variables:

Age of participant, number of songs (4 in each condition, 2 English and 2 Hindi), length of exposure of each song were matched across the two conditions. To control serial effects, half the participants first listened to English songs followed by Hindi songs and the other half first listened to Hindi songs followed by English.

## PARTICIPANTS

Participants of the study were female undergraduate students and male undergraduate students. Their age ranged between 18-21 years, with the mean age for the female population being 19 and the mean age for the male population being 20 years. They came from a relatively upper middle class socio-economic background. A total of 106 male participants and 106 female participants were there in the study. Participants were told their participation was voluntary and that their responses would be kept confidential.

## MEASURES USED

- Word-Completion Task (Adapted from Fischer & Grietmeyer, 2006)

This comprises of 15 word fragments with missing letters. Participants are instructed to complete the word with the first meaningful word that comes to their mind. These words could be either completed aggression related (e.g., kick) or not aggression-related (e.g., pick/sick/lick). The number of words completed as aggression-related was used as a dependent measure of aggressive cognitions. Previous research has successfully employed word completion task to measure psychological constructs such as mortality salience (e.g., Greenberg et al., 1994) and aggressive cognitions (e.g., Fischer & Grietmeyer, 2006). The words used in this task were selected by means of a pilot study administered on 27 students. They were given a list of 20 word fragments with missing letters and instructed to complete the word. The words which participants had some difficulty in completing were discarded (e.g., -U-ING and CRU--). Words for which almost equal number of aggression and non-aggression related responses were given were selected for the final task.

- Positive Affect Schedule (Watson & Clark, 1994)

The joviality, self-assurance and attentiveness subscales were used to assess positive affect and participants reported the extent to which they were currently feeling positive (e.g., confident, joyful, energetic, etc.) using the subscales from PANAS-X on a 5-point scale ranging from very slightly or not at all=1 to extremely=5. Items were summed to form an overall positive affect, with high scores indicating greater positive affect. The PANAS-X has been shown to have acceptable internal consistency ( $M \alpha = 0.87$ ), temporal reliability (2-month test-retest  $r = 0.71$ ), and convergent validity (Watson & Clark, 1991). Furthermore, self-reported negative affect on the PANAS-X shows agreement with peer reports (Watson & Clark, 1991).

- Songs

Suggestions from psychology students of LSR College were taken for contemporary songs that met the following characteristics: about half the songs had to have clearly misogynous content and the other half had to have no misogynous content. 15 Hindi and 10 English songs, where 19 songs (12 Hindi and 7 English songs) were considered to be aggressive/ men hating/ women-hating and 6 neutral songs (3 Hindi and 3 English songs) were selected for the pilot study on males and females. Both English and Hindi song lyrics were used to increase the strength and ecological validity of the experimental manipulation (Fischer & Grietmeyer, 2006).

A pilot study was conducted with 30 females and 30 males. The objective of this pilot study was to select the final 12 songs for the experiment, viz. 4 neutral songs (2 Hindi and 2 English songs) for the control group for both male and female populations, 4 aggressive women hating songs (2 Hindi and 2 English songs) for male participants in the experimental group, and 4 aggressive, men-hating songs (2 Hindi and 2 English songs) for female participants in the experimental group. It was deemed necessary to ensure that the misogynous songs were perceived as more misogynous and aggressive than the neutral songs.

The female participants and the male participants in the pilot study ( $n=60$ , with 30 female participants and 30 male participants) listened to all 25 songs and assessed to what extent the song lyrics were women-hating (0: not at all, 10: definitely), men-hating (0: not at all, 10: definitely), and aggressive (0: not at all, 10: definitely).

On the basis of the analysis of the ratings obtained from the pilot study, the extent to which each song was perceived as women/men-hating and aggressive was assessed. The songs that were

highest and lowest on both were finally selected for the experimental and control condition respectively. Any song that was regarded as “unclear” by more than one participant was discarded from further analyses. The songs of each category had to be of about the same length (approximately 2 minutes). The songs that were not considered to be comparatively aggressive and having men/women hating content were rejected and not included (13 songs were rejected, out of which 9 were Hindi songs and 4 were English).

Within the misogynous and aggressive lyrics category, the following songs were selected:

- “Superman” by Eminem (which was perceived to be aggressive and misogynous by 65% of the participants of the pilot study)
- “Literally I Can’t” by Play (which was perceived to be aggressive and misogynous hating by 55.6% of the participants of the pilot study)
- “Jaa Chudail” from the movie Delhi Belly (which was perceived to be aggressive and misogynous by 87.2% of the participants of the pilot study)
- “Saali Bitch” by Ishq Bector (which was perceived to be aggressive and misogynous by 84% of the participants of the pilot study)

Within the misandrous and aggressive lyrics category, the following songs were selected:

- “I Hate Boys” by Christina Aguilera (which was perceived to be aggressive and misandrous by 82.5% of the participants of the pilot study)
- “Dickhead” by Kate Nash (which was perceived to be aggressive and misandrous by 57.2% of the participants of the pilot study)
- “Luv Ka The End” from the movie Luv Ka The End (which was perceived to be aggressive and misandrous by 57.1% of the participants of the pilot study)
- “Mardaani Anthem” from the movie Mardaani (which was perceived to be aggressive and misandrous by 56.2% of the participants of the pilot study)

For both males and females the neutral song lyrics condition, songs selected were as follows:

- “Paradise” by Coldplay (which was perceived to be aggressive by only 12.8% of the participants of the pilot study)

- “Fireflies” by Owl City (which was perceived to be aggressive by only 6.4% of the participants of the pilot study)
- “Journey Song” from the movie Piku (which was perceived to be aggressive by only 8% of the participants of the pilot study)
- “Taake Jhanke” from the movie Queen (which was perceived to be aggressive by only 6.4% of the participants of the pilot study)

Presentation of songs was done by means of earphones and the lyrics of the songs were also shown to the participant while he/she is listening to the song. Each song was presented for approximately equal time (2 minutes).

## **Procedure**

Based on the analysis of the information obtained from the pilot study conducted on female and male populations (n=60, with 30 female participants and 30 males participants), the songs that were found to be having the most aggressive and women hating content (“Superman”, “Literally I Can’t”, “Jaa Chudail”, and “Saali Bitch” ), the songs that were found to have the most aggressive and male hating content (“I Hate Boys”, “Dickhead”, “Mardaani Anthem”, and “Luv Ka The End”), and the songs that were found to be the least aggressive and having no or negligible amount of men/women hating content (“Paradise”, “Fireflies”, “Taanke Jhaanke”, and “Journey Song”) were selected for the final experiment.

Using the songs that were finalized from the pilot study, a mock conduction was also carried out by all the experimenters to have clarity regarding the sequence of tasks and the processes of the final conduction. Based on this mock conduction, minor corrections were made regarding the procedure of the research and the procedure for the administration of the research was finalized.

The research was carried out in the following stages:

### **PRE-MANIPULATION:**

Participants were randomly assigned to either the research or the control condition. They were informed that the study deals with music preferences of college students and how music affects certain outcomes. This was necessary to keep the participants blinded about the true nature of the research. Informed consent was obtained from each participant (see form attached). Rapport was formed with each participant by carrying out a brief informal conversation. Demographic

information about their age, educational background and socioeconomic status was also taken.

#### MANIPULATION:

The research group of males was exposed to 4 songs with misogynous and aggressive lyrics, of which 2 were Hindi and 2 were English; while the control group of men was exposed to 4 songs with neutral lyrics, 2 Hindi and 2 English. The research group of females was exposed to 4 songs with misandrous and aggressive lyrics, of which 2 were Hindi and 2 were English; while the control group was exposed to 4 songs with neutral lyrics, 2 Hindi and 2 English. Participants were asked some filler questions with regard to their general music preferences and how much music do they listen to an average per day, how much they liked each song and whether they would recommend the song to others etc.

#### POST-MANIPULATION:

After listening to the songs, participant's aggressive cognitions and negative affect were assessed using the measures described above. Instructions for each were read out from the form.

Upon completion, introspective reports were taken from each participant. A manipulation check was done by asking participants what they felt after listening to various songs (to ensure that aggressive and misandrous/misogynous hating songs were indeed perceived so). Lastly, the participant was debriefed and asked not to tell anyone about her experience. The participant was then thanked for her cooperation.

#### **Precautions**

The conduction took place in proper laboratory conditions with adequate ventilation and lighting controlling maximum distractions as possible. The tables were set in a manner to ensure privacy of the individuals with adequate space for interaction as well.

The materials were placed behind the screens in a manner which was not visible to the participant and instructions were read out in a simplified, objective manner before each task and it was made sure that the participant understood the instructions well.

The participants were given adequate rest time before each task and were asked if they were comfortable to move on to the next.

Consent was taken for recording the interview.

Results

The aim of the experiment was to study the “Effect of aggressive misandrous/misogynous music on human affect and cognitions”. The experiment was done on a sample of 106(53 control group & 53 experimental group) from different colleges of Delhi University. The age group of the sample taken is 19-21 years. For the purpose of the experiment independent T statistical technique was used to see the difference between experimental and controlled group, on males and females separately along the three dimensions where two types of tasks were used : word completion, and PANASX (positive and negative). However, in the present research, only the positive PANASX has been used for purpose of significance.

**Table 1: Comparison of male participants’ performance on word completion task (cognition) in experimental and control group**

| SN | Variable                                  | Mean (SD)   | t(df)      | Significance |
|----|-------------------------------------------|-------------|------------|--------------|
|    | Word completion task (experimental group) | 4.26 (1.93) | 2.93 (105) | .227**       |
|    | Word completion task (control group)      | 3.18 (1.86) |            |              |

Table 1 illustrates the comparison of the performance of male participants on Word Completion Task (cognition) in experimental and control group. It shows us that the mean for the male experimental group is M=4.26 with a standard deviation of SD=1.93 whereas the mean for the female control group is M=3.18 with a standard deviation of SD=1.86.

This shows us that the number of aggressive words answered by the male experimental group is higher than that of the male control group. However, to check for statistical significance we have applied the independent sample t-test which shows us that the  $t(105) = 2.93$ , at  $p = .227$ .

A significant difference has been seen between the two groups. Therefore, our hypothesis “1(a) Males exposed to aggressive misogynous music (experimental group) will have higher aggressive cognitions than males who listened to neutral music (control group)” has been accepted.

**Table 2: Comparison of female participants’ performance on word completion task (cognition) in experimental and control group**

| SN | Variable                                  | Mean (SD)     | t(df)       | Significance |
|----|-------------------------------------------|---------------|-------------|--------------|
|    | Word completion task (experimental group) | 4.65 (2.32)   | -.377 (105) | .707**       |
|    | Word completion task (control group)      | 59.48 (12.57) |             |              |

Table 2 illustrates the comparison of the performance of female participants on Word Completion Task (cognition) in experimental and control group. It shows us that the mean for the female experimental group is M=4.65 with a standard deviation of SD=2.32 whereas the mean for the female control group is M=59.48 with a standard deviation of SD=12.57

This shows us that the number of aggressive words answered by the female control group is higher than that of the female experimental group. However, to check for statistical significance we have applied the independent sample t-test which shows us that the  $t(105) = -.377$ , at  $p = .707$

A significant difference has been seen between the two groups. However, because the mean of the control group is higher than the experimental group, our hypothesis “1(b) Females exposed to aggressive misandrous music (experimental group) will have higher aggressive cognitions than females who listened to neutral music (control group)” has been rejected.

**Table 3: Comparison of male participants’ performance on PANAS (Positive Affect) in experimental and control group**

| SN | Variable                                     | Mean (SD)     | t(df)       | Significance |
|----|----------------------------------------------|---------------|-------------|--------------|
|    | Positive Affect (PANAS) (experimental group) | 58.51 (14.09) | -.377 (105) | .316*        |
|    | Positive Affect (control group)              | 59.48 (12.57) |             |              |

As seen from table number 3 showing the comparison of male participants in experimental and control group on PANAS Scale through which affective aspect of induced aggression via misogynous songs. The mean of male participants exposed to aggressive misogynous music in experimental group was (58.51), SD=14.09, df=105,  $T = -.377$ , which was not significant. In comparison, the mean and SD of the control group are 59.48 and 12.57 respectively.

Therefore, based on this result, the corresponding hypothesis stated “2 (a) Males exposed to aggressive misogynous music (experimental group) will experience less positive affect than males who listened to neutral music (control group)” has been accepted because there was is significant difference found at 0.05significance level. Results show that hypothesis 2(a) has been accepted.

**Table 4: Comparison of female participants’ performance on PANAS (Positive Affect) in experimental and control group**

| SN | Variable                                        | Mean (SD)    | t(df)      | Significance |
|----|-------------------------------------------------|--------------|------------|--------------|
|    | Positive Affect (PANAS)<br>(experimental group) | 53.70(11.47) | -1.87(104) | .105*        |
|    | Positive Affect (control<br>group)              | 58.42(14.30) |            |              |

As seen from table number 4 showing the comparison of female participants in experimental and control group on PANAS (positive affect) through which affective aspect of induced aggression is measured via misandrous songs. The mean of female participants exposed to aggressive misandrous music in experimental group was (4.65), SD=2.32, df=105, T=1.377, which was significant on 0.01 significance level. In comparison, the mean and SD of the control group are 59.48 and 12.57 respectively.

Therefore, based on this result, there has been a significant difference found between the results of experimental and control group. Therefore, the corresponding hypothesis stated 2(b) “Females exposed to aggressive misandrous music (experimental group) will experience less positive affect than females who listened to neutral music (control group)” has been accepted. Hence, results show that hypothesis 2(b) has been accepted.

**Discussion**

The aim of the present experiment was to study the effect of aggression inducing music on aggression in the context of emotion and cognition.

Research on media violence has shown that aggressive music increases the accessibility of aggression-related cognitions, attitudes and emotions. However, besides unspecific aggressive lyrics, aggressive music often contains misogynous and misandrous song lyrics. Because research on media aggression mainly neglected gender differences both in terms of examining the aggressive music stimulus and the reactions of the listeners, we investigated effects of

aggressive misogynistic and misandrous song lyrics on aggression-related thoughts and emotions of male and female participants toward a confederate of the same or opposite sex.

While analyzing the results of the present research the effect of music was found to be significant, therefore it is not just a passive entertaining medium rather it has a very important role in day to day life decision making, problem solving and memorizing the things as well as having an attitude and orientation towards perceiving anything in our surrounding. Music is experienced in many different contexts and its significance for human behavior is not always obvious. There is no doubt that the influence of music has been on an exponential rise in the past few years, and almost all individuals have been affected by its prevalence in one way or the other. This makes it even more necessary to study the effects of music on human cognition because music might be influencing the individuals at both a conscious and an unconscious level. The effect of music on aggression is essential to be studied and explained so that such adverse effects might be kept in check and accordingly modified for better development of human beings.

It was hypothesized that males exposed to aggressive, misogynous music (experimental group) will have higher aggressive cognitions than males who listened to neutral music (control group), and this was accepted based on the findings of the experiment. This finding is consistent with what was seen in some previous researches as well. Anderson and his colleagues (2003), using the theoretical framework of the General Aggression Model also demonstrated that violent lyrics would be most likely to show short-term effects on aggressive emotions and aggressive thoughts. Violent lyrics are more likely to operate through both the affect and cognition routes, influencing appraisals of the situation and emotional state and (eventually) the behavioral decision” (Anderson, Carnagey & Eubanks, 2003). This was seen to be the case in this experiment as well, where subjects from the experimental group responded with more aggressive words on the word completion test than subjects from the control group. Research by Hallman, Price & Katsarou (2002) showed that exposing children to an arousing, aggressive, and unpleasant music condition disrupted the cognitive task performance. The findings of the present study were in line with all the studies already conducted in the past.

The present finding also supports that listening to aggressive music does tend to increase higher aggressive cognitions in male participants. This finding is significant as it gives us a glimpse about how aggressive music tends to affect our cognition, something which is not spoken about in our main stream culture.

Similarly, it was also hypothesized that females exposed to aggressive, misandrous music (experimental group) will have higher aggressive cognitions than females who listened to neutral music (control group). However, this hypothesis was rejected, meaning that females who were exposed to aggressive and misandrous songs did not exhibit more aggressive cognitions than females exposures to neutral songs. A research in cognition and neuroscience supports the idea that pleasure and emotions are key motivations for listening to music. Not only does music activate “pleasure centres” in the brain (Blood and Zatorre 2001), it can communicate and induce a range of powerful emotions (Juslin and Sloboda 2001). But, the probable reason for no such difference seen in the cognitions in the female participants of our study could be the increasing number of such songs, and also the general preference of these songs by the youth in today’s day. They are so accustomed to listening to songs which have aggressive and hateful content that it is probably no longer arousing enough to have an effect on their cognitions. Hence, it justifies the lack of difference seen in the cognitions of female experimental and control groups of the study. There was no indication in the interviews as well, of cognitions being altered or less aggressive by the songs listened to by the experimental group. The participants’ facial expressions did not change to a great extent while listening to those songs, which again may be because of overfamiliarity with and desensitization of the aggressive and sexual content of those songs.

Another hypothesis of this study states that males exposed to aggressive, misogynous music (experimental group) will experience less positive affect than males who listened to neutral music (control group). A comparison of the performance of male participants on PANAS (positive affect) in experimental and control groups has lead to the acceptance of this hypothesis. The effect of music on affect is complex. Studies have shown contrasting evidence in this domain. According to recent research from Durham University in the United Kingdom (2009) and the University of Jyväskylä in Finland (2010), listening to sad music has led to the listeners reporting happiness and upliftment of mood. This goes against the common logic which suggests that listening to music with sad lyrics leads to negative affect in individuals. In the current study too, the male experimental group participants did not report experience of any significant negative affect after listening to aggressive, misogynous songs. According to the interview responses of the male experimental group participants, it was inferred that the participants enjoyed listening to the songs due to their "catchy beats" and "fast pace and tempo". A majority of them reported that they “would refer these songs to (my) friends”. Thus, it can be inferred

that aggressive, misogynous songs did lead to none or low negative affect in the experimental participants.

On comparing the female participants' performance on PANAS (Positive Affect) in experimental and control group, we find there is a significant difference in the mean scores of both experimental group and control group. This means that the female participants who listened to aggressive misogynous songs had a significantly different level of positive emotions than those females who listened to neutral songs. This clearly shows that there was an impact of misogynous aggressive songs on positive emotions of female participants. Thus, our hypothesis that females exposed to aggressive, misogynous music (experimental group) will experience less positive affect than females who listened to neutral music (control group) is accepted. In the current study as well, participants from the experimental group reported feeling more impatient and irritable than participants from the control group. In the interview one of the female experimental participants stated that the songs were "Scarring, to say the least....why would you subject me to such terrible music?" She wrote in her introspective report "The music was bad." Her facial expressions were that of being upset on hearing such songs. McFarlane (1984) looked at the effects of exposure to violent music on the affect of participants and found that females from college who had a major preference for heavy metal and rap music were seen to display more hostile and alien behaviour than those females who listened to other kinds of music such as alternative rock, dance, country or soul music (Rubin, West & Mitchell, 2001). Listening to misogynous song lyrics also substantially increased women's recognition of negative male attributes (Fischer 2006). A plausible cause for the significant result could be the sample characteristic- that the female sample for the study comprised almost exclusively of students of Lady Shri Ram College for Women. Lady Shri Ram College has had a legacy of a deeply entrenched feminist ideology. Being a same sex educational institution, the morals and values of feminism is shared and common to the students. Cooperstock (2010) confirmed in a study that students in single-sex higher learning institutions show higher degree of feminist self-identification than students in co-ed institutions. A research done by two LSR alumna- Diksha Bijlani & Divya Utreja (2016) also confirmed that female students in single-sex higher learning institutions show stronger support for feminism, stronger positions on radical perspective of feminism, and higher feminist self-identification than students in co-ed higher learning institutions.

It is thus seen that out of the various hypotheses made at the beginning of this experiment, some of them have been accepted, whereas others have been rejected. These have been explained with theoretical and research backing, as well as by interview responses of the participants, behavioural observations and introspective reports.

### **Implications of the Study**

It is an undeniable fact that aggressive and violent behaviours are increasing by the day. In India alone, there was an increase in aggressive acts reported from 8.3% to 17.7% in 2000. If we can establish a link between genre and lyrical content and affective, and cognitive components of music in the extremely vulnerable age group of young adults, perhaps steps can be taken to moderate the particularly harmful content in songs, and duration for which it is listened to. In this manner we may keep a check on its negative effects.

We have also seen, through our study, how music is omnipresent in everyday life and it can lead to changes in emotional state, personality traits and habits over time. Hence it is important to study its influence on young adults so that it may be recommended to them to lessen the amount of this particular kind of music they listen to that had aggressive and misogynistic content, and that causes an increase in the affective, cognitive or behavioural components, often without their realizing it.

Repeated exposure to violent lyrics may contribute to the development of an aggressive personality and could indirectly create a more hostile social environment. To prevent the personal as well as large-scale ramifications of this, this study and its implications are important, not just theoretically but to be used for practical purposes. In this light, it may be suggested that music therapy be used as an intervention for aggressive behaviours in young adults. On the basis of this result we may suggest a therapeutic change in the lyrics of music listened to by youngsters, by tapping music production houses and censor boards to have checks on the lyrical content of songs, especially in Bollywood, where the lyrical content of songs is becoming increasingly aggressive and misogynistic.

### **Limitations**

1. Since most participants came from similar educational and socio-economic backgrounds, the results cannot be generalized to all males and females of this age group.
2. Since language plays a major role in the tests used, participants not comfortable with reading

or comprehending English wouldn't produce a reliable result on the tasks such as the word completion task. Thus the tools required the participants to be well-versed in English.

3. Only English and Hindi songs were used for the purpose of this test, whereas the population of India are comfortable with various different languages, and aggressive song lyrics exist in other languages which may have an impact on the individuals, which has not been assessed. Therefore, language was a barrier.

4. The sampling was based on convenience. Therefore, nothing could be controlled except for the age and gender of the sample.

5. Participants were habituated to the songs that were played for the purpose of the test, because of previous exposure to the songs. Therefore, it may be possible that the songs did not provoke aggression in them.

## **Conclusion**

It was seen through the given experiment that music with aggressive and misogynistic lyrical content did have an impact on the affective, and cognitive components of the PANAS Scale. This impact is seen in the light of gender.

On the cognitive component, there was found to be significant difference between control and experimental groups in both males and females for the Word Completion task, but only in females for the Vengeance Scale. There was no significant difference found between experimental and control groups of males on the Vengeance Scale.

The affective component of aggression was impacted similarly by the aggressive songs in both males and females between experimental and control groups, where there was no significant difference between both groups on the Positive Affect Scale but a significant difference on the Negative Affect Scale, in females. This difference was not seen in the Negative Affect Scale in males.

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# Effect of Gender and Family Structure on Work and Family Conflict

*Anjna Dahiya and Mounica Sreesai*

## Abstract

Changes in the demographic makeup of the workforce have been the primary impetus for the increased focus on work and family issues. Competing demands, which arise between work and family roles, often result in conflict for employees. The purpose of the current study was to explore the effect of gender and family structure on Work-Family conflict and Family-Work conflict. The study was an exposed factorial design and the data was collected from 50 married employees with at least one child and one year of experience (25 male and 25 female) from an Indian private organisation in Noida (name withheld), using a mixed method. A purposive convenient sampling technique of non-probability sampling was taken. The Qualitative tool used is Work and Family Conflict Scale (WAFCS), developed by Divna Haslam, Ania Filus, Alina M., Matthew R., Renee Fletcher in 2014. This data was supplemented by a semi-structured interview from a senior official from the organisation. For assessing the data, t-test was used and no significant level of differences in WFC (1.388) and FWC (.281) between the two genders were found (t critical at  $p=0.05=+-1.676$ ). Also, no significant level of differences in WFC (1.103) and FWC (1.472) between the two family structures were found (t critical at  $p=0.05=+-1.676$ ). Results hence show that, there are no significant differences either in between the genders or the family structures on WFC and FWC.

## Introduction

Due to the entry of more married women with children into the workforce, the topic of how families balance their work and family lives has been an interesting subject of research. The influx of women into the workplace has led to a growing recognition that work and family are not completely separate spheres of life (Piotrkowski, 1979; Rapoport & Rapoport, 1971).

Previous research on work and family often examine the link of success or failure to the individual's' psychological well-being (Frone, Russell, & Barnes, 1996; Riemann, Berger, and Voderholzer, 2001), physical health (Adams & Jex 1999; Grzywacz, 2000), sleep quality (Williams et al., 2006), quality of life (Kofodimos, 1993), as well as family and work

satisfaction levels (Frone, Yardley, & Markey, 1997; Greenhaus & Parasuraman, 1999). Hence, understanding the relationship between work and family has been the focus of a lot of research.

In recent years, research into the links between these two domains has grown tremendously because of the changes in the demographic composition of the workforce (Edwards & Rothbard, 2000; Greenhaus & Parasuraman, 1999; Lambert, 1990). It is evident that work lives can either enhance or detract from family lives. In the same manner, family lives can have positive or negative influences on work attitudes, behaviors, and outcomes.

Work-Family Conflict defined:

Historically work–family conflict was defined as the extent to which functioning in one domain (e.g., work) negatively impacted the other. Subsequent research has established that there are two components of work–family conflict that have different antecedents and consequences and can be conceptualised as separate but related constructs. These are family-to-work conflict (FWC) (i.e. family engagement negatively impacting work) and work-to-family conflict (WFC) (i.e. work negatively impacting family). Many researchers have distinguished between work-interference-with-family (WIF or WFC) and family-interference-with-work (FIW or FWC) (e.g., Gutek, Searle & Klepa, 1991). WIF occurs when work related activities interfere with the home domain, for e.g. changing plans with family members because of the job or not being able to spend time with the family due to job demands. FIW is said to arise when family or home responsibilities interfere with the work domain, for e.g. spending time at the job making arrangements for family members, or feeling tired on the job due to family demands.

Greenhaus and Beutell (1985) defined work-family conflict as a form of interrole conflict in which the role pressures from the work and family spheres are mutually incompatible. Greenhaus, J. H., & Powell, G. N. (2006) defines work-family conflict in the form of conflicts based on time, strain and behavior i.e., an individual strives to reduce incompatibility between work and family roles by effectively managing time requirements, dealing with pressures and strains and performing required behavior roles. Therefore, work-family conflict refers to the spillover of problems, strains and pressures from one role to another and making it difficult for an individual to accomplish goals and maintain a healthy lifestyle.

### Theoretical Perspective:

In order to understand the reasons for work-family conflict, many researchers have put forward explanatory theories of it. It is important to hence look at the relevant theories.

### Interrole conflict:

The conceptual approach taken in the present research is based on the premise that WFC and FWC are distinct but related forms of interrole conflict (Greenhaus & Beutell, 1985; Kahn, 1981; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Pleck et al., 1980). Interrole conflict has been viewed as a form of conflict in which "role pressures associated with membership in one organization are in conflict with pressures stemming from membership in other groups" (Kahn et al., 1964, p. 20). From work-family and family-work perspectives, this type of conflict reflects the degree to which role responsibilities from the work and family domains are incompatible, that is, "participation in the work (family) role is made more difficult by virtue of participation in the family (work) role" (Greenhaus & Beutell, 1985, p. 77).

### Pleck's Model of the work family role system:

In 1977, Joseph Pleck published a seminal article on the 'work-family role system' that depicts the couple as a system, in which each partner has a family role and a work role. Pleck's (1977) model proposed within-person relationships (e.g., between men's work role and men's family role) and across-person relationships (e.e., between women's family role and men's family role) that illustrated the interdependencies between work and family domains. Pleck's observations regarding asymmetrically permeable boundaries for men (work intrudes on family) and women (family intrudes on work) were important insights for scholars who adopted a work-family conflict perspective.

### Gender Role Theory:

According to gender role theory, women are more likely to see the family role as part of their social identity than men do (Bem, 1993; Gutek, Searle, & Klepa, 1991). Moreover, as women's roles in the workplace have increased, the expectations placed upon them in the family role have not diminished (Hochschild, 1997). Thus, according to Lazarus (1991) when work impinges on family demands (WIF), women are more likely than men to develop a negative attitude toward

the work because the job is more likely to be viewed as threatening a central social role. Men on the other hand, are unlikely to use this information to form work attitudes, because they are less likely to experience a threat to self if the job interferes with family time.

Zedeck's Spillover theory:

A work-family substantive theory called spillover theory was proposed by Zedeck (1992), among others. A strong work-family mesosystem is proposed and assumes that the work microsystem and the family microsystem significantly influence one another through a permeable boundary (Bromet, Dew & Parkinson, 1990). Spillover from work to family affects the family by impairing both individual and family functioning.

In addition, recent research in this area explicitly recognized that relationships between work and family are bidirectional (Frone, Russell, & Cooper, 1992a; Gutek, Searle, & Klepa, 1991; Kanter, 1977). The growing body of occupational stress research regarding the relationship between work and family has suggested that there are interconnecting and possibly reciprocal influences between these two domains (Greenhaus & Parasuraman, 1987; Kanter, 1977).

WFC and FWC in the Indian Context:

Repeatedly, studies have indicated that Indian women tend to be more involved with family roles and Indian men with work roles. (Aryee et al. 2005; Bharat 2003; Larson et al. 2001; Rajadhyaksha and Bhatnagar 2000).

In 1991 economic liberalization and reform of the Indian economic policies resulted in Indian businesses becoming connected to the global economy; consequently, there was an economic boom. With increased employment opportunities, more and more women are entering the workforce in large numbers (Department of Women and Child Development, Government of India, 2007). This increased labor force participation outside the home among women led to dual-earner/career families trying to balance their work and family responsibilities.

Traditionally, the labor force participation of women in the paid workforce has remained low in India and the gender ideology and norms followed very rigid traditional norms with the male as the principal provider and the female as the principal caregiver in the family. India's gender and

class inequities are also well-known in the global arena (Kristoff and WuDunn 2009). India in general presents a culture of contrasts and contradictions typical of a transitional economy (Musselman 2008). With the advent of women into the paid workforce, families have to adjust to the fact that they no longer have a female caregiver at home to take care of the household and caregiving responsibilities. When individuals are not able to manage the demands of their work and family life, they experience work-family conflict.

The entry of women at the workplace is not accompanied with a simultaneous shift in the social division of labour. The sex role ideology emphasizing upon the separate spheres of activity for men and women still exerts considerable influence on the public psyche. Even most of the dual earner wives continue to view themselves primarily as homemakers, and their work status did little to alter their sex role orientation (Rajadhyakasha and Smita, 2004, p 1677). Again, since the tasks done by women at home for the nurturing of family have been of great significance, their under fulfilment may lead to further problems in the society. The problems have burgeoned with the coming of the MNC culture of work characterized by long working hours, deadlines, competition, lesser holidays, negligible number of leaves, frequent tours, job transfers, increasing work pressure and so on. This has further posed challenge to the marital quality of the dual-earner couples; sometimes even threatening the sustenance of a happy marriage.

Traditionally, families in India, especially Hindu families, have been joint or extended in composition, although nuclear families are becoming more common in urban areas (Roy, 2000). Hughes and associates showed that non-specific job/family incompatibility decreased marital companionship and increased marital tension (Hughes, Galinsky & Morris, 1992).

India's rising importance as a potential economic force in the years to come (The Path to 2050, Global Economics Paper, 2003), and the presence of an active women's movement within a traditionally gender inequalitarian culture, has created interesting cross-currents of progress and apathy in the country (Krishnaraj, 2003).

Support for work-family conflict within the Indian context comes primarily from non-institutional sources that include family members such as spouse, parents and parents-in-law, paid help, friends and neighbours. The nature of this support tends to be informal, ad hoc, contingent and bound in a web of reciprocal relationships of dependence and counter-dependence. There is low institutional and organizational support for balancing work and family within the Indian context. Institutional support takes the form of governmental policies that are

progressive on paper (e.g. Child care at work) but poorly implemented by organizations that often circumvent the law (Rajadhyaksha).

#### Rationale:

Work-life conflicts are positively related to outcomes such as job dissatisfaction, job burnout, job tension, job role conflict, job role ambiguity and turnover (Burke, 1988; Frone et al., 1992; Greenhaus, 1988; Pleck, Staines, & Lang, 1980; Bedeian et al., 1988; Frone et al., 1992; Maslach & Jackson, 1981), as well as to outcomes related to psychological distress (e.g., depression), and life and marital dissatisfaction (Greenhaus & Beutell, 1985; Gutek, Searle, & Klepa, 1991; Voydanoff, 1988). Research suggests there is an inverse relationship between organizational commitment and WFC and FWC (O'Driscoll et al., 1992; Greenhaus & Beutell, 1985) and between job satisfaction and WFC and FWC (Frone et al., 1992; Rice et al., 1992).

For the variables of life satisfaction, relationship satisfaction, and relationship agreement, inverse relationships with FWC and WFC have been suggested (Judge et al., 1994; Parasuraman et al., 1989). Both WFC and FWC are related to negative physical symptoms and depression (Burke, 1988; Frone et al., 1992; Kemery, Mossholder, & Bedeian, 1987).

To conclude, increased work-family conflict has been found to be associated with (1) Poor health outcomes such as increased depressive symptoms and decreased physical health (2) Reduced levels of reported life satisfaction and marital satisfaction and (3) Compromised work-related outcomes such as lower job satisfaction and less commitment to the employer. Excessive work-family conflict, therefore, presents challenges for employees, their families, employers, and for society as a whole (MacDermid 2005).

However, the concept of work/life conflict and work/family conflict were developed in the West and has been studied quite vigorously in Western countries (Greenhaus, and Beutell, 1985; Frone, 2000; Frone et al, 1997; Thomas and Ganster, 1995, Higgins, and Duxbury, 2001; Kossek and Ozeki, 1998; Gutek, Searle, and Klepa, 1992). However, there is a notable lack of information on the concept in Eastern countries (Wesley and Muthuswamy, 2005) and whatever studies have been undertaken in the area of work/life balance and work/life conflict in India, are characterised by a glaring and distinct lack of focus (Rajadhyaksha and Smita, 2004). Hence, it is only imperative that we study gender differences in the Indian context in order to find out if the work-life conflict is experienced differently by both the genders. A revision in the policies of Indian organisations can be recommended, if significant difference are found.

## Review of Literature

### Research on Gender:

Fredriksen-Goldsen and Schlarlach (2001) found that even when familial responsibilities are somewhat balanced, women still tend to take a more active role as caregivers. Consequently, it has been argued that women are most at risk for work and family conflict (Covin and Brush, 1991; Friedman and Greenhaus, 2000). Research on gender differences in WFC and FWC has produced different results. Most of the older researches on this topic found gender differences to be existing in WFC and FWC, for example;

Some studies have found that men experience more WF conflict than women (e.g. Duxbury & Higgins, 1991; Yang, Chen, Choi & Zhou, 2000), while others have found the opposite to be true, i.e. women experience more WF conflict than men (e.g. Carlson, et al., 2000).

Some studies found results that supported Pleck's model of role system where women reported more WFC than men (e.g. Duxbury et al., 1994; Cinamon and Rich, 2002 and Lee, Vernon-Feagans, Vazquez, and Kolak, 2003) and that men experienced higher FWC conflict than women (Boyar, Maertz Jr., & Pearson, 2005); while a few studies found the exact opposite: women experienced greater levels of FWC (Behson, 2002; Frone, Russell, & Barnes, 1996; Bruck, Allen, & Spector, 2002; Fu and Shaffer, 2001), but men experienced greater levels of WFC (e.g. Fu and Shaffer, 2001).

Milkie (1999) pointed out that family duty hampers females participating work more, and that females are easier to get work stress and family stress and more difficult to balance work and family as well, and therefore, more likely to experience FWC. This might be a reason that some studies found that women experienced more WFC than men, even when working identical hours (e.g. Gutek et al., 1991).

The researches not only found out the gender differences of FWC, but also observed WFC from gender's perspective. Gutek discovered that the WFC phenomenon brought by time conflict is quite common. Although males and females spend the same time on their work, females' WFC is more obvious than males', probably because females focus more on family. Longtime work and fulfilling family duty enable females feel stronger WFC (Simon, R. W., 1995).

However, more recent researches seem to indicate that there are no significant gender differences in WFC and FWC, for example;

A meta-analysis of 61 published studies has found that there were no overall mean gender differences in either WFC or FWC (Byron, 2005). Many other researchers have also discovered that men and women do not differ on their levels of work-family conflict. (Simon, Kummerling, & Hasselhorn, 2004; Aryee, Srinivas, & Tan, 2005; Kinnunen, Geurts, & Mauno, 2004; Carnicer, Sanches, Perez, & Jimenez, 2004; Hammer, Saksvik, Nytro, Torvatn, & Bayazit's, 2004; McElwain et al., 2005, Korabik, et al., 2008).

Even in India, in the case of managerial and professional dual career couples who are presumably matched in terms of their career involvement, no significant difference in levels of overall work-family conflict have been found, though there are differences in the sources and the kinds of work-family conflict experienced by men and women (Rajadhyaksha, 2001).

Although there are many debates, one major view that is widely accepted is that, it is not gender per se, but the gender role that people hold is working. The effects of gender role, including gender identification and gender role attitude, are significantly embodied on the faith of work and family (Matsui, T. et al, 1999), work after birth of baby, and so on. The research also found out that females are always the main undertakers of childcare and housework no matter they work or not (Lundberg, U., & Frankenhaeuser, M., 1999). Moreover, females are more likely to encounter interruptive career than males (Kirchmeyer, C., 1998). All these points represent the influences of consciousness of gender role, which in turn in some ways affects WFC & FWC.

#### Family Structure:

The family structure is said to affect the work-family and the family-work conflict, especially in collectivistic countries like India. Employees balance work and family roles together. Irrespective of their position in organizations, married employees with children usually are bestowed with higher level of responsibilities. Larwood and Wood (1977) believe that spending quality time imposes a tighter schedule on the personal lives of executive employees.

Since there are large numbers of people in a joint family, it becomes very difficult for a working individual from a joint family to maintain the balance between work and family than that of a working individual from a nuclear family where there are less number of living individuals. More members in a family means more responsibility, but it also means more social support in things like taking care of an adolescent, etc. This research hasn't been studied much, but a few Indian researchers found that Work family conflict was more among those living with Joint family than those living in Nuclear family (Dr. R. Sembien, 2016).

However, other researches resulted in family status having found to have no influence on work-life balance as there is no significant difference in the work-life balance of respondents belonging to joint family and nuclear family. (Chitra Devi and Preethi Sheshadri, 2016).

This finding was also in line with other researches which also found no significant difference regarding Work-Family conflict and Family-Work conflict between Joint and Nuclear Family (Revati C Deshpande, Dr. R.K. Balyan, 2014).

Overall, researchers are recognizing that work-family conflict is a complex, multi-dimensional construct. Work-family conflict is conceptualized as a construct with dual direction (work-to-family and family-to-work), multiple forms (time-based, strain-based, and behavior-based) and specific to multiple life roles (e.g., spouse, parental, elder care, home care, and leisure).

## **Methodology**

### **Objective:**

1. To explore the effect of gender on Work-Family conflict and Family-Work conflict.
2. To explore the effect of family structure on Work-Family conflict and Family-Work conflict.

### **Hypothesis:**

Given that the Indian context is characterized by high gender in egalitarianism (Chhokar, et al., 2007) and there are strong forces within the family (Kakar, 1978) and outside within the nation (Banerjee, 2005) that act to prescribe and maintain traditional gender roles for men and women, we hypothesize that:

1. a. Females will experience more Work-Family conflict.
- b. Females will experience more Family-Work conflict.
2. a. Employees living in a nuclear family will experience more Work-Family conflict.
- b. Employees living in a joint family will experience more Family-Work conflict.

### **Design:**

The current research is an exposed factorial design where in the researchers did not manipulate any variables. The data collection followed a mixed method.

Work and Family Conflict Scale (WAFCS) developed by Divna Haslam, Ania Filus, Alina M.,

Matthew R., Renee Fletcher in 2014 was administered on 50 employees from an Indian based private company (name withheld). A semi-structured interview was also conducted on a senior official from the organisation to understand the organisation's policies and working.

A pilot study was conducted to assess misinterpretation of the items of the questionnaire by the Indian population and no such misinterpretations were found.

Independent samples 't' test was used for statistical analysis. For each of the genders, Work-Family and Family-Work scores were assessed to see whether there was any significant difference between the gender scores.

Bivariate Correlation was also used for analysis. The correlation (one or two tail- to finalize) was done between the joint and nuclear family structures to analyse the correlation between WFC & FWC score. Bivariate Correlation was also done to see the overall correlation between WFC & FWC scores.

A semi-structured interview was also conducted on a senior official of the organisation to understand the company's policies and perceptions concerning gender in the workplace.

Sample:

The sample used in the current research is that of married males and females having at least one child, from the office of an Indian private company in Noida, who requested their name to remain confidential.

The total sample size was that of 50 employees consisting of 25 male parent employees and 25 female parent employees. No employee who had worked for less than a period of one year in the organisation was considered. For males, the mean age and the mean work experience is 41.76 years and 7.02 years and for females the mean age and mean work experience is 35.4 years and 8.012 years. The sample consisted of 24 employees from a joint family structure and 26 employees from a nuclear family structure.

A purposive, convenient sampling technique of non-probability sampling was used.

Inclusion criteria: Married Male and Female parents with at least one child.

Exclusion criteria: Employees with less than one year of experience in the organisation.

**TABLE A- Demographic profile of the respondents- Representing the mean of the age, work experience and working hours:**

| VARIABLES       | FEMALE (mean) | MALE (mean) |
|-----------------|---------------|-------------|
| AGE             | 35.4 years    | 41.76 years |
| WORK EXPERIENCE | 8.012 years   | 9.02 years  |
| WORKING HOURS   | 8.5 hours     | 8.5 hours   |
| AGE OF KIDS     | TOTAL MEAN:   | 11.36       |

Variables:

**Work-Family Conflict:** Work-family conflict has been defined as a form of inter-role conflict in which the role pressures from work and family domains are mutually incompatible (Greenhaus and Beutell, 1984). This definition implies a bidirectional relation. Work-family conflict (WFC) occurs when work related demands interfere with home responsibilities and Family-work conflict (FWC) arises when family responsibilities impede work activities.

**Gender:** It refers to the “distinctive culturally created qualities of men and women apart from their biological differences” ( Brandser, 1996).Gender is the range of characteristics pertaining to, and differentiating between, masculinity and femininity. Depending on the context, these characteristics may include biological sex (i.e. the state of being male, female or an intersex variation which may complicate sex assignment), sex-based social structures (including gender roles and other social roles), or gender identity.

**Family:** The family is an intimate domestic group made up of people related to one another by bonds of blood, sexual mating, or legal ties. It has been a very resilient social unit that has survived and adapted through time (Oxford University Press 1998).

**Nuclear Family:** Duncan Mitchell has defined nuclear family as ‘A small group composed of husband and wife and immature children which constitutes a unit apart from the rest of the community.” In simple words a nuclear family is one which consists of the husband wife and their unmarried children.

**Joint Family:** A consanguineal family unit that includes two or more generations of kindred related through either the paternal or maternal line who maintain a common residence and are subject to common social, economic, and religious regulations.

Tools:

Quantitative Tools-

Although a conceptual distinction between work conflicting with the family and family conflicting with work has been made, most research has assessed only work-family conflict (WFC). Also, recent research in this area explicitly recognized that relationships between work and family are bidirectional. That is, work can interfere with family, and family can interfere with work (Frone, Russell, & Cooper, 1992a; Gutek, Searle, & Klepa, 1991; Kanter, 1977).

In the current study, the researchers hence, decided upon a questionnaire developed by Divna Haslam, Ania Filus, Alina M., Matthew R., Renee Fletcher in 2014, that measured both WFC and FWC in the same scale.

The measure- The Work–Family Conflict Scale (WAFCS) which is a short 10-item measure assessing WFC (five items) and FWC (five items).

Description of the measure- The scale has 10 items which are to be rated on a point 7 likert scale; 1 being very strongly disagree and 7 being very strongly agree. Sample items include: “My work prevents me spending sufficient quality time with my family” (Work-to-family subscale) and “My family has a negative impact on my day to day work duties” (Family-to-work subscale). For each subscale items are summed to provide the total WFC score (range 7–35) and FWC score (range 7–35) with higher scores indicating higher levels of conflict.

The measure was also found to be general enough to be used across a variety of occupational types and across a range of family environments, and one that did not require sophisticated reading and comprehension skills.

Summating, the measure was found to have the following strengths:

- It is brief, easy to administer, score and interpret.
- It covers both facets of work–family conflict and assesses potential time-based, strain-based and behaviour-based aspects of conflict under each domain (WFC and FWC) as Greenhaus

and Beutell (1964) suggested.

- It is change sensitive, and
- It has adequate psychometric properties including reliability, face validity, and construct, concurrent and predictive validity.

#### Concurrent Validity-

As expected, the WFC subscale correlated highly with the Frone's subscale measuring WFC ( $r = .82, p \leq .001$ ) and lower with the Frone's subscale measuring FWC ( $r = .62, p \leq .001$ ). Further, the FWC subscale correlated highly with the Frone's subscale measuring FWC ( $r = .73, p \leq .001$ ) and much lower with the Frone's subscale measuring WFC ( $r = .35, p \leq .001$ ).

#### Convergent and Discriminant Validity-

The AVE estimates for both subscales exceeded the cut-off value of .50 (.60 and .56 for WFC and FWC subscales, respectively).

#### Reliability-

The coefficients H for both subscales of WAFCS were well above the cut-off value of .70 (.91 and .91 for the WFC and FWC subscales, respectively), indicating very good internal consistency of the measure.

#### Qualitative Tools-

A semi-structured interview framed by the researchers was used in the current study. The questions focused on getting a deeper understanding about the organisation's policies, the gender differences perceived by the organisation with regard to work-life, and the interventions provided by the company to maintain a healthy work-life balance.

#### Procedure:

The participants were debriefed about the study. The informed consent was taken from all the participants and they were explained about their right to withdraw and their right to confidentiality. The researchers assisted the participants wherever necessary and thanked them for their co-operation at the completion of the filling of the questionnaire.

With the permission of the officials, a semi-structured interview was conducted on a senior official suggested by the employees of the organisation. Since the officials were hesitant to have

the interview recorded, live notes were made by the researchers which were later typed into proper notes.

**Results And Data Analysis**

The results are presented below:

**TABLE 1- Means and standard deviations (gender comparison)**

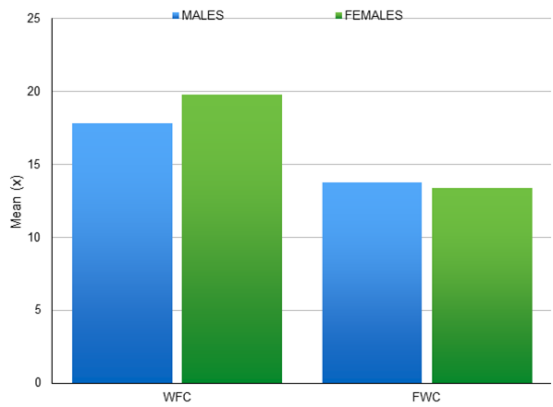
| SUB-SCALE | GENDER | N  | MEAN    | STANDARD<br>DEVIATION | STANDARD<br>ERROR MEAN |
|-----------|--------|----|---------|-----------------------|------------------------|
| WFC       | FEMALE | 25 | 19.7600 | 3.76696               | .75339                 |
|           | MALE   | 25 | 17.8400 | 5.80000               | 1.16000                |
| FWC       | FEMALE | 25 | 13.4000 | 4.35890               | .87178                 |
|           | MALE   | 25 | 13.7600 | 4.70177               | .94035                 |

Table 1 reveals that the mean of the Work Family Conflict Subscale for females is 19.76 and for males is 17.84. This shows that in comparison, the mean of the female sample is slightly higher than the male sample. Though the difference is not much, it is still in the expected direction as hypothesised. Hence, it can be said that females slightly experience more WFC than their male colleagues.

Table 1 also reveals that the mean of the Family Work Conflict Scale for female sample is 13.4 and for male is 13.76 which is almost the same. Both the means are not much different and hence, it can be said that males and females experience FWC at similar levels. There are no gender differences perceived in this variable as such.

As evident from Graph 1, an analysis by gender revealed that female employees experienced greater work-to-family than their male colleagues. However, both female employees and male employees experienced family-to-work conflict in intensities that do not differ significantly.

**GRAPH 1- Graphical representation of the mean of females and males in WFC and FWC subscales.**



**TABLE 2- INDEPENDENT T TEST (gender comparison)**

| SUB-SCALE | t     | df | Sig.(2 tailed) |
|-----------|-------|----|----------------|
| WFC       | 1.388 | 48 | .172*          |
| FWC       | .281  | 48 | .780*          |

\*t critical at p=.05=1.676

An independent t test analysis revealed that the scores on both WFC and FWC differ in intensities that do not differ significantly. The t values for the two domains, WFC and FWC between the two genders is 1.388 and 0.281 respectively. For the df, 48; the scores are significant at 1.676. It is analysed from Table 2 that the p values are less than 1.676. The p values of WFC and FWC are 0.172 and 0.780 respectively, revealing that there are no significant differences in both the variables (WFC and FWC) between the male and the female employees.

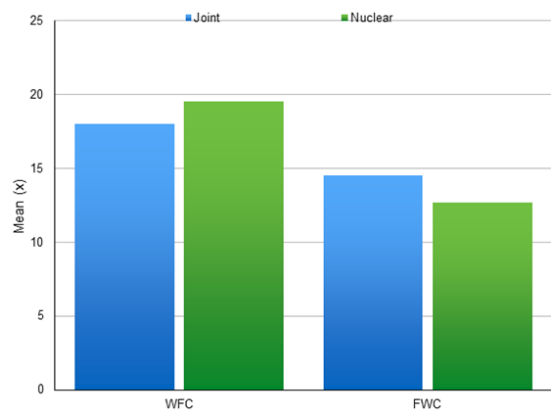
**TABLE 3- Sample size, means and standard deviations (family structure comparison)**

| SUB-SCALE | FAMILY STRUCTURE | N  | MEAN    | STANDARD DEVIATION | STANDARD ERROR MEAN |
|-----------|------------------|----|---------|--------------------|---------------------|
| WFC       | JOINT            | 24 | 18.00   | 4.46240            | .91088              |
|           | NUCLEAR          | 26 | 19.538  | 5.31587            | 1.04253             |
| FWC       | JOINT            | 24 | 14.5417 | 4.09644            | .83618              |
|           | NUCLEAR          | 26 | 12.6923 | 4.73091            | .92781              |

Table 3 reveals that the mean of Work-Family Conflict for the employees from a joint family is 18.00 and from a nuclear family is 19.538. This shows that, in comparison, the mean of the sample belonging to a nuclear family is slightly higher than the mean of the sample belonging to a joint family. Though the difference is not much, it is still in the expected direction as hypothesised. Hence, it can be said that employees belonging to a nuclear family slightly experience more WFC than those belonging to a joint family.

Table 3 also reveals that the mean of the Family Work Conflict Scale for the employees from joint family is 14.541 and from nuclear family is 12.692 indicating that the mean of the sample belonging to joint families is slightly higher than the mean of the sample belonging to nuclear families. Though the difference is not much, it is still in the expected direction as hypothesised. Hence, it can be said that employees belonging to joint families slightly experience more FWC than those belonging to nuclear families.

**GRAPH 2- Graphical representation of the mean of joint and nuclear family structure in WFC and FWC subscales.**



As evident from Graph 2, an analysis by family structure revealed that employees belonging to nuclear families experienced greater work-to-family than those belonging to joint families. Also, employees belonging to joint families experienced greater family-to-work than those belonging to nuclear families experienced family-to-work conflict.

**Table 4- Independent T Test (Family Structure Comparison)**

| SUB-SCALE | t     | df | Sig.(2 tailed) |
|-----------|-------|----|----------------|
| WFC       | 1.103 | 48 | .275           |
| FWC       | 1.472 | 48 | .148           |

\*t critical at p=.05=1.676

An independent t test analysis revealed that the scores on both WFC and FWC differ in intensities that do not differ significantly. The t values for the two domains WFC and FWC between the two-family structures are 1.103 and 1.472 respectively. For the df, 48; the scores are significant at 1.676. It is analysed from Table 3 that the p values are less than 1.676. The p values of WFC and FWC are 0.275 and 0.148 respectively, revealing that there are no significant differences in both the variables (WFC and FWC) between the employees belonging to a joint family and the employees belonging to a nuclear family.

**TABLE 5- Bivariate Correlation between WFC and FWC of the Questionnaire**

| Correlations |                     |       |       |
|--------------|---------------------|-------|-------|
|              |                     | WFC   | FWC   |
| WFC          | Pearson Correlation | 1     | .232  |
|              | Sig. (2-tailed)     |       | .105* |
|              | N                   | 50    | 50    |
| FWC          | Pearson Correlation | .232  | 1     |
|              | Sig. (2-tailed)     | .105* |       |
|              | N                   | 50    | 50    |
| * p<.05      |                     |       |       |

Table 5 implies that the two domains of work-life (WFC and FWC) show a weak to moderate positive correlation (0.232), however not at a significant level since .105 is greater than .05. A work-family substantive theory called spillover theory proposed by Zedeck (1992) also explains the correlation between WFC and FWC. In this theory, a strong work-family mesosystem is proposed and assumes that the work microsystem and the family microsystem significantly influence one another through a permeable boundary (Bromet, Dew & Parkinson, 1990).

**Qualitative Analysis**

The qualitative analysis was based on a semi-structured interview which consisted of questions which were framed according to the need and the knowledge of the researchers. The questions focused on getting a deeper understanding about the company’s policies, the gender differences

perceived by the company with regard to work-life, and the interventions provided by the company to maintain a healthy work-life balance.

The analysis of the interview indicated that the company does believe in a healthy balance between work and family. They had employee friendly policies and tried not to discriminate any employee based on gender. The company's leave policies and the working hours are gender neutral. Their office is shut by 6pm and no employee is allowed to stay back after that and no employee will be contacted on official purposes after the office hours. A transport service is provided by the company to all their employees. All the employees are treated with respect and dignity from all departments. A priority is given to females in regard to safety; for example, letting them catch the first bus from office. The company prioritises the safety of their employees, especially female employees and does not compromise on this issue at any cost. They conduct training programmes for the employees and provide enough opportunities for career and self-development.

However, the company lagged behind in implementing recent developments like child care at workplace, flexi time, work from home, etc. Though the flexi time policy wasn't implemented in the conventional way, the employees were given the flexibility to come and leave the office according to the necessity. Overall, the organisation culture seemed gender neutral and employee friendly.

## **Discussion**

The results showed that:

- There are no significant differences in both the variables (WFC and FWC) between the male and the female employees.
- That there are no significant differences in both the variables (WFC and FWC) between the employees belonging to a joint family and the employees belonging to a nuclear family.

## **Hypothesis 1**

As evident from Table 2, an independent t test analysis revealed that the scores on both WFC and FWC for both male and female employees differ in intensities that do not differ significantly.

The sample of the current study is based on a metropolitan city (Noida), where the cost of living

Women are now becoming more career oriented and evidences of breaking the glass ceiling barriers are prominent in the current scenario. Budhwar, Saini & Bhatnagar (2005) noticed that the rise in literacy levels and better position of women due to economic and social development has been becoming much better.

With the society becoming more egalitarian in today's time, there is an emergence of shift in the gender ideology, where it is no longer believed that the household responsibilities are only bestowed upon the females, but that the males are also responsible for the same. Also, in the current city life, almost every household employs domestic help, especially in households where there is a working woman. This way the household responsibility doesn't entirely fall upon the females, helping them maintain a healthy balance between work and family.

Seeing the huge changes in the demographic composition of the workforce (Edwards & Rothbard, 2000; Greenhaus & Parasuraman, 1999; Lambert, 1990) because of the entry of more married women with children into the workforce, the government and company policies are under constant process of amendments, which benefits the employees (especially targeted for female employees) on all levels. The policies are also shifting towards the idea of Gender Egalitarianism, which is the degree to which an organization or a society minimizes gender role differences while promoting gender equality (House and Javidan, 2004).

In addition, in response to increased emphasis on work and family issues, several companies have instituted policies aimed at facilitating employees' combining paid employment and household labour. Most prominent among these policies include legally protected family leaves such as maternity leave, parental leave and sick leave; family tax and cash benefits; and childcare services (Lewis, 2009).

Flexibility in the timing (flextime) is one such characteristic that is repeatedly seen as a way to achieve balance in work and family life in this challenging environment (Hill et.al., 2001; Christensen & Staines, 1990; Galinsky, 1992; Galinsky & Johnson, 1998; Zedeck, 1992). Flextime is broadly defined as the ability to rearrange one's work hours within certain guidelines offered by the company, directed towards a better balancing at the level of work-family interface. The individual, the society and the workplace- all have much to gain from flexibility. Flexibility in family processes diminishes potential family stresses, while flexibility in work processes helps manage contemporary stresses situated at the work-family interface.

During the interview with a senior official from the organisation, it was told to the researchers

that flexitime in their organisation is not implemented in the conventional way, however, the employees had the flexibility to come and leave the office space accordingly when and where the necessity arises.

Several studies indicating that the individual and family have a lot to gain from flexibility, the possible benefits including less marital conflict, better monitoring of children, increased period of breastfeeding after the birth of an infant, less depression, and so forth (see Beatty, 1996; Bumpus et al., 1999; Crouter et al., 1999; Lindberg, 1996).

One of the inclusive criteria of the sample was to have at least one child. Childcare responsibility is usually measured by number of children in a family. Grandey et al (1999) achieved a research result indicated that the correlation of the number of children to FWC is high to 0.45. Besides the number of children, age of children is another factor that needs to be focused on. The younger a child is, the more he or she is dependent on parents. Pre-school children need their parents to pay much more time and efforts. Infants and preschool children have the highest requirements of time and energy of their parents (Bedeian, A.G. et al, 1988). Definitely speaking, parents with 0-10-year-old children have highest FWC. While, when children grow up to 11-18 years old, the FWC experienced by a mother both decrease obviously. However, in recent years, more and more studies demonstrate that FWC interfere not only females' but also males' (Eagle, B. W. et al, 1997). In the present research, the mean age of the kids was 11.36. This is in line with the studies quoted above that as the children grow, the FWC experienced by the mothers decreases and also that there are no significant gender differences arising from child care responsibility, as both females and males experience FWC to the same extent.

All the employees of the company have their total working hours centered around 8 to 8.5 hours, daily. Numerous studies have shown the negative relationship and impact of total working hours on work-family conflict (Frone et al.1997, Judge Boudreau and Brets, 1994). The total working hours affect both male and female employees in the context of work-family conflict. And since in this company, both males and females work for the same number of hours, this in turn results in no gender difference in the conflict experienced by them.

Another reason for the not-so-significant results can be that in response to the conflict generated among the multiple roles that individuals occupy, organizations are increasingly pressured to design various kinds of practices, intended to facilitate employees' efforts to fulfill both their

employment- related and their personal commitments (Frone, 2003).

In our present study, the company had a strict rule wrapping up work by 5.30pm and leaving the office by 6pm, after which no one is allowed to stay. The interviewers were also told that the employees are not contacted on official purposes after the office hours.

Research has found similar results. In a study, (Bretz, R.D. and Judge, T.A., 1994) it was found that the more the organizations provided comprehensive policies to accommodate work and family issues, the less work-family conflict was experienced by these employees. Hence, with the emergence of all such employee friendly practices and a gender-neutral workplace, the results being not significant becomes vivid.

Along with other explanations, it is possible that since this was a sample of working women, their gender identity was not as strongly traditional as can be expected from non-working women in India (Ujvala Arun Rajadhyaksha and Sofiya Velgach, 2009). Hence the interference of work to family reported by them was not significantly different from that reported by men in the sample. Working women may be embracing egalitarian attitudes more enthusiastically than working men, as the payoff of having such an attitude appears to be lower levels of WF conflict. (Ujvala Arun Rajadhyaksha and Sofiya Velgach, 2009).

Another possible explanation for the relatively low scores on FWC (13.4 and 13.76 are the means of female and male employees respectively) than on WFC (19.76 and 17.84 are the means of female and male employees respectively) is that India being collectivistic in nature, tends to not attribute family as a disruption in their work life, and even if it does, they tend to manage it themselves without accepting family as one of the causal factor.

The individualism-collectivism dimension has been applied to explain how work and family relationships are constructed in different contexts. Schein (1984) posits that there are variations in the extent to which individuals in different cultures separate work from family life. Segmentation between work and family roles is considered most common in individualistic societies, whereas integration of work and family life is most typical among collectivists (Schein, 1984). Ashforth et al. (2000) argued that role segmentation decreases blurring between roles, making transitions between domains more difficult, whereas role integration increases blurring between roles and thus eases between-role transition. Yang (2005) found that work and family roles are viewed as compatible in collectivistic cultures, and this could be one of the reasons why there were relatively less scores on FWC as compared to WFC.

To conclude, the gender differences did not exist according to the results from the current study. Recent studies have confirmed the same finding that there was no gender difference in work-life conflict (e.g. McElwain et al., 2005, Korabik, et al., 2008). Also, in regard to WFC, the results in accordance to those reported by Hammer, Cullen, Neal, Sinclair, and Shafiro (2005). However, the results of this present study that women and men did not differ in the extent of FWC they experienced. In other words, for both females and their male colleagues, the demands created by their families did not interfere with their job-related responsibilities. The lower level of FWC could be due to the lack of permeability of the work boundary since work domain is more formal and therefore is bound by more formal rules than the family domain, resulting in less tendencies for family to interfere with work. The non-significant difference in gender with regard to FWC in this study could be due to the similar emphases given by both women and men in maintaining the work boundary (Aminah Ahmad, Zoharah Omar, 2008).

## **Hypothesis 2**

Looking at Table 4, we infer that the p values of WFC and FWC reveal that there are no significant differences in both the variables (WFC and FWC) between the employees belonging to a joint family and the employees belonging to a nuclear family.

The role of the extended family can play an important role in helping women deal with the tasks of looking after their family, children and work. Children need care and attention which varies according to their age. Very young children may need more care and attention than older children. Supervision and care of children may interfere with the time a mother can spend on employment. The presence of children can complicate the process of balancing work and family demands. In addition to the organization of child care and after school activities, children become ill and parental time and energy are needed for ordinary daily nurturing and support (Glezer & Wolcott, 1999). Extended families can provide a support system whereby some of the responsibilities can be shared by other members of the family. Otherwise too, domestic help is hired according to the need.

However, with the changing times, there's an emerging concept of a modern family, where there is not just one working man or woman but almost all the adults in the family are working. The elderly members of the family look after the children in the family and hence, household in joint families are no more a bigger responsibility for the working members. The boundaries between the traditional joint and nuclear families are now not so clear with the concept of a modern family; especially in the metropolitan cities and hence, can be a possible explanation for the differences between the two-family structure not being significant.

Domestic help is employed in both joint and nuclear families, the number which is in accordance with the need. Division of labour, division of events/functions to be attended, etc are also done between all the family members, hence reducing the responsibility on just a few members. In other words, all these probable reasons bring down both the family structures to the same point. Help is provided, either by the elderly retired people of the family or by the hiring of domestic help. Hence, it is possible that significant differences are not seen between the two-family structures.

### **Implications**

Since there are no significant differences in WFC and FWC in the context of gender, it therefore implies that the government and company policies should not only be tilted towards the females, but rather should give equal importance to the men's work and family balance. For eg., Policies should include the concept of paternity leave.

Since the society perceives women to take charge of more household activities, it is usually assumed that women would not be able to manage their household alongside work. But the present research shows that there is no gender difference in WFC and FWC, and hence, various ideas need to be challenged. For example, family members not letting women work (especially after marriage) reasoning that it would be difficult for the women to manage both work and family simultaneously.

### **Limitations and Further Suggestions**

- The findings cannot be generalized since the sample size was too small.
- The scope of the study is limited to one company. However, further research can be done on comparison between two different type of organisations comparing the scores of work-life conflict and the policies of those organisations. Furthermore, a comparison between the scores of the sample from different cities can be done to see if any difference in the locations affect work-life conflict.
- The current study used a questionnaire developed on the norms of Australian population. Though the researchers have conducted a pilot study to check the applicability of the items on the Indian population, one cannot be sure. A questionnaire developed for the Indian context would be better for future researchers in the field in the country.
- The semi-structured interview was limited to only one senior official due to lack

of permissions and time. Interviews from a larger number of senior officials and the HR managers would have given more insight.

- The current research study did not consider the aspect of working couples. Future research on gender differences can be done on working couples (dual earners, i.e.; husband and wife) to assess the gender differences more vividly.
- The demographic sheet should've included number of members in the family and if help was provided at home. This would give the researchers more insight into the explanatory factor of the work-life conflict.
- A correlational study of work-life conflict with other on-job (for e.g., job satisfaction) and off-job (for e.g., stress) constructs would have thrown more light on improving the balance.
- A study on the different causal factors for each of the genders and each domain of Work-Life Conflict (WFC and FWC) would've provided more insight on how the genders differ in their conflict.
- The socio-economic status could not be taken into consideration since it was considered as a breach of confidentiality by the organization.

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# Survey on Self-Awareness and Perceived Barriers regarding Healthy Diet among Female Undergraduate Students

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## Abstract

Health Psychology, as a discipline, has gained momentum in recent years, due to its demonstrated effect on the physical and mental health of an individual. It does not simply look at curing ailments, but also maintaining a healthy lifestyle. Diet forms an important aspect of an individual's health. With the objective of understanding the level of awareness and kinds of barriers perceived regarding a healthy diet, this study was conducted among 56 female undergraduate students (1722 years) hailing from Lady Shri Ram College for Women. The online survey method was used with self-report questions, six of which were close-ended and two were open-ended. The survey was designed by the authors. Analysis was done using percentages for the close-ended questions and themes were computed for the open-ended ones. Results showed that 75% students were mindful of their diet, 64.3% were unhappy with it, while 71.4% were inclined towards changing their diet. Although 98% of the participants were aware that a healthy diet is not just related to weight loss, 76.36% attributed these other benefits only to physical factors. Perceived barriers were lack of time, easy availability of junk food, taste factor, lack of knowledge, lifestyle and laziness. This study could be used to understand what kept people from following a healthy diet, while designing intervention strategies.

## Introduction

Following the lead of 'The World Health Organization (WHO)' which defines health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (WHO, 1948), the discipline of psychology began to focus on how cultural, behavioral and cognitive factors affected the well-being of an individual. Psychological factors in health had been studied since the early 20th century by disciplines such as psychosomatic medicine and later behavioral medicine, but these were primarily branches of medicine, not psychology. The emergence of health psychology as a distinct discipline can be traced back to the 1970s. In 1969, William Schofield prepared a report for the APA entitled The Role of

Psychology in the Delivery of Health Services. In 1977, led by Joseph Matarazzo, APA added a division devoted to health psychology under its ambit and this was a huge step in formally establishing the field.

As of today, it has become widely accepted that Psychological science can make important contributions in terms of prevention and treatment of illness (Taylor, 2006). Looking at the current scenario, there is substantial evidence that modest behavioural intervention results in significant health benefits. Even moderate weight loss and physical activity can prevent diabetes for those at heightened risk. A systematic randomized clinical trial demonstrated that lifestyle changes were not only more effective but also more cost-effective than pharmacological intervention in the prevention of type 2 diabetes (Tuomilehto et al., 2001). A series of behavioural, public policy, and communications strategies has resulted in a remarkable decline in the use of tobacco products (Messer et al., 2007), and these reductions may have resulted in a decline in deaths from heart disease, lung cancer, and COPD. These are only a few examples of how health psychology can dramatically alter the way illness has been historically conceptualized and treated as part of the medical sciences.

The field focuses on the interface between biology, behaviour, and social context. A new understanding in the field of health psychology, the biopsychosocial model considers health as the complex interplay among biological disposition, behaviour, and social conditions (Fava & Sonino, 2008). Behaviours include lifestyle variables such as tobacco use, risk taking, alcohol consumption, diet, and exercise. Social conditions range from cultural influences, family context, and conditions of poverty. Biological studies consider a range of variables like the effect of stress on the immune system. A unifying theme in health psychology is interest in the effects of these influences (Behaviours, social conditions, and psychological stress) upon health outcomes.

Focusing specifically on the aspect of dietary behaviors of the individuals, it cannot be emphasized enough that eating is a behavior important for optimal health. Positive health behavior includes eating all necessary nutrients while preventing the accumulation of excess body fat. Eating is a learned behavior beginning in infancy. Many choices are made about food consumption every day. People decide what they will eat, when they will eat, how they will eat, with whom they will eat every day. These choices affect their health. Human beings eat to meet biological needs but there are a multitude of additional choices and behaviors involved in eating.

Food intake reflects biological, psychological and cultural influences and parallels the biopsychosocial approach used in health psychology. Some health psychologists and scientists contribute hundreds of research papers analyzing the causes and solutions to poor nutritional behavior. To understand the science of healthy eating, it is required that a thorough grounding of biopsychology influences on food intake be understood. Moreover, the focus needs to be on how unhealthy eating patterns can be avoided.

Behavior change theories from health psychology can be applied to eating behavior to improve health. This is the need of the hour as it has been seen that a huge percentage of the world's population has been suffering from lifestyle related health concerns such as obesity. A recent WHO report (2008) points towards an epidemic of obesity in the U.S. and other countries of the world. The solution to obesity partly lies in changing the eating habits of the masses. Moreover, diseases such as osteoporosis, kidney stones and hypertension also result from faulty eating habits.

Good nutritional practices are important for maintaining a good health, yet many people do not adopt them in their lives. The focus is on people who have access to a variety of food choices but still opt for unhealthy food items. Hence, it is important to understand the biological and psychological factors influencing eating behaviors. The biological factors include - hunger and starvation, satiety, energy and chronological age. The psychological factors include - environmental influences (economic, cultural beliefs, traditions, religious beliefs), sensory influences (flavor, texture, appearance), cognitive influences (advertisements, learned food habits, emotional needs, nutritional and health beliefs) and genetics (taste sensitivity, preference for sweets, fat tooth) etc.

These factors influence and shape each other and their interplay determines the kind of diet an individual follows. Diet, which includes the general eating patterns of individuals, is different from Adequacy which means eating sufficient amounts and types of food to consume so as to gain the necessary nutrients and correct number of calories. The Dietary Reference Intake (DRI) which includes Recommended Dietary Allowances (RDA) are targets of intake by healthy individuals which include vitamins, calories, water, carbohydrates, fibre, fats, and proteins. A simpler approach to assess eating habits is the food guide pyramid proposed by the US Department of

Agriculture in 2007. Moreover, specifically for the Indian population, the new 'Indian Food

Composition Tables, 2017' released by the national institute of nutrition, provides nutritional information on 151 discrete food components for 528 key foods available across the length and breadth of the country.

There are available, a number of parameters of healthy eating and current researches are exploring unique and interesting aspects of good eating behaviors. This is crucial as they serve to spread awareness among the general population regarding what constitutes healthy and unhealthy eating. Misinformation or a lack of information about good dietary patterns is a major hindrance to dietary modifications being included in people's lifestyles.

People often succumb to comfort food, and the name that it's been given is certainly apt. These foods provide one with temporary relief, from sadness and/or stress or any negative emotions, but unfortunately this relief doesn't last. And it is this vicious cycle of wanting to uplift the mood and feeling guilty later to again de-stressing the self that makes an individual blind and unaware to other things about diet.

Walsh & Nelson (2010) described the reasons for eating or picking out certain foods as a 'complex biopsychosocial process that is relative to person, place and time'. The dietary habits of children generally developed around the age of 15, and soon became habitual henceforth (Birch 1999; Sweeting & Anderson 1994). Hence, the period of adolescence is a crucial time in developing correct eating habits. The same research also found that the consumption of nutrition decreased during this period; only a handful met the dietary guidelines. Lytle (2002) conducted a large-scale longitudinal study of children ranging from ages of 8 and 14, and saw that the level of vitamins, fruits and vegetables (fibres) and other nutrients had reduced during adolescence and the level of fats, sodium and saturated fats had skyrocketed. In a study by Anding (2001), it was surprisingly reported that not more than 15% of female students ate more than 5 servings of vegetables and fruits in a day. To add to that, only 1/3rd of the students met the balanced proportion of a healthy diet as per Kolodinsky's 2007 study.

Another study conducted by Bernard, Stephanou & Urbach in 2007 of 10,000 students showed that entering high school drastically led to a decrease in the well-being of a student. Due to the current lifestyle of this generation, people prioritize diet a lot less as compared to other achievement oriented goals. Mental health problems has become a common problem of the young, especially those that used to be more of a risk factor among older age, according to Eckersley (2008).

Apart from these facts, it is a common knowledge that there are several gender differences when it comes to eating habits, just like in other things. Research has proven that the common notion of women worrying more about their diet and weight is in fact very true. A research was conducted by Wardle, Haase, Steptoe, Nillapun, Jonwutiwes and Bellisie (2004) on a sample of 19,298 students from 23 international universities on a similar background, aiming to explore the gender differences in food choices. Results showed that women were more concerned about consuming less fats, high fibres and eating more fruits and vegetables. It was also found that men were in general less concerned and more indifferent about their health, in all the 23 countries. They mentioned that “it wasn’t that they didn’t care, it was just that the health benefits and nutrition didn’t interest them as much”. But one must keep in mind that the study was done on mostly educated, upper middle class people.

Christensen & Brooks in 2006 interpreted the self-reported responses of undergraduate female students to situations designed to make them feel content or upset. The female participants craved food more than the male counterparts, which led to the increase of their sweet and fat consumption during negative situations. For women, the serotonin-boosting foods acted as a coping mechanism to deal with the stressful situations, unlike for men, who generally may use other getaways like exercise.

A study conducted by McPartland in 2013 on the stress, lifestyle, and diet among college students correlated the relationship among perceived stress, BMI(body mass index), waist circumference, and eating and physical activity behaviors as well as focused on gender differences in these relationships. The sample consisted of students from fourteen universities (n=1,116). Results showed that stress was positively correlated with BMI and waist circumference in females, but not in males. Increased levels of stress was linked with slight increases in the BMI and waist circumference among the students. Women in general engaged in more body weight related eating behaviors, as compared to the men.

In order to focus on the level of motivation to gather information regarding a healthy diet, Rieh, in 2007 did a study to investigate the different kinds of information seeking behaviors of undergraduate students. He found that the most common thing searched was (40% of the students researched most on) health related facts, shopping, and bus schedules. Only then came things like educational and other needs. Rieh also researched the method of seeking these information. The most used was the internet. Although most women generally obtained information through their family and friends, they may use newspapers and magazines for tips

too. Very few would consult dieticians and nutritionists. And in this generation of the media being highly influential, it is easy for people, especially for women, to get blinded by whatever the media recommends.

The present study was taken up to understand how much aware female undergraduate students are regarding their diet. Motivation to change the diet, if needed, was also a factor looked into through this survey. It wanted to explore the possible reasons for students to not indulge in a healthy diet, if at all, and understand how these barriers impact them, with regard to their context.

### **Sample**

The sample consisted of 56 female undergraduate students hailing from Lady Shri Ram College for Women. The age of the respondents ranged from 17 to 22 years, with the mean age of the sample being 19.52 years.

### **Measure**

The survey method was used to collect data, where the questions were to be self-reported, designed to collect direct information regarding the awareness of the students about a healthy diet, and understand their level of motivation. Data was collected online, but limited to one college only.

The questions consisted of six closed questions and two open-ended questions, listed below –

1. Are you mindful of the kind of food you eat? (Yes/No)
2. Do you regularly check health related information online? (Yes/No/Sometimes)
3. Do you feel you eat nutritious food (one including proteins, carbohydrates, fats, minerals and water)? (Yes/No/Sometimes)
4. Are you happy with your current diet? (Yes/No)
5. Are you inclined to make changes in your diet? (Yes/No)
6. There is a popular notion that a healthy diet leads to weight loss. Apart from weight loss, are you aware of other benefits of healthy eating? (Yes/No)
7. Please specify the other health benefits of a healthy diet. (open ended)

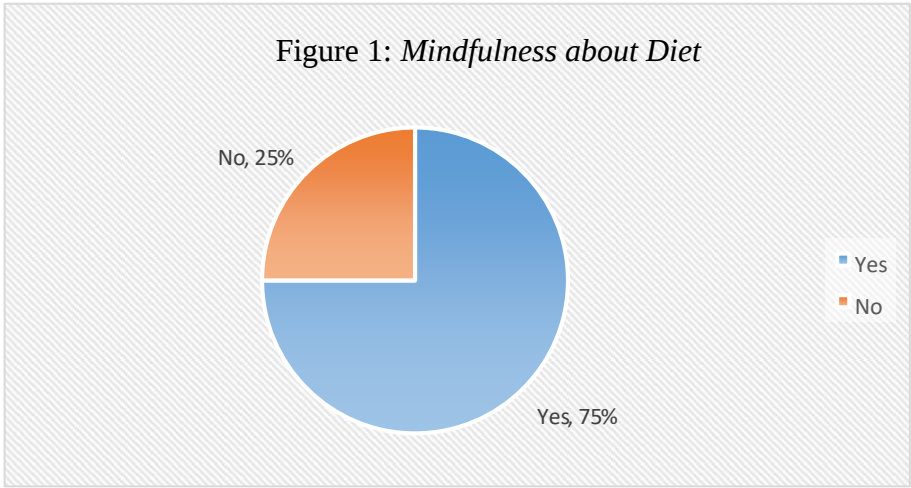
8. What do you think are some of the reasons which prevent people from eating healthy?  
(Specify personally for you and also with regard to the general population). (open-ended)

Results were analyzed by computing percentages of the responses provided to the close ended questions, while themes and their percentage of occurrence were searched for in the open-ended responses. Summing up the total number of themes, percentages for each were computed.

**Results**

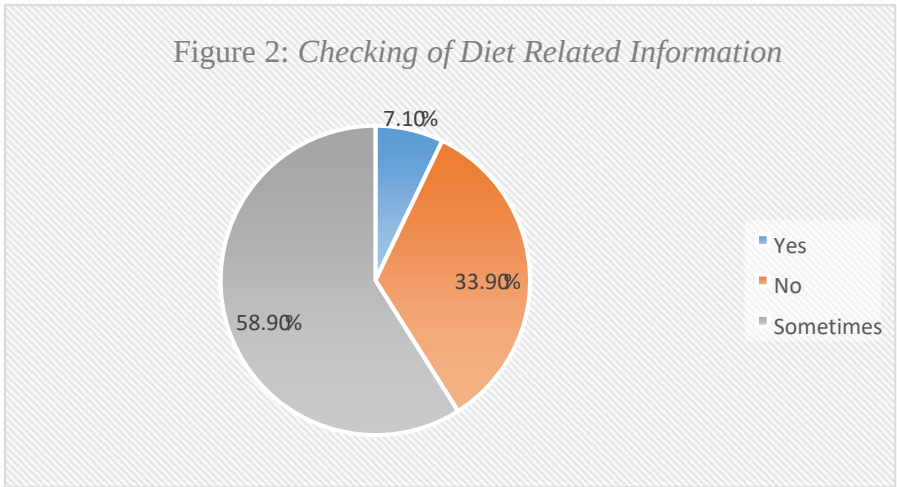
In case of the close-ended questions, following results were found.

1.Are you mindful of the kind of food you eat?



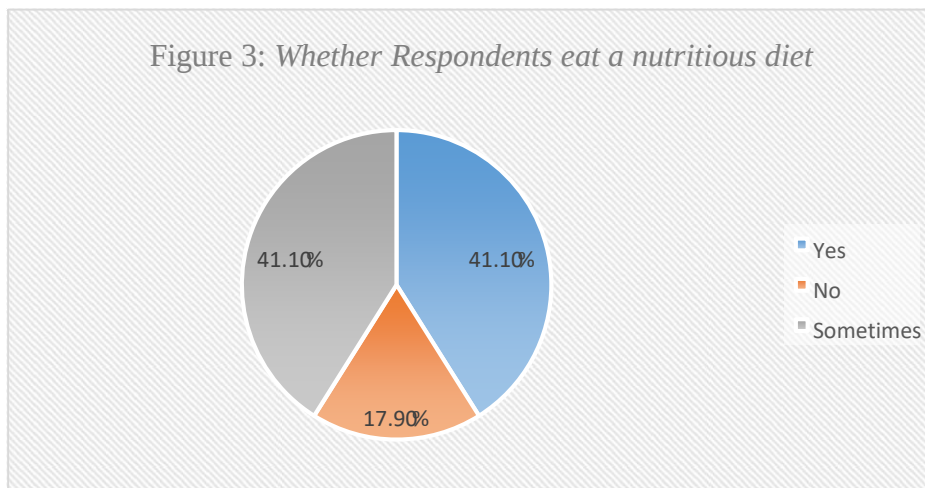
It was found that a vast majority of the respondents (75%) were conscious about what they ate, on a daily basis. Only 25% stated that they were not conscious while having food.

2.Do you regularly check health related information online?



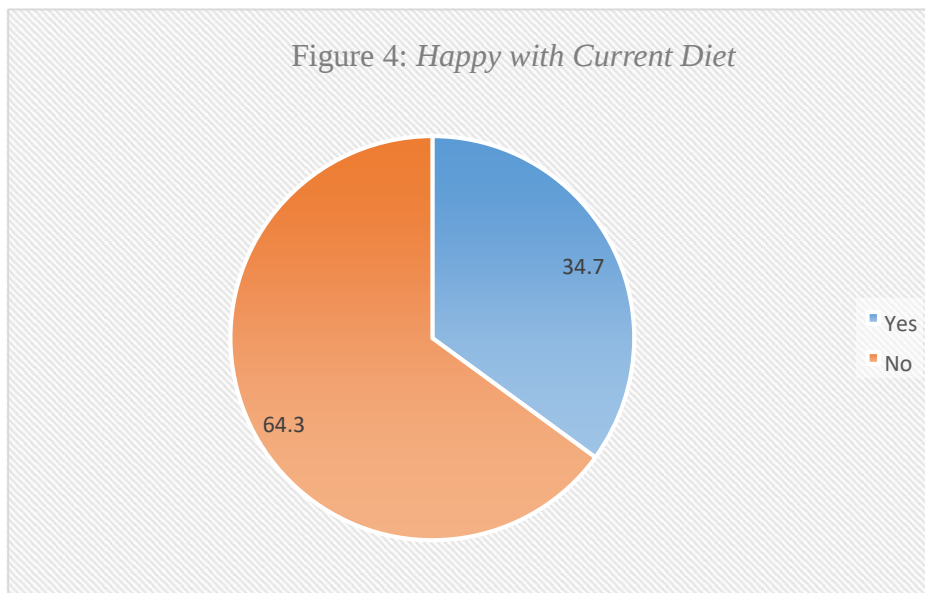
In order to check if the respondents update themselves with dietary information in order to follow a healthy diet, the above question was asked. Only 7.1% responded to check such information on a daily basis, while 58.9% indulged in it “sometimes”.

3. Do you feel you eat nutritious food (one including proteins, carbohydrates, fats, minerals and water)?



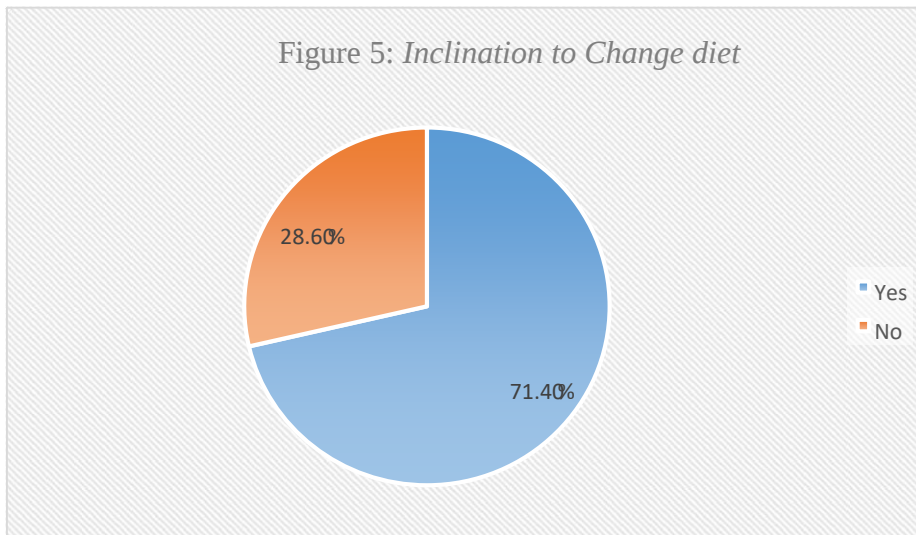
Out of the 56 respondents, 41.1% felt that they ate a healthy diet, while another 41.1% felt so, occasionally. 17.9% respondents felt that their diet was not healthy.

4. Are you happy with your current diet?



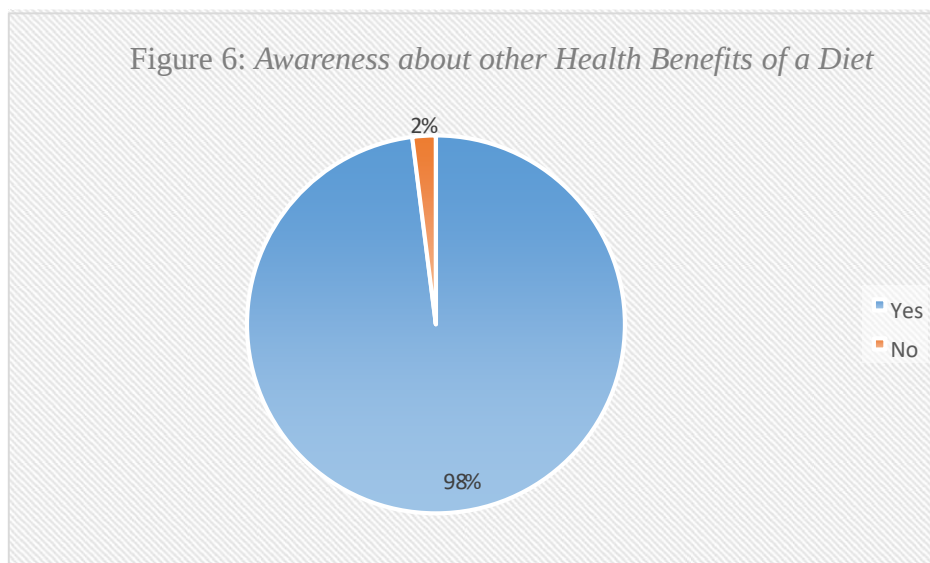
On being asked if they were happy with their diet, most of the respondents (64.3%) said “no”, while 34.7% replied affirmatively.

5. Are you inclined to make changes in your diet?



Majority of the respondents, 71.4% showed great inclination to change their diet, while 28.6% did not have any such motivation.

6. There is a popular notion that a healthy diet leads to weight loss. Apart from weight loss, are you aware of other benefits of healthy eating?



98% of the respondents acknowledged that they knew about the other health benefits of a nutritious diet apart from weightloss, while 2% were unaware of it.

In case of the open-ended questions, following broad themes were identified, from the verbatims.

7. Please specify the other health benefits of a healthy diet.

| Table 1:<br>Themes concerning knowledge of other benefits of diet.           |                                                                                       |                                                                                                            |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| PHYSICAL/BIOLOGICAL                                                          | MENTAL/MIND-RELATED                                                                   | EMOTIONAL                                                                                                  |
| Examples of responses:                                                       | Examples of responses:                                                                | Examples of responses:                                                                                     |
| 1. .... and physical strength etc.                                           | 1. Awareness of the senses and a fresh mind                                           | 1. It keeps you enthusiastic throughout the day. Taking proper diet is also a way of self care which makes |
| 2. it's about your heart being healthy, your energy levels, your stamina etc | 2. Better mood, better mental strength, more alertness                                |                                                                                                            |
|                                                                              | 3. Healthy mind,                                                                      |                                                                                                            |
| 3. ... no diseases                                                           | 4. It leads to an overall sense of well being , not only physically but mentally too. | one feel happy and positive about himself/herself.                                                         |
| 4. Healthy food helps in proper functioning of body systems.                 | 5. A healthy and a happy mind!                                                        | 2. A healthy diet for me, directly determines how I feel everyday!                                         |
| 5. Healthy skin, hair, increased immunity                                    |                                                                                       |                                                                                                            |

Of the responses analyzed, 76.36% responses were focused only on the biological or physical aspects. 5.45% focused on mental or mind-related aspects, while another 5.45% focused on emotional aspects. 12.73% took a holistic view, incorporating both the mental and the physical aspects.

## 8. What do you think are some of the reasons which prevent people from eating healthy?

(Specify personally for you and also with regard to the general population).

**Table 2:**  
**Themes concerning perceived barriers to healthy eating.**

| TIME                                                                                                                                                                                                              | AVAILABILITY                                                                                                                                                                                                                                                                                                | LACK OF KNOWLEDGE                                                                                                                                                                                                                                                                                                                                          | LIFESTYLE                                                                                                                                                                                                                                                                                                                          | TASTE                                                                                                                                                                                                  | LAZINESS                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Tight schedules<br><input type="checkbox"/> Lack of time a busy schedule prevents us from eating healthy as we eat whatever we get outside.<br><input type="checkbox"/> Time constraints | <input type="checkbox"/> Easily availability of cheap but unhealthy food, lack of knowledge about adverse health effects, etc<br><input type="checkbox"/> Easily available junk food...too many restaurants<br><input type="checkbox"/> Junk food is easily available I just eat whatever I get my hands on | <input type="checkbox"/> If there's no immediate pressing need to eat healthy, then it's easy to ignore it<br><input type="checkbox"/> lack of guidance and ignorance<br><input type="checkbox"/> Lack of awareness about balanced diet<br><input type="checkbox"/> I would say that there is a lack of awareness regarding what a proper, nutritious diet | <input type="checkbox"/> Being away from the home for longer<br><input type="checkbox"/> I think eating healthy is a bit difficult for students who live away from their home<br><input type="checkbox"/> Staying away from home puts restrictions on the food<br><input type="checkbox"/> Popular demand of friends family around | <input type="checkbox"/> Tastier options<br><input type="checkbox"/> Junk food looks more tempting and delicious I think it is largely the taste<br><input type="checkbox"/> Unhealthy food is tastier | <input type="checkbox"/> because I'm lazy to cook something healthy<br><input type="checkbox"/> I am extremely lazy<br><input type="checkbox"/> For me it's just laziness<br><input type="checkbox"/> I think mostly because I'm lazy |

From the analysis, it was found that 28.92% of the responses pointed towards easy availability of junk food at cheap rates as a major barrier to eating healthy. 22.89% cited taste as one of the factors. 19.28% attributed it to lifestyle factors like living away from home, PG food, friends around, etc. 12.04% felt that lack of time caused a major hindrance to eating healthy. 9.64%

either attributed unhealthy eating to lack of knowledge, or themselves responded in an unaware manner. Lastly, 7.23% responses stated that laziness prevented the respondents from cooking or searching for healthier options.

## Discussion

With the aim of understanding self-awareness and perceived barriers to a healthy diet among 56 young female undergraduates, this study was conducted. An online survey method was used, with questions designed by the author. Summing up the results, following data was arrived upon. On being asked if they are mindful of their diet, 75% responded “yes”, illustrating that there was a sense of awareness regarding what they chose to eat rather than consume what was readily available. This was also brought about in the fact that 58.9% of the respondents occasionally checked for information regarding diet, while 7.1% did it regularly. When asked if they ate nutritious food, only 17.9% stated a clear ‘no’. Half of the remaining felt that they had a nutritious diet, sometimes, while the other half responded doing it regularly. However, 64.3% were not happy with their diet, while 35.7% were. However, a clear majority of 71.4% were motivated for changing their diet. There is a common belief that diet is beneficial only for weight loss. But the sample showed awareness about the other health benefits of the diet, with only 2% stating that they didn’t know about the other health benefits of a proper diet. In order to probe into their awareness, as well as understand the common reasons for resistance to a healthy diet, a qualitative analysis of the open-ended questions were done.

From the above data, few discrepancies were seen. While 75% reported being mindful of what they eat, only 41.1% actually indulged in healthy eating regularly, while 41.1% did so only occasionally. It might point towards the fact that despite awareness to some extent, the understanding had not translated into action. This discrepancy might be explained to some extent with the help of the qualitative data. 12.04% of the responses cited lack of time and 7.23% had admittance of being lazy. E.g. some of the responses that stated were - “Being busy and lazy”, “a busy schedule prevents us from eating healthy as we eat whatever we get outside.” These might have formed an important barrier to healthy eating. In a cross-sectional study of 14,331 subjects (above the age of 15) from the European Union, Lappalainen, Saba, Holm, Mykkanen and Gibney (1997) found that lack of time was one of the most commonly mentioned barriers to healthy eating, especially among people pursuing higher education. In an Arab population, Musaiger and his colleagues (2013) found that lack of knowledge, lack of motivation to eat healthy and lack of time to cook or opt for a healthy diet are the top-most barriers to eating nutritional food. Hence, there might have been a possibility that for the current sample, despite being conscious, tight schedules and laziness became an issue.

Lack of awareness was one of the barriers cited by the respondents (cited in 9.64% of responses). Yet, only 7.1% regularly checked diet related information to gain insight. One of the probably reason might again be attributed to time. With submissions and assignments, health seemed to take a backseat, as it was not prioritized over studies. So they would rather “look for study material” than health related articles. However, these were mere speculations with not much of research evidence. Certain verbatim of the respondents seemed to point towards this. E.g. statements like

“If there’s no immediate pressing need to eat healthy, then it’s easy to ignore it” and “lack of time is one of the biggest reasons for not eating healthy. One needs to buy groceries and ingredients, then prepare a wholesome meal, which is usually after work when one is physically and mentally tired. If it’s before work, then it’s time consuming” seemed to suggest how health and its awareness was not only lacking, but also was not considered important over work or other priorities. This could, however, be seen as a contradiction to the study by Rieh (2007), where it was found that undergraduate students searched most on health related articles, followed by study-related materials.

Although lack of awareness was seen as a barrier, 98% of the respondents were aware that a healthy diet had other benefits than weight loss. But it must be acknowledged that an astounding majority of 76.36% of the respondents only focused on biological or physical health benefits, like improved stamina, enhanced immunity, clear skin, more strength. E.g. “A healthy diet is a good source of energy, it provides stamina and keeps one immuned”, “Keeping the endocrine system at its best, maintain muscle mass and bone density, high immunity etc.” and so on. Very few (5.45%) focused on the mind (e.g. “Awareness of the senses and a fresh mind”) and 5.45% felt that a healthy diet impacted one’s emotions as well (e.g. “Taking proper diet is also a way of self-care which makes one feel happy and positive about himself/herself”). This trend of responses illustrates how diet continued to be connected to the physical body first, followed by the mind, if at all.

Interestingly, despite less focus on emotional benefits of diet, 64.3% respondents expressed unhappiness about their current one. More people, that is 71.4%, were highly motivated to change their diet. Yet how much of this translates into actual behavior was an area that called for further research. According to Schwarzer (2008), despite what social-cognitive theories would have one believe, intention may not always predict behavior. Supplementary factors like perceived self-efficacy and strategic planning were required to take care of strengthening the intention-behaviour link. Self-efficacy may have been one of the major predictors of enhancing intention (Vries, Dijkstra, & Kuhlman, 1988). However, Jacksona, Lawtonb, Knappa, Raynora, Connerb, Lowe, & Clossa (2005) also found that increasing implementation intention did not improve consumption of fruits and vegetables among 120 cardiac patients in the UK.

Besides this gap, when other barriers were looked at, 28.92% of the responses believed easy

availability of junk food at cheap rates as a major barrier to eating healthy, 22.89% felt taste as one of the factors and 19.28% majorly cited lifestyle as a hindrance. Existing body of literature seemed to support the same. Koikkalainen, Lappalainen, and Mykkänen (1996) while examining cardiac patients found that half of them did not eat a healthy diet, even after being prescribed because they felt that it would not taste good. In general, even consumers at grocery stores believed that a healthy diet was not tasteful enough (Wright, 1994). The main reason why taste was such an important factor while eating food, may be traced back to the fact that people inherit their taste preferences (Birch, 1992). Even the cost factor seemed to cause a disruption. Junk foods were usually available everywhere, and at very cheap costs, which often tempted the consumers to opt for them (e.g. Lloyd et al, 1995). Few responses pointed towards this fact. E.g. “Easily available junk food.. Too many restaurants”, “Junk food is easily available and cooking healthy is tough”, “Junk food all around”.

Lastly, lifestyle seemed to affect a lot of the respondents from the college sample. Many students had left home and stayed in hostels and PGs, where healthy food was usually not easily accessible. Most of these students, being from different parts of the country, could not adjust to the taste of the current region. E.g. one responded specifically mentioned “I am from Assam and the food which i get in my pg is too spicy so most of the time i order food from outside and therefore i am not able to eat healthy. This is one of the major reason preventing people from eating healthy”. Others, too shared similar concerns, with the added factor that since their lifestyle includes living with friends, it was difficult to avoid unhealthy food when their friends are eating it. E.g. “I live in a PG which serves great food but there is certainly a compromise on the quality to meet up the quantity. Even if I want to, I cannot have healthy food here because many people do not like green vegetables, etc. Basically, generally people do not have healthy food choices.”, “Peer pressure (seeing your friends going out, you tend to go with them and eat from outside)”.

Thus, it could be found that, knowledge and awareness, by itself, may not result in a healthy diet. This study, however, had certain limitations. Data was collected online through a self-report measure. Self-report measure, in itself, brings with a plethora of drawbacks on reliability of responses. The tool used was a survey questionnaire, which was self-designed. The reliability and validity of the same may be questioned. Sample size was small and only limited to one college, and the female gender. Hence, future study may aim at collecting similar data from the other genders in order to identify the trend more fruitfully. Based on the information provided on

the barriers, intervention techniques can be devised to tackle the problem of an unhealthy diet. Moreover, other than focusing on just diet, other indicators of a healthy life, like exercise, and meditation, may also be looked into.

## **Conclusion**

The conclusion drawn from the above survey is that while people admit being conscious of their diet, less than half of the respondents actually followed a healthy diet on a regular basis. Majority were unhappy with their diet, and an even higher percentage of people expressed an intention of changing it. However, certain barriers like lifestyle, time constraints, laziness, taste of unhealthy food and so on, all contributed to not adopting a healthy diet on a daily basis. Ample researches validated the responses. To add to that, it was also found that most of the respondents perceived the advantages of a healthy diet only in terms of physical factors, something which might need to be addressed and changed to make people view health in a more holistic way.

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# Influence of Shift Work on Psychological Depression, Stress and Anxiety

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## Abstract

The purpose of the study was to investigate the significance of night shift on employees' stress levels, to examine the differences between stress, anxiety and depression levels between the day and nightshift workers; and to prove there exists a positive correlation between Stress, Anxiety and Depression. This was a cross-sectional study, carried out in three organizations dealing with investment management, from where workers from both day and night shift were included. The sample had 21-31 year old males and females from the offices of 3 organizations in New Delhi, India: - IHS Market, BlackRock and XYZ (name withheld). The total sample size was that of 100 employees from all three organizations combined, with 50 day shift and 50 night shift workers. A convenient sampling technique of non-probability sampling was taken. Two tools; DASS and OSI questionnaire were used. For assessing DASS questionnaire, t-test was used and significant levels of differences in depression, stress and anxiety among the two shifts i.e. - 3.442, -3.354, -4.237 respectively were found (T-critical at  $p=0.05 = \pm 1.984$ ). There was also a positive correlation between all the subscales Depression-Anxiety-Stress following a similar trend. The highest correlation was found to be between Anxiety and Stress i.e. +0.730 and lowest Depression-Stress +.670. (Correlation is significant at the 0.01 level 2-tailed). Analysis of the OSI showed that there was a significant difference between day and night shift workers on 6 subscales of occupational stress, and no significant difference on the other 6. It was also seen that women were 20% more stressed than their male counterparts.

**Keywords:** Depression, Anxiety, Stress, Occupational Stress, Night shift, Day shift, Shiftwork, Burnout

## Introduction

The breakthrough in the IT and globalization in the last two centuries has had a staggering impact on our organizations. If globalization and IT are the driving forces of economic development, then stress and anxiety are its primary vehicle. This breakthrough has lead to

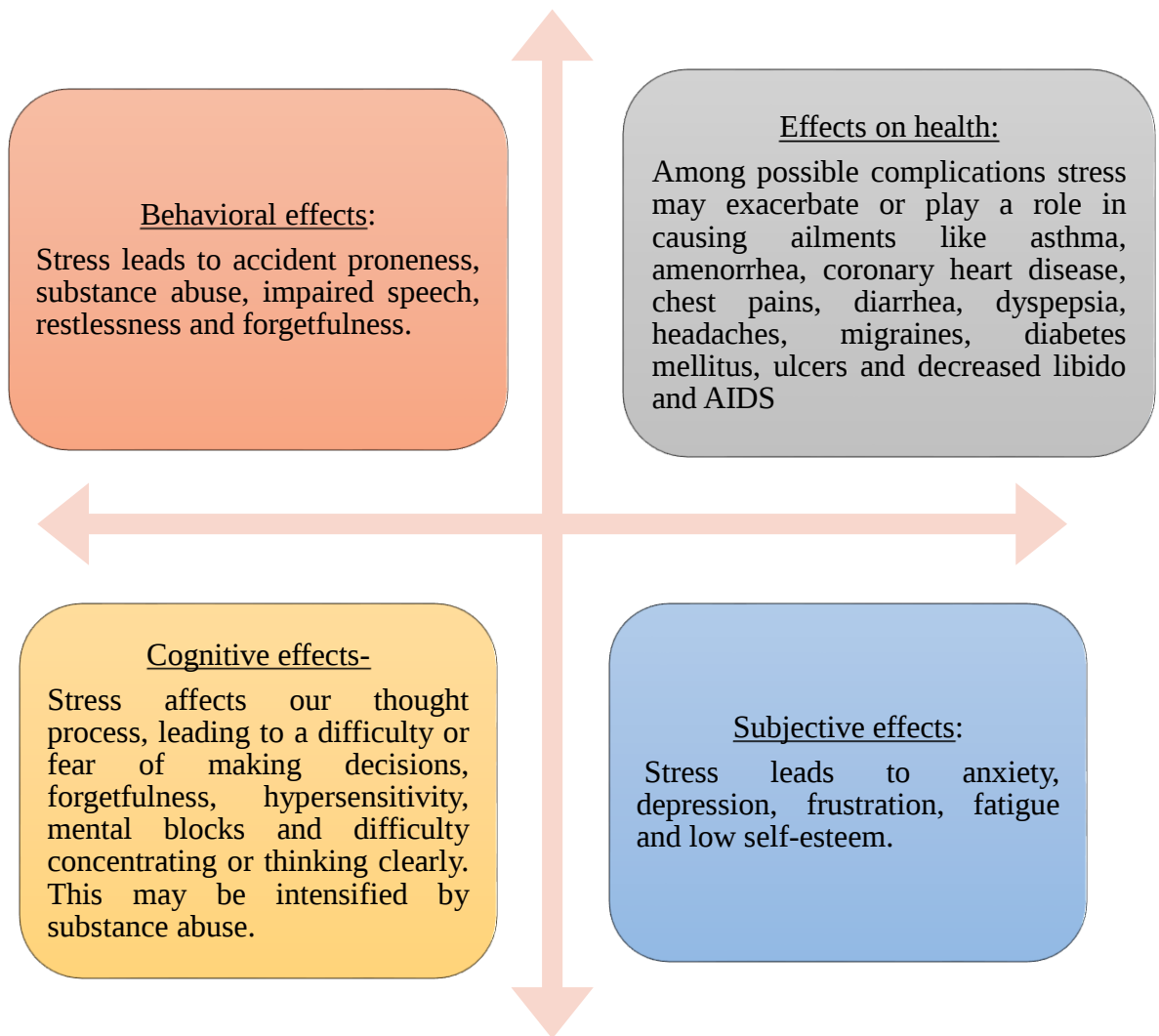
decreased costs of communications and transportations, making this world an even smaller place – a global market that has not only enhanced various opportunities for commerce but also made it difficult for industries to survive without scanning the world for completion, consumers and suppliers. This intense competition coupled with over population and the needs in developing countries to expand their markets have lead to increasing levels of stress in workers.

Many organizations in the world are witnessing an alarming increase of the negative effects of stress on employee's productivity. **Stress** has therefore become a worldwide phenomenon, which occurs in various forms in every workplace. In today's work life, employees are generally working for longer hours, as the rising levels of responsibilities require them to exert themselves even more strenuously to meet rising expectations about work performance. Typical examples are organizations in America, the United Kingdom, the Caribbean, East and Central Africa, West Africa and in other parts of the world. The American Academy of family Physicians reported that, about two-thirds of the visits to family physicians are the results of stress-related symptoms (**Henry and Evans 2008**).

APA describes Stress as a feeling of being overwhelmed, worried or run-down. Stress can affect people of all ages, genders and circumstances and can lead to both physical and psychological health issues. By definition, stress is any uncomfortable "emotional experience accompanied by predictable biochemical, physiological and behavioral changes" (eustress).

**Omolara (2008)** described **occupational stress** as the adverse psychological and physical reactions that occur in an individual as a result of their being unable to cope with the demands being made on them. According to **Swanepoel et al (1998)** work related stress has been a topic that has received increasing attention, in the area of occupational health, over the last three decades. These authors were of the opinion that the world, especially the world of work and business, has become increasingly subject to fast changing forces like increased competition, the pressure of quality, innovation and an increase in the pace of doing business. The demands on employees grew equally dramatically and this created stress within employees. Apart from stress that arose from the work situation, other sources of stress could relate to personal factors such as relationships with others and use of free time. Stress can therefore be described as the adverse psychological and physical reactions that occur in an individual as a result of his or her inability to cope with the demands being made on him or her (**Moorhead and Griffen, 1998**).

**Blumenthal (2003)** differentiated different effects of stress as follows:



**Arnold, Robertson and Cooper (1993)**, identified five major causes of work stress as: factors intrinsic to the job, role in the organization, relationships at work, career development and organizational structure and climate. They illustrate in detail the effects of factors intrinsic to the job and its leading impact on organizational stress and anxiety. These factors include:

1. **Poor Working Conditions** – the poor working conditions in an organization includes high levels of noise, poor lighting conditions, smells and all the stimuli which bombard a worker's senses and can affect his moods and overall mental state. The poor physical design of the organization which hinders communication is also a source of stress.
2. **Shift Work** - This is where workers have jobs which require them to work in shifts, some of which involves working staggered hours, which affects a worker's blood temperature, metabolic rate, blood sugar levels, mental efficiency, sleep patterns, resulting in hypertension, mild diabetes and peptic ulcers.
3. **Long Hours** - The long working hours required by many jobs appear to take a toll on employees' health and also making them suffer a high rate of stress.

#### 4. Risk and danger and New Technology

5. Work Under load and Overload- in the case of work under load individuals are not enough challenged by their jobs because of job repetition and under stimulating work where as work overload deals with too much pressure to perform in a given time set.

Keeping in mind the various causes and factors leading to stress at the workplace, it has been seen that **shift work** (particularly nightshift) in organizations which have rotating shifts in order to have continuous production of functioning, leads to particularly high level of stress in its workers. There is evidence that temporal organization in the shift work schedules of companies/industries is one of the factors that raises stress and anxiety levels by negatively affecting physical and mental health and human performance (Monk, 1988; Olsson, Kandolin & Kauppinen-Toropainen, 1989). This occurs because temporal organization in work schedules at non-usual times forces individuals to successive physiological and behavioral adaptations because of: 1) the broken phase relations between the organism and the work hours and the broken relation between the phases of the different endogenous rhythms (circadian alterations); 2) shortened, irregular or fragmented sleep (homeostatic alterations) and 3) absence of family life because of the work schedule, loss of relationships, and social activities, among others (psychosocial alterations) (Costa, 1996; Harrington, 1994; Monk, 2000). All these alterations and their consequences (gastrointestinal diseases, chronic fatigue, mood alterations, cardiovascular disorders, hypertension, etc. (Andalauer, Prin, Malbec, Vieux & Bourdeleau, 1984; Monk, 2000; Reinberg et al., 2001) are partly a result of the schedules and demands of work, which may be interpreted by individuals as threatening factors that generate conflict and thus provoke stress and anxiety responses.

One of the most important physiological problems associated with shift work and the night shift in particular, is that working, eating, and sleeping phases are changed. Mammals have a natural rhythmicity to many bodily functions and these **circadian rhythms** exist in humans, with many operating on a 25 hour cycle. Such free running cycles, which include body temperature, respiratory rate, urinary excretion, cell division, and hormone production, can be modulated by exogenous factors such as light-dark cycle, social climate, and of course, work schedules.

Previous studies demonstrate that alterations in circadian, homeostatic and psychosocial mechanisms lead to a stress response. **Van Carter and Spiegel (2000)** showed that in a situation of sleep deprivation (homeostatic alteration) or of irregular sleep-wake cycle (circadian

alteration), there is an increased response in the oral glucose tolerance test, elevated plasma cortisol concentration in the evening and increased sympathetic activity. These responses are similar to those provoked by a situation of chronic stress. Furthermore, they contribute to the development of chronic diseases such as obesity, diabetes and hypertension. Smith and Folkard (1993) observed an association between shift work and symptoms of stress and anxiety in family and social life. They showed that even the wives of workers in continuous shifts complained of stress, since they were often alone, had more responsibility for the children, ate at irregular hours and were concerned about noise interfering in their husband's sleep. Workers, on the other hand, complained of tiredness related to sleep deprivation and stress linked to social and family life. Barton, Aldridge and Smith (1998) showed that children of night shift workers also experienced stress because of their father's work. Williams, Magid and Steptoe (2005) demonstrated that workers under a scheme of alternating 8-hrs daytime shifts starting at 5hrs had high cortisol levels on waking, seemingly associated with chronic stress. However, workers under the same scheme starting at 8 hours had normal cortisol levels. The magnitude of cortisol responses on waking is likely associated to the interruption of sleep at a very early hour, leading to poor sleep quality and a break in the diurnal cortisol cycle (homeostatic and circadian alterations).

Shift work has been reported to be associated with various mental complaints, including *anxiety*, *depression*, *insomnia* and *fatigue*. Scott and colleagues found night work to be a risk factor for *major depressive disorder*, especially for women. In that study, employees with more than 5 years of night work experience had more than a 6-fold increased risk of having a depressive disorder, compared with employees with 5 years or less of night work experience. A large prospective study from the UK found shift work to be associated with subsequent depression in both men and women. Women's mental health was most impaired by unstable shift schedules, while night work had the strongest negative impact on men. A prospective study among female student nurses found night work to be negatively associated with psychological well-being 15 months after undertaking work. On the other hand, there are also some studies that have not found any association between shift work and mental health.

To summarize, a number of theories postulate that night shifts are instrumental in causing elevated levels of stress, anxiety and depression. However there is a need to acknowledge that some people work industriously under pressure and individuals respond differently to similar stressors.

## **Statement of the Problem**

Multiple researches have been conducted to provide theories concerning the relation between shift jobs and stress, as organizations want their employees to be productive as well as to be healthy. There has been indisputable proof that working night shifts negatively impacts both the psychological and physiological health of workers. This leads to fatigue, errors in work, high turnover and burnout which consequently reduces performance and work productivity. Thus arises the need to understand the relation between these variables in order to correctly place and implement the much required intervention and stress management techniques and boost performance. Hence, these interventions are essential not only at an organizational level of productivity but also for maintaining the mental and physical well being of an individual. Lastly, even though it is an important field of research for both organization and employees, there are very few theories presenting a legible link between job stress, depression and shift jobs. Consequently, there is the need to evaluate the impact of night shifts on employee's productivity and wellbeing.

## **Objectives**

The objectives of the current study are as follows:

- i. To investigate the impact of night shift on employees' stress levels
- ii. To examine the differences between stress, anxiety and depression levels between the day and nightshift workers.
- iii. To prove there exists a positive correlation between Stress, Anxiety and Depression.

## **Research hypothesis**

The following hypotheses stated in null form will be subjected to statistical test in this study:

H01: Shift work has no impact on employees' stress levels.

H02: Shift work has no impact on the anxiety and depression levels of employees.

H03: There is no correlation between Stress, Anxiety and Depression.

## **Rationale**

The area of Organization and Stress has been of extreme importance in the field of Psychology, and much research has been carried out regarding the same. Extensive research shows that

excessive job stress can adversely affect the emotional and physical health of workers. The result is decreased productivity, less satisfied, and less healthy workers, thus bringing about the need to study a matter so significant that affects millions of people. More particularly Job stress with irregular timings has a substantial negative effect on physical and emotional health. Jobs with irregular timings can make people more susceptible to major illnesses. There is increasing evidence that shift work is associated with cardiovascular disorders, including myocardial infarction and ischemic stroke. Numerous underlying mechanisms have been proposed to explain causal relationships between shift work and cardiovascular disease (CVD).

Another major reason for conducting a research on stress levels with regard to irregular timings is because of its gigantic exposure. Shift work is common in many occupations, from doctors and nurses, watchmen to call centers and formal organizations and more and more people are now falling victim to the silent killer that is stress.

This study would help us understand if at all there lies a relationship between stress burnout and job shifts and what sort of attitude and what components of it shape their perceptions towards the organization. Past literature does indicate towards the presence of high level of anxiety and stress during the night shift of call centers and other type organizations, this study might enable us to understand whether such phenomenon exists in the Indian context as well as past literature on the subject matter in Indian context is scanty.

## **Review of Literature**

**Desslerer (2000)** was of the opinion that for organizations job stress consequences included reductions in the quantity and quality of job performance, increased absenteeism and turnover, increased grievances and health care costs. A study of 46,000 employees concluded that stress and depression may cause employees to seek medical care for vague physical and psychological problems and can in fact lead to more serious health conditions. The health care costs of the high-stress workers were 46% higher than those of their less stressed co-workers.

**Arnold and Feldman (1986)** emphasize the deleterious effects of role ambiguity, conflict, overload and underload. Role ambiguity is often the result of mergers, acquisitions and restructuring, where employees are unsure of their newbeen categorized into two types: intersender and intrasender. (Kahn, et al., 1964) Intersender role conflict can occur when worker's perceive that two different sources are generating job responsibilities. Role conflict has

incompatible demands or expectations. Intrasender role conflict can arise when worker's perceive conflicting demands from the same source. Overload is frequently created by excessive time pressures, where stress increases as a deadline approaches, and then rapidly subsides. Underload is the result of an insufficient quantity, or an inadequate variety of work. Both overload and underload can result in low self-esteem and stress related symptoms, however, underload has also been associated with passivity and general feelings of apathy. (Katz and Kahn, 1978) Poor interpersonal relationships are also a common source of stress in organizations. Arnold and Feldman (1986) cite three types of interpersonal relationships that can evoke a stress reaction: 1) too much prolonged contact with other people, 2) too much contact with people from other departments, and 3) an unfriendly or hostile organizational climate.

Personal factors are often a source of stress. These include career related concerns, such as job security and advancement, as well as financial and family concerns. Holmes and Rahe (1967) constructed a scale of forty-three life events, and rated them according to the amount of stress they produce. The most notable feature of their instrument is that many positive life changes (i.e., marriage, Christmas, vacations, etc.) are substantial sources of stress. Generally, stress appears to be a result of any change in one's daily routine.

**Levin-Epstein (2002)** noted the most common indicators of stress as feeling overwhelming and burn out. Emotional and physical exhaustion often accompany such feelings, he further emphasized that employers as implementers of stress-endangering policies and procedures, should help employees manage their stress especially if it affects job performance.

Shift work has been reported to be associated with various mental complaints, including anxiety, depression, insomnia, stress and fatigue. The effects of shiftwork on psychological well-being and health have been well documented by comparisons between shift workers, on the one hand, and non-shift workers or former shift workers on the other (Costa 1996). One of the major problems that shift workers are confronted with is that they are required to ignore their diurnal nature, and to work and be active at times that they should actually relax, which is also known as desynchronization of the circadian periodic functions (Folkard 1996).

The effects of working unsocial hours have been examined from many different perspectives, including influence on the biological and psychosocial systems as well as impact on the quality of performance. Cavallo et al (2002) found that difficulty falling asleep, waking frequently during the day's sleep, feeling depressed or moody, never adjusting and feeling more tired were

problems when on nights, as well as feeling that thinking and performance was slower. Dula et al (2001) demonstrated a decline in performance after working five consecutive night shifts. In addition Bartel et al (2004) found that performance of simple repetitive tasks deteriorated.

A study by Hossain et al (2003) showed significant sleep pathology in night workers, while Garbarino et al (2002) suggested that many cases of sleep disturbance and sleep disorders could cause sleep-related accidents. In a study into the effects of cardiovascular disease, Furlan et al (2000) suggested that an excessive rate of disease in shift workers could be due to the continuous changes of the time of maximum cardiac sympathetic modulation over the years. Van Amelsvoort et al (2004) found that shift workers had a slightly higher age and a substantially less favourable cardiovascular risk profile, and that significantly more shift workers were smokers and males. Shift workers also showed a higher sickness record than daytime workers. These results agreed with Knutsson et al (1999), who found that a higher proportion of shift workers smoked, and tended towards a lower educational level, but added that shift work was more prevalent among unskilled workers and that cardiovascular disease is related to socioeconomic status.

In general, there are three types of consequences that have been studied in relation to shiftwork:

1. physical health variables;
2. family and social variables; and
3. organizational variables (Blau and Lunz 1999).

Among the physical health variables, sleep problems, gastrointestinal and psychovegetative disorders count as the most frequently studied (e.g., Nachreiner et al. 1995, Costa 1996), whereby employees who work in rotating shifts report more physical health complaints than those with fixed shifts (Åkerstedt 1985). Not surprisingly, former shift workers (those who have left shiftwork due to health complaints) tend to show more signs of ill-health than present shift workers (Frese and Semmer 1986). The negative impact of shiftwork on health is mainly attributed to the disturbances of the normal circadian rhythms of physiological functions (e.g., Nachreiner et al. 1995).

Shiftwork has been related to family and social problems such as higher work/ nonwork conflict (Staines and Pleck 1984, Bohle and Tilley 1989), and diminished leisure activities (Walker 1985), participation in voluntary organizations (Jamal 1981), education of the children (Diekmann

et al. 1981) as well as reduced spouse satisfaction (Smith and Folkard 1993).

The organization related variables, include attitudes like job satisfaction, organizational commitment and intentions to quit (turnover) (Jamal 1981), but also job stress or burnout (Kandonlin 1993), job performance and the prevalence of accidents (Monk and Folkard 1985).

A study of general health pattern among night shiftwork employees by M.K. Vijayalaxmi, Anu George and Natasha Nambiar (2014) at a hospital in Mangalore, India, found that shift workers had low general health score (35.1) compared to day workers (39.5). The mean psychological health score was 12.5 in day workers and 10.7 in shift workers. Lifestyle factors like inadequate sleep, irregular eating habits, skipping of meals and lack of exercise had significant association with shift work and were found to contribute to ill health.

In a study by The Asian Journal of Pharmaceutical and Clinical Research, 40 healthy male security guards (25-35 years) who did rotating night shifts at least for 1 year and 40 day workers (25-35 years) who did not do night shift in last 2 years were involved in the study. Psychological health status was assessed using Depression Anxiety Stress Scales (DASS) questionnaire.

Among night shift workers, 60% significantly suffered from mild depression and 40% from moderate depression, 37.5% from mild stress, 52.5% from moderate stress, 45% from mild anxiety. 10% of the day workers suffered only from mild stress. It was concluded that night shift workers who are prone to the circadian rhythm alteration suffer more from depression and stress than anxiety. There is also deterioration in the memory performance and psychological health of the night shift workers when compared to day workers.

**Scott and colleagues** found night work to be a risk factor for major depressive disorder, especially for women. In that study, employees with more than 5 years of night work experience had more than a 6-fold increased risk of having a depressive disorder, compared with employees with 5 years or less of night work experience. A large prospective study from the UK found shift work to be associated with subsequent depression in both men and women. Women's mental health was most impaired by unstable shift schedules, while night work had the strongest negative impact on men. A study by Crew, S. (2006) among female student nurses found night work to be negatively associated with psychological well-being 15 months after undertaking work. Hansen (2001) showed a positive trend towards breast cancer in women with an increasing duration of work at night. However, Knutsson (2003) states that there is no conclusive evidence that night shifts increase the risk of cancer. People who work rotating shifts have

significantly lower levels of serotonin, a hormone and neurotransmitter in the central nervous system that plays a critical role in the regulation of sleep, according to an article published in the Journal of Sleep in 2007. The study indicated that serotonin levels differed greatly between day workers and shift workers, with levels of serotonin significantly lower in shift workers. Low levels of serotonin are associated with conditions such as depression and anxiety.

## **Methodology**

### DESIGN

This study was a *cross-sectional study*. It was carried out in three organizations dealing with investment management from where workers (both male and female) from both day and night shift were included.

### SAMPLE

The sample used in the current research was that of 21-31-year old males and females from the offices of 3 organizations in New Delhi, India – HIS Market, BlackRock and a third organization who requested their name to be withheld.

The total sample size was that of 100 employees from all three organizations combined, and consisted of 50 day shift workers and 50 night shift workers. No night shift worker who had worked in that shift for less than a period of 6 months was considered. The sample consisted of 22 females and 28 males in the day shift, and 11 females and 39 males in the night shift.

A convenient sampling technique of non-probability sampling was used.

*Inclusion criteria:* males and females within the age group of 21-31 years.

*Exclusion criteria:* Workers with less than 6 months of experience in the night shift were excluded from the sample

### TOOLS

The technique used in gathering data was based on questionnaires. The primary data source consisted of two questionnaires, which were used to check the level of stress, and other clinical scales, i.e. depression and anxiety in the workers. To assess the stress levels, including depression and anxiety, the Occupational Stress Index (OSI) was used to assess the various components of organizational stress and anxiety.

**Table- A: DEMOGRAPHIC PROFILE**

| VARIABLES                    | DAY    |         | NIGHT |         |
|------------------------------|--------|---------|-------|---------|
|                              | MALES  | FEMALES | MALES | FEMALES |
| Age (Mean age in years)      | 27.9   | 28.2    | 26.6  | 24.73   |
| Marital Status (percentage)  |        |         |       |         |
| Married                      | 32.14% | 63.6%   | 48.7% | 27.3%   |
| Single                       | 67.86% | 36.4%   | 51.3% | 72.7%   |
| Divorced                     | 0      | 0       | 0     | 0       |
| No. of Children (percentage) |        |         |       |         |
| 0                            | 71.4   | 63.6%   | 61.8% | 72.7%   |
| 1                            | 21.4%  | 22.7%   | 28.2% | 27.7%   |
| 2                            | 7.1%   | 13.6%   | 7.7%  | 0       |
| 3                            | 0      | 0       | 2.6%  | 0       |

The ***Depression Anxiety Stress Scale (DASS)*** by Lovibond and Lovibond (1995) is a 42-item questionnaire which includes 3 self-report scales to measure the negative emotional states of depression, anxiety and stress. Each of these three scales contains 14 items divided into subscales of 2-5 items with similar content. The Depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest, anhedonia. The Anxiety Scale assesses autonomic arousal, skeletal muscle effects, situational anxiety and subjective experience of anxious affect. The Stress Scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated and impatient. Four-point severity/frequency scales were used to rate the extent to which they were affected.

All studies of DASS have demonstrated excellent internal consistency scales.

**Table-C: Inter-scale correlations range as follows:** (Antony et al., 1998; Brown et al., 1997, Clara et al., 2001)

|                  |         |
|------------------|---------|
| Depression range | .91-.97 |
| Anxiety range    | .81-.92 |
| Stress range     | .88-.95 |

**Table D**

|                    |          |
|--------------------|----------|
| Depression-Anxiety | .45-.71  |
| Anxiety-Stress     | . 65-.73 |
| Depression-Stress  | .57-.79. |

The *Occupational Stress Index (OSI)* by Srivastava, A.K., and Singh, A.P. (1981) consists of 46 items, each to be rated on the 5-point scale. The items relate to almost all relevant components of the job size, which cause stress in some way or the other, such as role overload, role ambiguity, role conflict, unreasonable group and political pressure, responsibility for persons, under-participation, powerlessness, poor peer relations, intrinsic impoverishment, low status, strenuous working conditions and unprofitability.

The reliability index ascertained by split alpha (odd-even) method and Cronbach’s alpha – coefficient for the scales as a whole were found to be .935 and .93 respectively.

**Table E- Reliability Index**

| No. | Sub Scales (Occupational Stress)          | Reliability Index |
|-----|-------------------------------------------|-------------------|
| 1   | Role Overload                             | .597              |
| 2   | Role Ambiguity                            | .495              |
| 3   | Role Conflict                             | .508              |
| 4   | Unreasonable Group and Political Pressure | .540              |
| 5   | Responsibility for persons                | .697              |
| 6   | Under-participation                       | .548              |
| 7   | Powerlessness                             | .539              |
| 8   | Poor-Peer Relations                       | .577              |
| 9   | Intrinsic Impoverishment                  | .528              |
| 10  | Low Status                                | .499              |
| 11  | Strenuous Working condition               | .525              |
| 12  | Unprofitability                           | .518              |

In general, in psychology researches a good measure should have a Cronbach’s alpha of at least .60 and preferably closer to .90. Therefore, in the present study, the scales can be considered reliable.

Result and Data Analysis

Data analysis is a process of systematically applying statistical techniques to describe, illustrate, condense and evaluate data. Researches generally analyze for patterns and observation through the entire data collection phase (Savenye, Robinson, 2004).

The data collected through the DASS Scale and the OSI was analyzed using MS-Excel and Statistical Packages for the Social Sciences (SPSS). First the subscales of each of these tests were computed and then SPSS was used to calculate the mean and the standard deviation. To test for the differences in scores between the day and night shift workers, t-values (two-tailed tests) were determined. Lastly, to investigate the correlation between the subscales of DASS (Depression-Anxiety-Stress), Pearson’s Correlation (bi-variate) was applied.

**TABLE 1** Group statistics of the DASS showing sample size (N), Mean (X), Standard Deviation and Standard Error of Mean.

| Group Statistics |             |    |         |                |                 |
|------------------|-------------|----|---------|----------------|-----------------|
|                  | Group       | N  | Mean    | Std. Deviation | Std. Error Mean |
| Depression       | Day Shift   | 50 | 6.5400  | 6.80699        | .96265          |
|                  | Night Shift | 50 | 11.9000 | 8.65731        | 1.22433         |
| Anxiety          | Day Shift   | 50 | 6.5800  | 6.26975        | .88668          |
|                  | Night Shift | 50 | 10.9600 | 6.77920        | .95872          |
| Stress           | Day Shift   | 50 | 11.2400 | 7.99122        | 1.13013         |
|                  | Night Shift | 50 | 17.8200 | 7.53140        | 1.06510         |

**TABLE: 2** Group statistics of the OSI showing sample size (N), Mean (X), Standard Deviation and Standard Error of Mean.

| Group Statistics    |             |                |         |                |                 |
|---------------------|-------------|----------------|---------|----------------|-----------------|
|                     | Group       | N              | Mean    | Std. Deviation | Std. Error Mean |
| Role_Overload       | Day Shift   | 50             | 15.7600 | 2.84684        | .40260          |
|                     | Night Shift | 50             | 19.3000 | 2.68214        | .37931          |
| Role_Ambiguity      | Day Shift   | 50             | 10.2800 | 2.40781        | .34052          |
|                     | Night Shift | 50             | 11.0400 | 2.49047        | .35221          |
| Role_Conflict       | Day Shift   | 50             | 14.2600 | 2.38028        | .33662          |
|                     | Night Shift | 50             | 14.4400 | 2.75651        | .38983          |
| Pol_Pressure        | Day Shift   | 50             | 12.3400 | 2.57627        | .36434          |
|                     | Night Shift | 50             | 13.8400 | 2.22564        | .31475          |
| Per_Res             | Day Shift   | 50             | 8.7800  | 1.66953        | .23611          |
|                     | Night Shift | 50             | 8.8600  | 2.02041        | .28573          |
| Under_Participation | Day Shift   | 50             | 10.3000 | 2.15946        | .30539          |
|                     | Night Shift | 50             | 10.9800 | 3.17831        | .44948          |
| Poweless            | Day Shift   | 50             | 7.7400  | 1.87148        | .26467          |
|                     | Night Shift | 50             | 8.6800  | 2.35120        | .33251          |
| Poor_Peer           | Day Shift   | 50             | 10.2200 | 1.70581        | .24124          |
|                     | Night Shift | 50             | 10.6400 | 2.00774        | .28394          |
| Intrinsic_Imp       | Day Shift   | 50             | 11.0600 | 3.07995        | .43557          |
|                     | Night Shift | 50             | 12.2400 | 2.74464        | .38815          |
| Low_Status          | Day Shift   | 50             | 7.2400  | 1.54603        | .21864          |
|                     | Night Shift | 50             | 8.3000  | 2.20621        | .31200          |
| Stren_Work          | Day Shift   | 50             | 10.9600 | 2.00977        | .28422          |
|                     | Night Shift | 50             | 14.6200 | 2.92693        | .41393          |
| Unprof              | Day Shift   | 0 <sup>a</sup> | .       | .              | .               |
|                     | Night Shift | 50             | 6.3200  | 1.92131        | .27171          |

**TABLE: 3** t-test values of Depression

T critical at p=0.05= +-1.984

|            | Group       | N  | Mean  | Std. Deviation | t - value | Df | Sig (2-tailed) |
|------------|-------------|----|-------|----------------|-----------|----|----------------|
| DEPRESSION | Day Shift   | 50 | 6.54  | 6.807          | -3.442    | 98 | .001           |
|            | Night Shift | 50 | 11.90 | 8.657          |           |    |                |

An independent sample t test has been computed to determine the level of difference between the day and night shift workers. The results shown in Table 5 indicate that the mean depression score of day shift is 11.24 and the SD is 7.99 whereas for night shift is 17.82 and 7.53 respectively. At p value  $\geq 0.05$  we reject our  $H_0$  thus It has been found that the night shift worker experiences significantly higher levels of stress as compared to their day shift counterparts which cannot be accounted for chance or error.

**TABLE 5** t-test values of subscales of OSI (T critical at  $p=0.05 = \pm 1.984$ )

|                             | Group       | N  | Mean    | Std. Deviation | t - value | df | Sig (2-tailed) |
|-----------------------------|-------------|----|---------|----------------|-----------|----|----------------|
| ROLE OVERLOAD               | Day Shift   | 50 | 15.7600 | 2.84684        | -6.400    | 98 | .000           |
|                             | Night Shift | 50 | 19.3000 | 2.68214        |           |    |                |
| ROLE AMBIUITY               | Day Shift   | 50 | 10.2800 | 2.40781        | -1.551    | 98 | .124           |
|                             | Night Shift | 50 | 11.0400 | 2.49047        |           |    |                |
| ROLE CONFLICT               | Day Shift   | 50 | 14.2600 | 2.38028        | -0.349    | 98 | .727           |
|                             | Night Shift | 50 | 14.4400 | 2.75651        |           |    |                |
| GROUP/POLITICAL PRESSURES   | Day Shift   | 50 | 12.3400 | 2.57627        | 3.115     | 98 | .002           |
|                             | Night Shift | 50 | 13.8400 | 2.22564        |           |    |                |
| PERSONS RESPONSIBILITY      | Day Shift   | 50 | 8.7800  | 1.66953        | -0.216    | 98 | .830           |
|                             | Night Shift | 50 | 8.8600  | 2.02041        |           |    |                |
| UNDER PARTICIPATION         | Day Shift   | 50 | 10.3000 | 2.15946        | 1.251     | 98 | .214           |
|                             | Night Shift | 50 | 10.9800 | 3.17831        |           |    |                |
| POWERLESSNESS               | Day Shift   | 50 | 7.7400  | 1.87148        | -2.212    | 98 | .029           |
|                             | Night Shift | 50 | 8.6800  | 2.35120        |           |    |                |
| POOR PEER RELATIONS         | Day Shift   | 50 | 10.2200 | 1.70581        | 1.127     | 98 | .262           |
|                             | Night Shift | 50 | 10.6400 | 2.00774        |           |    |                |
| INTRINSIC IMPOVERISMENT     | Day Shift   | 50 | 11.0600 | 3.07995        | 2.023     | 98 | .046           |
|                             | Night Shift | 50 | 12.2400 | 2.74464        |           |    |                |
| LOW STATUS                  | Day Shift   | 50 | 7.2400  | 1.54603        | -2.782    | 98 | .006           |
|                             | Night Shift | 50 | 8.3000  | 2.20621        |           |    |                |
| STRENUOUS WORKIN CONDITIONS | Day Shift   | 50 | 10.9600 | 2.00977        | 7.289     | 98 | .000           |
|                             | Night Shift | 50 | 14.6200 | 2.92693        |           |    |                |
| UNPROFITABILITY             | Day Shift   | 50 | .       | .              | -1.595    | 98 | .114           |
|                             | Night Shift | 50 | 6.3200  | 1.92131        |           |    |                |

From the above 12 sub-scales of the OSI, there is a significant difference between day and night shift workers in the following subscales: Role Overload, Group/Political pressures, Powerlessness, Intrinsic Impoverishment, Low Status and Strenuous Working Conditions.

**TABLE 6 table showing correlation between DASS subscales (Depression-Anxiety-Stress) using Pearson’s correlation**

| Correlations                                                 |                     |            |         |        |
|--------------------------------------------------------------|---------------------|------------|---------|--------|
|                                                              |                     | Depression | Anxiety | Stress |
| Depression                                                   | Pearson Correlation | 1          | .710**  | .670** |
|                                                              | Sig. (2-tailed)     |            | .000    | .000   |
|                                                              | N                   | 100        | 100     | 100    |
| Anxiety                                                      | Pearson Correlation | .710**     | 1       | .730** |
|                                                              | Sig. (2-tailed)     | .000       |         | .000   |
|                                                              | N                   | 100        | 100     | 100    |
| Stress                                                       | Pearson Correlation | .670**     | .730**  | 1      |
|                                                              | Sig. (2-tailed)     | .000       | .000    |        |
|                                                              | N                   | 100        | 100     | 100    |
| **. Correlation is significant at the 0.01 level (2-tailed). |                     |            |         |        |

Table 6 shows the correlation between the three subscales of DASS : Depression-Anxiety, Anxiety-Stress and Stress-Depression using Pearson’s correlation. There is a positive correlation between all the subscales following a similar trend. The highest correlation was found to be between Anxiety and Stress i.e. +0.730 and lowest Depression-Stress +.670 (still a strong correlation).

**Discussion**

The objectives of the current study were to investigate the significance of night shift on employees' stress levels, to examine the differences between stress, anxiety and depression levels between the day and nightshift workers; and to prove there exists a positive correlation between Stress, Anxiety and Depression.

The main findings of the study show that night shift workers had significantly higher levels of depression, anxiety and stress than those of daytime workers. It was also found that there exists a positive correlation between Depression and Anxiety, Anxiety and Stress, and Stress and Depression. The higher level of stress and anxiety scores collaborate with the previous findings

of shift schedules increasing anxiety/stress levels. There may be many possible explanations for this. The most common incorporate the irregular sleep-wake cycle, desynchronized circadian rhythms, or psychosocial problems caused by shift work. (Akerstedt, Torsvall & Gillberg, 1982; Akerstedt, Kecklund & Knutsson, 1991; Monk, 2000; Ohayon, Lemoine, Arnaud-Briant & Dreyfus, 2002).

The circadian rhythm is an endogenously driven biochemical, physiological, behavioral process in the body that functions as the biological clock which controls our sleep and wake cycles. As a result, Night shift workers are exposed to such an unstable sleep pattern due to frequent disruption of the circadian rhythm. As is the case when these workers work against their natural sleep cycle, the damage on their physiological and psychological health increases. The irregularity of the sleep-wake cycle also influences the homeostatic mechanism that further coincides with some psychological rhythms such as body temperature.

Due to deleterious effect on sleep, it can be concluded that sleep loss is a major effect of shift work. Not only is the quantity of sleep reduced (up to 2 hrs a day), but there is also a far greater effect on the quality of sleep. Researches also show a reduction in Rapid Eye Movement (REM) and Stage 2 sleep.

These alterations caused by different shiftwork are seen as a form of conflict by the workers. Taken together these alterations may explain the higher level of stress and anxiety found in the night shift workers. Supporting this statement, Suri Sen, Singh, Kumar and Agarwal (2007) found high rates of anxiety disorders in business process outsourcing shift workers when compared to day shift workers.

Night shift workers perform poorly when compared to dayshift workers because of the influence of fatigue, mental health, cardiovascular and gastrointestinal disorders, reproductions effects and performance. Shift work can be a potential psychosocial stressor. By the use of 2 tools, DASS and OSI, which gauged the level of stress in both the shifts, reported an adverse effect on mental health. The question to address of whether shift work causes psychiatric mortality or shift workers have pre-existent psychiatric problems is not entirely resolved. There seems to be an increased neuroticism with increasing years of shift work but stress levels in themselves do not predict health related shift problems.

A mortality study from California showed increased rates of arteriosclerotic heart disease for male occupational groups in increasing proportions of the population who work more than 48 hours a

week. Complaints of digestive problems are also common within the shift workers. Night shift workers seem to have the most complaints of dyspepsia, heartburn, abdominal pains and flatulence. There also seems to be increasing awareness with proof to hypotheses that night shift working may present special risks to women of child-bearing age. This can be accounted for by the disruption of the menstrual cycle and increased stress from the conflicts created by social factors, for example, night work on family life. Researches show that there is an increased risk of spontaneous abortion, low birth rate and prematurity correlating with shift work. A study undertaken by Vernon et al. shows a decrease in performance associated with long hours of work and stress.

Through the above discussion, a link between increased fatigue with lowered performance and subsequent rates of accidents would seem logical. Several studies have shown peak accident rates at around 10pm and 11pm.

There is a significant level of difference between the scores on depression between day shift and night shift workers. The means of the scores were 6.54 and 11.90 respectively. This significant level of depression is caused because of sleep disturbances and hormonal changes. Night shift work can have an impact on physical health as well as psychological health. The immune system may be compromised, thus making the individual more prone to illnesses which can cause a person to become depressed. They are also extremely emotional, sensitive, easily disturbed, anxious, defensive, forgetful and aggressive. The August 2007 issue of *Sleep* reported that late shift workers have lower levels of serotonin, the hormone that helps regulate sleep, anxiety, mood swings and depression.

The OSI measures 12 subscales which cause occupational stress. It was found that there was a significant level of difference in scores between day shift and night shift workers on the following 6 scales: Role Overload, Group/Political pressures, Powerlessness, Intrinsic Impoverishment, Low Status and Strenuous Working Conditions.

Based on the study done by International Journal of Social Sciences, there is a significant and positive relationship between role overload and occupational stress. This is in sync with the findings of previous studies. For example, nurses who work longer hours, more shifts feel more stress and tiredness and they may decide to leave their nursing profession in an early retirement age (Parikh et al., 2004; Monroe, 2009).

The scales which according to the results did not seem to have significantly different score

between day shift and night shift workers are Role Ambiguity, Role Conflict, Persons Responsibility, Under Participation, Poor Peer Relations and Unprofitability.

From Table no. 6 depicting the level of correlation between the three DASS subscales, using Pearsons Correlation, a strong positive correlation between Depression-Anxiety-Stress was found. More significantly, there existed a I correlation between stress and anxiety of 0.730. A study by Leonice Fumiko Sato Kurebayashi, Juliana Miyuki do Prado and Maria Julia Paes da Silva on the correlations between the anxiety and stress levels of nursing students in the University of Sao Paulo, Brazil found that students presented both high levels of stress and anxiety and correlations between these variables were positive. ( $r=0.512/p=0.000$ ).

The demographic profile of the current sample shows that while the mean age of day shift and night shift workers does not vary much in males, there is a significant difference between the mean ages of female day shift (28.2 years) and night shift (24.73) workers. This tells us that more young women are working night shifts in organizations, which is not the case with males. This might be because older women who are settled and may hve children do not take up jobs where it is required for them to be working night shifts.

Among night shift workers, a high percentage of males are married (48.7.5), as compared to day shift male workers (32.14%). Since more of them have dependents on them (wife, children), this may be a contributing factor to their heightened levels of stress. They are also less likely to leave their jobs if dissatisfied (T.Ohida, 2001; Journal of Occupational Health), which may be a reason for increased levels of depression. Among females, however, a much higher percentage (63.6%) of day shift workers is married as compared to night shift workers (27.3%).

Among male workers, it has been seen in our particular sample that night shift workers have more children than day shift workers, which may be an additional cause of higher levels of depression, anxiety and stress, as the number of people depending on them increases. In Australia, both parents become significantly more stressed after the birth of a child. (Mark Wooden and Hielke Buddelmeyer, 2015). Another study by the University of Minnesota in 2011 (Katherine Dorsett et al.), found that parents of all types and all socioeconomic levels in the United States report more symptoms of depression and emotional distress than their childless adult counterparts Such a distinction has not been seen among female workers in this particular study, perhaps because not many women with young children choose to take up night shift jobs.

In analyzing the results, it was also found that women of the night shift had higher levels of

Stress, Anxiety and Depression as compared to their male counterparts also working the night shift. They are much more likely than men to report the physical and emotional symptoms of stress. One of the reasons attributed to these higher levels can be social expectations and duality of work faced by women with increase in modernization in India, although the statistical number of women in the workforce as dramatically increased over 30 fold, the family and the social expectations do not seem to be decreasing at a proportionate rate. A recent analysis by health and safety consultants Arinighte as revealed that excessive stress levels among female worker are 1.5 times more likely than in men. The report titled Work Employment and Society, involved questioning participants on their feelings of job security, flexibility and the perceived potential of progress in the workplace. The findings show that male workers generally indicate their levels of exhaustion and stress at 5% lower when compared to the responses from the female workers. It also suggested that they were more satisfied with their job flexibility and opportunities for advancement while females were less likely to offer a positive response in these areas. On top of an inferior sense of well-being at work, females across the globe are also subject to a discriminatory pay gap and sexual harassment which laves them behind when compared with their male counterparts. In 2013, the pay gap was estimated to be 15% on average across the globe with Korea being the worst offending country. A new survey 2015 found that 1 in 3 women between the ages of 18-34 have been sexually harassed at work. Michelle Ruiz and Lauren Ahn wrote Sexual harassment hasn't gone away; it as just taken on new forms.

## **Conclusion**

Night shift work schedules causes more stress, anxiety and depression in organizational workers, with statistically significant differences.

## **Scope of the study**

The given research can be used as an applicable, up-to-date hard evidence for putting into place adequate intervention techniques or strategies for reducing the stress levels in organizations especially the occupational stress in the night shift workers. Several studies have been put forth by researchers to deal with job stress in this field example by Daniels, 1996; Frank, Campbell & Stanislav, 1994. The core issues pertaining to the intervention strategies are to focus attention on the work design variables such as role overload, low status, and strenuous working conditions.

1. Control and specify the domain of work for workers so as to prevent role overload.
2. Surveillance of the physical working conditions as well as unwanted group or political

pressures in making important job decisions.

3. Ensure proper and just job evaluation with adequate reward system.
4. Ensure that the workload is allocated based on worker's capabilities and resources employed.
5. Surveillance of the pertaining psychological condition of the work force.

Further, education of executives, managers and other members concerning psychological well being and understanding, analyzing and solving the stressors in work place, reduction in health care claims and absenteeism play a major role in reducing occupational stress, not just in irregular shifts but in a holistic setting.

### **Limitations:**

This research has some limitations, of which the noteworthy ones are:

- 1) A lack of previous research on this topic in the Indian context. Thus, a majority of the studies quoted in this research were conducted on an American or European population.
- 2) Lack of generalizability of the findings as the method of sampling was convenience-based, and only the employees of three companies in New Delhi and NCR were respondents in the study.
- 3) There was no comparison made of the levels of depression, anxiety and stress of the employees on a company-wise basis, to see if the difference in levels of depression, anxiety and stress were due to other situational factors.
- 4) There was limited data available as most of the companies approached were unwilling to allow their employees to fill out the questionnaires used. Those which did requested that their company name not be disclosed in the research.
- 5) The sample was based on only 3 organizations from the Delhi-NCR, hence the results cannot be completely generalized to the whole population.
- 6) The results hence obtained could also be influenced by the organization's internal policies and their respective working conditions.

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# Perceived Sources of Happiness among the Young Adult Population at Varying Levels of Happiness

## *Mitakshara Medhi*

### Abstract

With Positive Psychology gaining strong footholds gradually in the realm of psychology, well-being is being studied enthusiastically. Given that happiness, a basic human emotion, is closely associated with well-being and predicts a lot of other future outcomes, it is surprising that very few literature is available on this construct, especially in the Indian context. This study aimed to find the perceived sources of happiness, among the young adult population, through thematic analysis. For greater insight, respondents were divided into average, high and low scorers on the basis of the scores obtained in the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999), before their verbatim were analyzed. The sample consisted of 24 females and 7 males, with an age range of 17-27 years. Along with the SHS, an open-ended question designed by the author was used to understand what made them happy. Results showed that while themes like relationship, new experiences and helping others were unique to the average scorer group, intellectual stimulation, negative outlook were prevalent among the low score group. High scorers had themes of emotional stimulation, focus on self, a positive outlook and so on. There were a lot of common themes and sub-themes across all the three groups like reading, and focus on accomplishments.

### Introduction

*“There is no path to happiness; happiness is the path.” Gautam Buddha, 500 BC*

Psychology, as a discipline, has had a history of about a little more than a hundred years. The theories that developed in the course of its evolution focused on curing illness, enhancing the normal life of individuals and measuring high talents. Yet these three components were only prevalent till the World War II. Seligman and Csikszentmihalyi (2000) believed that the war brought in a shortage of resources, and a widespread occurrence of mental health problems, primarily owing to the trauma created by the violence, and sufferings. Soon all the resources were directed towards treatment of mental illness, the first component, while the other two took

a backseat. Thus emerged the “disease model” in psychology.

After decades of this model being the only way to look at human life, a new field of Positive Psychology arose around 1998. 1998 was the year Martin Seligman was appointed the President of the American Psychological Association, who then introduced this field, formally in 1999. Positive Psychology looks at the past in terms of contentment and well-being, present in the context of happiness and flow, and the future with constructs of hope and optimism. The limelight of the field is put over the “positive” in human beings, rather than considering them a ‘brute’, like few of the earlier theories of psychology.

Of the many constructs of positive psychology, happiness was an important one. One of the classic books of Seligman, which seemed to have laid a firm ground for Positive Psychology, was named *Authentic Happiness*. Prior to this, there were few theories of happiness. *Hedonic* view saw happiness in terms of pleasure-pain principle, where happiness and self-satisfaction were maximized and pain was minimized (Diener, 1999). Then there was the *Desire Theory* by Griffin (1986) which simply looked at happiness as a result of achieving or getting what one wanted. There were no specifications as to what kind of “want” they could be. The *objective list theory* perceived happiness as achieving something that is valued (career, freedom, helping others), rather than a mere emotion (Nussbaum, 1992; Sen, 1985). Synthesizing all the above traditional perspectives on happiness, Seligman postulated the theory of *Authentic Happiness* where happiness was of three kinds – the pleasurable life, the engaged life and the meaningful life. This was brought out in the form of a book with the same name, published in 2004.

In 2011, Seligman went on to publish another book called ‘Flourish’ which added two more dimensions to the previous three components, namely that of relationships and accomplishments. Thus, was born the PERMA model of happiness. Here, P or positive emotions was about looking at life through a positive lens, inculcated through focusing on the ‘brighter side’ of the situation. Second, E or engagement referred to involvement in work or activity that one loves. R focused on relationships with other people, primarily the near and dear ones, and finally, A or accomplishment was based on how much an individual thought he/she had achieved.

Besides theory, there have been few research on happiness. Easterlin (2006), reviewing the United States General Social Surveys, found that happiness seemed to increase between the age of 18-midlife, and fall thereafter. Factors that influence this happiness level were financial condition, family life health and work. Another study found that happiness was about positive assessments of life situations and comparison with others and with the past, based on resources

like money, income, health, family, age and sex (Shin & Johnson, 1978). A similar study was done years later among the Asian Confucians where it was found that interpersonal relationship was considered more important than the amount of knowledge gathered, and monetary gains. This conclusion criticized the West for having a single view of happiness (Shin & Inoguchi, 2009).

In terms of characteristics of happy people, Diener and Seligman (2002) assessed 222 undergraduate students on their happiness levels using several assessments. The top 10% of the consistently very happy people were found to be extraverted, scored low on various psychopathologies of the Minnesota Multiphasic Personality Inventory, and had strong social relationships, were more agreeable and less neurotic. King and Nappa (1998) concluded from their research that American people often valued happiness and a meaningful life as more important than money and even “going to heaven”. Happiness was considered more essential for quality of life than health, money and sex even in England (Skevington, MacArthur and Somerset, 1997). In India, studying temperament and happiness among children aged between 7-14 years, Holder, Coleman and Singh (2012) found that children who were more socially active and extraverted were happier, as compared to their shy peers. Biswas-Diener, Tay and Diener (2012) felt that India, owing to its diversity and population, was a unique case to study happiness. They consequently suggested the two approaches that seemed to influence the happiness and well-being of the Indian population. First was the “outside-in” approach (material conditions like income, job security) and second was the “inside-out” approach (personal characteristics like perceptions, temperament).

Perceptions had been deemed as an important factor in happiness in other researches as well. Lyubomirsky & Tucker (1998), in order to assess how happy individuals perceived and interpreted their life situations differently, conducted three studies, two of which were for testing a questionnaire, and one was a laboratory study. The first study found that peers who were viewed by their classmates as ‘very happy’ experienced the same circumstances and emotions, but tended to look at it more adaptively than their ‘unhappy’ counterparts. The second study found similar results for imagined situations, while in the last study, results showed that happy people assessed a female confederate more favorably than the unhappy participants. Schwartz, Monterosso, Lyubomirsky, White & Lehman (2002) concluded that people who have a constant desire to maximize were less satisfied with their lives, more affected by upward social comparison, and were more sensitive to regrets than non-maximizers. This trait also seemed to

have a positive correlation with depression and perfectionism.

Lastly, a lot of criticism had been faced by research on happiness regarding its doubtful scientific nature. Primarily, intervention techniques were in dispute, because many felt that it would not bring about a long-term change. However, Seligman, Steen, Park and Peterson (2005) analyzed 5 interventions targeting the construct of happiness and found that 3 out of the total interventions were successful in causing a long lasting increase in happiness of individuals and a decrease in depression. Studies in the field of happiness, though not much prevalent, continued to expand with the growing importance of the field of positive psychology.

In the light of the above information, the present study aimed to analyze the themes of the verbatim of respondents who were first divided into three groups on the basis of their scores in the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999). The three groups were respondents who scored in the average range of the questionnaires, respondents whose scores were above average, and respondents whose scores were below average. The average range was calculated by computing the mean and standard deviation of the scores of the sample. The rationale was to look for the differences and similarities about how happy and unhappy people acknowledge the sources of their happiness, in the Indian population. Happiness, according to the researcher, is an important but underestimated feeling, which determines one's daily perceptions, behavior and even one's quality of experiencing an everyday situation (like heat, conversations with peers, and so on). But when looked at from a general and stable perspective, different people have different levels of happiness. The researcher wanted to find out if this could be attributed to what kind of sources these individuals attributed their happiness to. She was interested to explore variations in the kind of the sources that were cited, if any existed at all.

## **Sample**

The sample of the present study consisted of 31 respondents (24 females and 7 males), with the age range of 17-27 years. The mean age of the sample was 20.81 years, with the highest number of respondents belonging to the age group of 20 years (13). The educational qualifications ranged from undergraduate students to individuals pursuing PhD. The reason for such a wide age range was because the researcher wished to study this construct among the "youth". According to the National Youth Policy (2014), anyone between the ages of 15-29 were considered as "youth". Hence, all the respondents met the inclusion criteria.

As the data was collected online, the respondents were spread all over the country. Socio-economic status was not determined for this research. This was one of the limitations of the study. However, since the rationale was to look at the sources of happiness of individuals at different levels, socio-economic status was not considered as an important factor at this particular phase of the study. Yet further research to delve into differences arising due to this factor is important. Moreover, data, being collected online, the researcher was aware of the limits it would put on the representativeness of the sample. The online method was chosen merely out of convenience, owing to the paucity of time. The only advantage seen in this method of data collection was the option of anonymity. 7 out of the 31 participants withheld their names.

## Measures

As mentioned, data was collected online, in the form of a survey.

In order to find out the levels of happiness among respondents, the **Subjective Happiness Scale**, designed by Lyubomirsky and Lepper (1999) was used. It was a 4-item questionnaire, where two items aimed to get a direct rating on their happiness, while the other two items had a description of a kind of people, which then asked respondents to indicate how much the description resembles them. All the questions were to be marked on a rating scale of 1 to 7.

The validity of the SHS scale was established in 14 studies among 2,732 individuals, from two countries - the US, and Russia. Internal consistency ranged from 0.79 to 0.94. The test-retest reliability ranged from 0.55 to 0.90, with 0.55 being established on adults tested 1 year apart. Convergent validity was 0.52-0.72.

Apart from this, **ONE open-ended question**, designed by the author, was asked to the respondents in order to collect verbatim. The question was “What makes you happy? Why does it make you happy? Please describe it in as much detail as possible.”

## Results

After the data was collected, the Subjective Happiness Scale scored for each respondent. From the results, mean (4.47) and standard deviation (1.33) were computed. The range of average score was, thus, 3.14-5.8. On the basis of this, individuals were grouped as ones with average scores (19 respondents), ones who fell above the average range (5 respondents), and respondents whose scores were lower than average (7 respondents). Their open-ended responses were then

analyzed for themes. Percentages were calculated for each theme, on the basis of number of occurrence of the theme. The analysis was not checked by another independent author. However, all the verbatim of the respondents have been included in the tables. The tables for each group are as follows:

Table 1  
*Analysis of verbatim of respondents with average scores*

| Sl. NO | VERBATIM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SUB-THEME                                                                                                                    | BROAD THEME          | % OF OCCURANCE |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------|
| 1.     | <ul style="list-style-type: none"><li>Company of the <b>people I love - my friends , family...</b></li><li>I think being <b>around people</b> who make me feel loved, makes me happier than anything else</li><li>Spending time with <b>family and friends,</b></li><li>Spending time <b>with family and friends</b> makes me happy</li><li>But talking to my <b>loved one, Bible study</b></li><li>Good <b>people, happy family</b></li><li>When I am with <b>my family and friends</b> having a good time.</li><li>a happy <b>family and good friends</b></li><li>Finding the rare <b>few like minded people</b></li><li>Spending time with <b>my loved ones</b> who respect me and aren't judgemental.</li><li></li><li><b>..see other happy</b> because of me</li><li>Coming up to... expectations of <b>people who matter to me</b></li><li>Seeing <b>my loved ones</b> happy makes me happy</li><li></li><li>I am happy when <b>my friends</b> treat me just the way i treat them. It gives me so much of happiness to see that they reciprocate the same way i do</li><li>Just <b>others around me</b> being happy makes me happy. To be able to <b>love</b> makes me happy. To be loved makes me happy</li></ul> | <p>Company of the near and dear ones</p> <p>Seeing near and dear ones happy (because of self)</p> <p>Reciprocal feelings</p> | Relationship focused | 41.67%         |

| Sl. N O | VERBATIM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SUB-THEME                                                                          | BROAD THEME                  | % OF OCCURANCE |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------|----------------|
| 2.      | 1. Architecture yes. Coz thats my <b>passion</b><br>2. <b>Football</b><br><br>1. things that give me happiness are <b>like hobbies</b> - I love to cook, both for myself and for others<br>2. <b>reading</b> a good book, <b>good food, good music..... reading a good book, good food, good music.....Gardening</b><br>3. <b>Music</b> makes me happy<br>4. indulging <b>in art</b> , hot baths.<br>5. <b>Running</b> makes me happy, <b>dancing</b> and most of all a guilt free day of <b>Painting</b> . | Passion<br><br><br><br><br><br><br>Hobbies                                         | Focus on hobbies and passion | 19.44%         |
| 3.      | 1. coming up to my <b>own expectations....</b><br>2. feeds <b>my need to be different</b> from the crowd.<br><br>1. doing <b>good work</b> makes me happy<br>2. Becoming <b>a better person</b> from what I was earlier makes me happy<br>3. Circumstances working in my favour make me happy.<br>4. I think it is something which is some kind of <b>internal peace</b>                                                                                                                                    | Meeting one's own expectation<br><br><br>Becoming better<br><br><br>Internal Peace | Focus on Self                | 16.67%         |
| 4.      | 1. I feel good when I am able to help someone clear their mind or just help then with anything<br>2. And most importantly, <b>helping people</b> makes me happy because nothing can match the joy you experience when you see someone smile just because of you. :)<br>3. finding solutions to problems others<br>4. <b>Being able to bring smile</b> to the faces of my loved ones, with my deeds and my presence, makes me happy                                                                          | Helping others                                                                     | Helping others               | 11.11%         |

| Sl. NO | VERBATIM                                                                                                                                                                                                                                                                                                                                                                                           | SUB-THEME                                                                         | BROAD THEME              | PERCENTAGE OF OCCURRENCE |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------|--------------------------|
| 5.     | 1. Self Satisfaction....make me feel accomplished, worthy and an asset and satisfied from within.<br>2. Levelling up in the game of life makes me happy<br>3. Finally <b>dreams becoming reality</b> makes me happy.<br>4. <b>Independence</b> makes me happy (I am a differently abled person).                                                                                                   | Self satisfaction<br><br>Mastery<br><br>Realisation of dreams<br><br>Independence | Sense of Accomplishments | 11.11%                   |
| 6.     | 1. I enjoy <b>experiencing new places</b> , I love swings in parks and taking long walks<br>2. <b>New experiences.</b> Because I'm a curious soul and I like the thrill or the excitement that a new experience gives me<br>3. travelling also makes me happy, I enjoy <b>new experiences</b> , meeting new people and good <b>conversations</b> .<br>4. Events, <b>conversations</b> , situations | New places<br><br>Travelling<br><br>Conversations                                 | New Experiences          | 11.11%                   |

Table 2

*Analysis of verbatim of respondents with higher than average scores*

| SL.NO | VERBATIMS                                                                                                                                                                                                   | SUB-THEME   | BROAD THEME | PERCENTAGE |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|------------|
| 1.    | You know how people run after perfection, for me that isn't the case. When I am <b>satisfied</b> with what I am doing and what I have done, I become happy. So for me satisfaction is the key to happiness. | Contentment |             |            |

| SL.N<br>O | VERBATIMS                                                                                                                                                                                                                                                                                                                 | SUB-<br>THEME | BROAD<br>THEME                              | PERCENT<br>AGE |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------------------|----------------|
|           | <ul style="list-style-type: none"> <li>A <b>positive thought</b> that I have got the opportunity to live life for so long and I should <b>make the most</b> of it.</li> <li>I am a glass half full kind of a person. Even when things are going wrong, I always find <b>silver linings</b></li> </ul>                     | Positivity    | Positive outlook                            | 42.85%         |
| 2.        | <ol style="list-style-type: none"> <li>Anything and <b>everything</b> can make me happy. From the biggest things like successfully completing a very difficult task to the smallest one</li> <li>I firmly believe that every experience is worth experiencing and there's something <b>good in everything</b>.</li> </ol> | Everything    | Finding Happiness in Everything             | 28.57%         |
| 3.        | <ol style="list-style-type: none"> <li><b>Reading</b> makes me incredibly happy. It gives me not just <b>intellectual stimulus</b> but also an opportunity to laugh, cry, imagine, love</li> </ol>                                                                                                                        | Reading       | Both intellectual and emotional stimulation | 14.28%         |
| 4.        | <ol style="list-style-type: none"> <li>I take a day at once. So if I <b>complete my daily goals</b> they keep me happy. Each day leads to a step towards my ultimate goal. The <b>daily success</b> means happiness to me.</li> </ol>                                                                                     | Goals         | Achievement focused                         | 14.28%         |

Table 3

*Analysis of verbatim of respondents with lower than average scores*

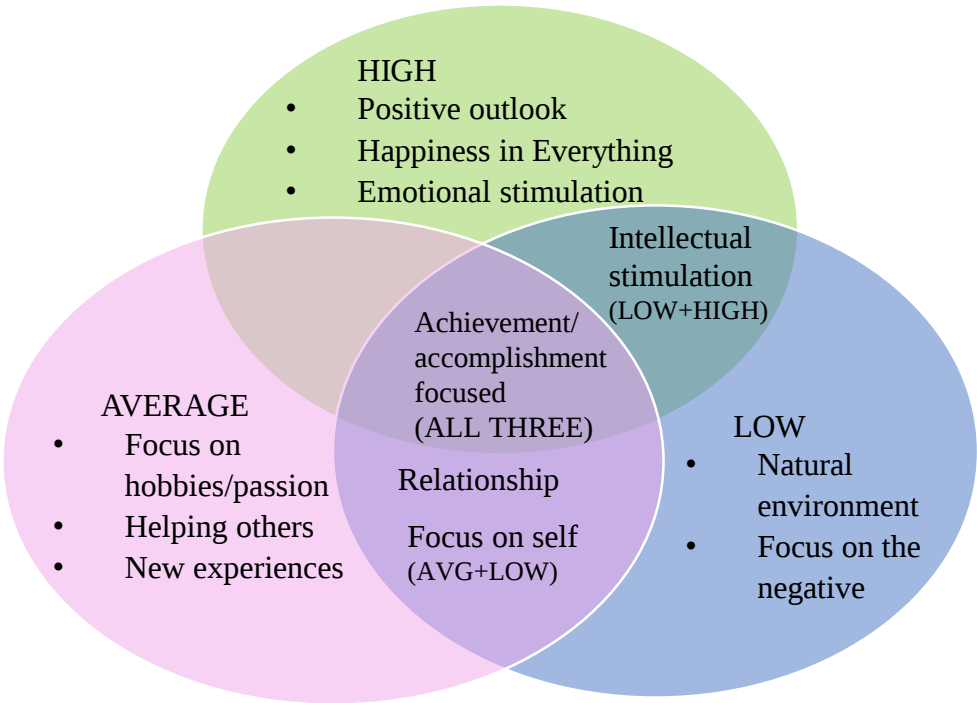
| S. N O | VERBATIMS                                                                                                                                                                                                                                                                                                                                                                                                                     | SUB-THEME                                                                                           | BROAD THEME                 | %      |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------|--------|
| 1.     | <p>1. I love academic and intellectual stimulation and <b>coming up with ideas and theories</b> and research. It gives me a "high".</p> <p>2. <b>learning new things</b></p> <p>3. <b>Books,</b> good food, good movies...<b>a meaningful conversation</b></p> <p>4. In fact, any kind of <b>reading</b> makes me extremely happy. It is my life's true joy. <b>Writing.</b> Pouring out my thoughts and writing fiction.</p> | <p>New ideas</p> <p>Learning new things</p> <p>Meaningful conversations</p> <p>Reading/ Writing</p> | Intellectual Stimulation    | 25%    |
| 2.     | <p>1. beautiful scenery make me very happy</p> <p>2. rains, greenery, sunsets and sunrise, a crescent moon night</p> <p>3. <b>Dogs.</b></p>                                                                                                                                                                                                                                                                                   | <p>Nature</p> <p>Animals</p>                                                                        | Natural Environment focused | 18.75% |
| 3.     | <p>1. socialising with friends</p> <p>2. Spending time...<b>with family</b></p>                                                                                                                                                                                                                                                                                                                                               | Near and dear ones                                                                                  | Relation-focused            | 12.5%  |
| 4.     | <p>1. becoming a better person step by step.</p> <p>2. Being an introvert, it feels good to spend some time <b>alone</b></p>                                                                                                                                                                                                                                                                                                  | Self                                                                                                | Focus on self               | 12.5%  |
| 5.     | <p>1. <b>Achieving goals</b> in things I love. <b>Fame, greatness, power.</b> Sometimes, even love.</p> <p>2. taking one step every day towards <b>my goals</b></p>                                                                                                                                                                                                                                                           | Goals                                                                                               | Achievement focused         | 12.5%  |
| 6.     | <p>1. <b>I don't like the idea of happiness.</b> Happiness is over rated.</p> <p>2. Prblm free life</p> <p>3. This is <b>largely absent</b> from my college which makes <b>sad and bored</b> with life</p>                                                                                                                                                                                                                    | <p>Unconventional negative outlook</p> <p>Absence</p>                                               | Focus on the negative       | 18.75% |

In order to understand the themes and overlaps better, the following venn-diagram has been used. It could be found that under the average scorers, the themes of focus on hobbies/passion, helping others and new experiences were exclusive. For the high scorers, positive outlook, happiness in everything and emotional stimulation were prevalent. With regard to people scoring below the average scores, natural environment and focus on the negative were exclusive.

Yet there were overlaps. Focus on achievement or feelings of accomplishment were found in all the three groups. Surprisingly, the high and low scoring groups had one common theme – intellectual stimulation, while the average and the lower than average group had the common themes of relationship-focus and focus on self. None of the themes overlapped between the high and the average scoring groups.

Figure 1

*Venn-Diagram showing the overlaps of themes among the three groups.*



## Discussion

After the Subjective Happiness Scale had been scored, the mean (4.47) and standard deviation (1.33) were calculated, determining the average range of scores (3.14 - 5.8). Based on this, individuals were divided into three groups – people whose scores were higher than average (5 respondents), people whose scores were lower (7 respondents) and people whose score fell within the average range (19 respondents). From the responses given to the open-ended questions, themes were computed. The percentages of the occurrence of themes were calculated, not on the basis of individual responses, but in terms of frequency with which the themes occurred in all the responses, taken as a whole. This meant that one response may have contained more than one theme. Percentage was found out on the basis of the total occurrence of all the themes taken together.

In the analysis of the content, the following themes were found in the verbatim of people with higher than average scores (above 5.8). 42.85% of the responses contained a “positive outlook” towards life, or circumstances. They were found to connote a positive meaning, even to negative situations. This outlook, most likely, results from holding an overall positive affect. E.g. one respondent answered “Even when things are going wrong, I always find silver linings”. This theme was in line with Seligman’s PERMA model of happiness, where P stood for “positive emotion”. He believed this to be a crucial component for ‘flourishing’ in life. This could have several implications. In a meta-analytical study, where studies such as cross-sectional, longitudinal and experimental were included, Lyubomirsky, King and Diener (2005) found that a positive affect may be correlated to happiness, as it brought with it several elements and resources that contributed to a person being happy. In the organizational setting, Staw, Sutton and Pelled (1994) found high correlation between positive emotions and success in job as well as developing a supportive environment within and outside the sphere of work. Adams, Bezner, Drabbs, Zambarano, and Steinhardt (2010) concluded from their survey research among 112 undergraduate students that along with positive outlook and coherence, a purpose in life was necessary to ensure well-being.

The assumption of an overall positive affect was further accentuated by the next theme found in this group – finding happiness in everything (28.57%). E.g. one of the response was “Anything and everything can make me happy”. This, too, could be classified as falling under the ‘P’ component of Seligman’s model. Veenhoven (2006), in his article “How do we assess how happy we are?” stated that a key element of happiness was satisfaction with life. This

satisfaction, according to him, was explained with the help of three theories, out of which, the Affect Theory focused on happiness as a result of “unreasoned emotional experience” concerned with the appraisal of how one usually feels.

In the Low-score group, intellectual stimulation (25%) seemed to be the highest occurring source of happiness. This stimulation mostly seemed to come from reading, which has been discussed later. The second theme to emerge was natural environment and related sources (18.75%). E.g. “..rains, greenery, sunsets and sunrise, a crescent moon night” was written by one of the respondents. This had been explained by a study by Hartig, Mang and Evans (1991), who using a quasi-experimental and a true experimental design, demonstrated that natural environments had a “restorative” effect on the moods of individuals. Perhaps, a natural environment acted as a “break” to the tiresome negative cognitions in people with low-scores of happiness. Kaplan (1995) believed that nature had the power to help an individual recover from “directed attention fatigue”, which in this case could probably be the cognitions. Apart from this, focus on the negative aspects of life was prevalent in 18.75% of the responses. In a stark contrast to the high-score group which focused on “happiness in everything”, low-score group acknowledged a sense of “absence” of the desired object. E.g. one respondent stated “I love academic and intellectual stimulation and coming up with ideas and theories and research. It gives me a "high". This is largely absent from my college which makes sad and bored with life”. Although none of the PERMA components could directly be used for this, there seemed to be an underlying need for “engagement” or ‘E’ and a search for ‘meaning’ or ‘M’, which they felt were absent from their lives, thus, lowering their happiness levels.

Focus on the self was a common theme in the score groups of average (16.67%) and lower than average (12.5%). However, the lower score groups focused on being better or spending time alone. In contrast, the average-score categories had sub-themes of inner peace, the “need to be different” and “doing good work”, as mentioned by few of the verbatim. None of the PERMA components seem to fit here, which is why the level of happiness may have been average or below average. Lu and Shih (1995), however, while studying the Taiwanese residents of the West concluded nine categories of the 180 reported sources of happiness. Out of this, one important theme that emerged was sense of self-control and self-actualization. Other categories were fulfilment of the need for respect, harmonious interpersonal relationships, gratification of material needs, work related achievement, being at ease with life, taking pleasure at others' expense, pleasure and positive affect, and health.

To add to this, in the average score group, “helping others” was prevalent in 11.11% of the themes. E.g. “And most importantly, helping people makes me happy because nothing can match the joy you experience when you see someone smile just because of you.” was one of the responses. A review research by Post (2005) found that altruism is highly correlated with well-being and happiness. The correlation of helping behaviour with happiness, health and well-being was also confirmed by a research on 457 teens by Schwartz, Keyl, and Marcum (2008). The surprising element was that the theme of helping others was not found in any of the other two groups, including the high scorers. One explanation might be that people with average scores did not necessarily have a positive outlook towards life. Hence, when faced with spells of unhappiness, instead of finding the positive in the situation, they may have resorted to altruistic behaviour, which perhaps caused a diversion from the context and made them feel better to have helped someone else in need. This may have served the purpose of providing a “meaning” to their lives during difficult times (the ‘M’ of PERMA). Another reason might be that high scorers, owing to their positivity, might overlook the fact that not all individuals were optimistic, and some might have even needed help. Yet these explanations must not suggest that a very happy person is not altruistic at all. An important aspect of these speculations to be mindful about is that these are tentative speculations by the author, and not a research-supported reason.

Similarly, the explanation of a need for ‘diversion’ during unhappy phases of the average-score group might also be brought about by the theme of “new experiences” which also occurred 11.11% in the verbatim. But many respondents, in all likelihood, saw it as a direct source for thrill seeking and enlightening themselves. These experiences were in terms of travelling, new places, and conversations. E.g. one respondent stated that “New experiences. Because I'm a curious soul and I like the thrill or the excitement that a new experience gives me.” A study among 1530 Dutch individuals found that the happiness levels of travellers were more than non-traveler before and during the trip, but the levels were the same after the completion of it (Nawijn, Marchand, Veenhoven, and Vingerhoets, 2010). However, Vuuren and Slabbert (2011) concluded from their research that the main travel motivates of individuals were resting and relaxation, followed by enriching and learning experiences. Recreation and personal and social gains were also seen as important by the travellers. All of these perhaps contributed to the happiness levels of the individuals with average score. But the PERMA model was inadequate to explain this factor. Future research may focus on why this trend was prevalent only in the

average scoring group.

The most unique of the themes for the average-score group was perhaps the theme of relationship focus. Although this was present in the other groups as well, but it seemed to particularly dominate the statements of individuals with average scores. E.g. “I think being around people who make me feel loved, makes me happier than anything else”, “Spending time with family and friends makes me happy” etc. With a percentage of occurrence at 41.67%, this focus was found in almost all of the verbatim of the respondents with average scores. Apart from the PERMA model, where ‘R’ stood for relationships, a plethora of study also validates this connection. In a study by Seligman and Diener (2002), students who were found to be happy had strong ties with family and friends and were devoted to spending time with their near and dear ones. In order to be happy, students required to develop at least one close relationship, which provided space for self-disclosure. Otherwise it led to loneliness, irrespective of the number of such relationships (Jackson, Soderlind & Weiss, 2000). It still could not be established as to why this was so prevalent only in the average score group, and not so much in the rest of the groups. Future studies might aim to provide an appropriate reasoning.

One of the most curious of the sub-themes, reading, too, was found in all the three groups. However, the verbatim of the respondents found in the different groups seemed to connote a different understanding of the indulgence in this particular hobby. E.g. a respondent who scored lower than average wrote “Reading. I love fiction. Anything psycho-thriller and I am in.” This suggested a kind of need for intellectual stimulation. She also mentioned how it was, in fact, intellectual stimulation that gives her happiness, something she found missing from her current life. A respondent who scored higher than average took into account this stimulation aspect but also added that “reading was...an opportunity to laugh, cry, imagine, love. I feel that it makes me more empathetic” Thus, it had an emotional aspect to it. Studying the command over reading among students of diverse cultural backgrounds, Au (1997) concluded that this factor highly correlated to engagement. In case of the current study as well, the habit of reading may have created a sense of “engagement”, which Seligman, through PERMA, felt was important for happiness and well-being.

Goal Achievement, again, was found in all the three groups (11.11% in the average score group, 14.28% in the high score group and 12.5% in the low score groups). This was in sync with the last component of PERMA, namely, accomplishment. Yet there were variations about the perception of this factor. The people within the average range, focused more on betterment of

self (e.g. “Levelling up in the game of life makes me happy”). People in this category stated goals in terms of mastery approach, self-satisfaction, independence and hopeful realization of dreams. Surprisingly, the verbatim related to goals, in both the high and the low score group, focused on accomplishment of daily goals as important. However, one verbatim from the group with low scores (“Achieving goals in things I love. Fame, greatness, power. Sometimes, even love) seemed to be blown out of proportions, with future orientation and a hint at loneliness.

The aspect of loneliness was found in other statements of the low-score groups as well, although the perception of the loneliness itself is debatable. The respondents who stated this component considered themselves as introverted. E.g. one of the respondent stated “Being an introvert, it feels good to spend some time alone. I think this one line says it all.” This presents a sense of “happiness” with being alone. However, another verbatim “I don't like the idea of happiness. Happiness is over rated.” may be seen as some form of intellectualization, although no concrete evidence can be arrived upon, without further probe. Weeks, Michela, Peplau, and Bragg (2016), through a structural equation analysis, found that while loneliness and depression were correlated, both seemed to be completely different constructs, as neither directly caused the other. Moreover, when talking about PERMA, Seligman had acknowledged how happiness theories often discounted the perceptions of the introverts, and consequently their votes (in the context of policy making, arising out of maintaining well-being of the citizens). However, research did seem inadequate to suggest a clearer picture.

With regard to the current study, certain limitations must be kept in mind while interpreting the results. First, the sample had very few male respondents. Second, it was not based on a randomized sample, and the size was limited. Hence, these must be kept into consideration while interpreting the results, since generalization may not really be a viable option. Third, the respondents whose scores did not fall in the average (that is, both high and low scores) were very few in number. Even for the average score group, 19 is a limited sample size. Moreover, it was a self-report measure, where data was collected online. This could call for serious concerns regarding the validity of the results. Therefore, the study above does not provide any conclusive evidence on the matter. Socio-economic status, as mentioned before, could be considered as a factor for further studies. Future studies may also look at probing the reasons behind the sources of happiness, among the different groups. Thematic analysis for the reasons of such attributions would be able to provide a greater insight into the matter. The implications of this study is that it would help in contributing to the literature and may prove to be useful while designing

intervention strategies for increasing happiness among people. It may help in implementation of modification strategies with different groups of people, if need be. But further research needs to look at understanding the reasons behind the commonalities of certain themes in all the three groups. This research did not focus on the “why” of the themes. There were few mere speculations, which needed enhanced empirical probe.

## Conclusion

In conclusion, it can be seen that themes that were computed on the basis of the three categories – high scorers, average scorers and low scorers – were both distinct and overlapping. In case of high scoring group, the major themes were positive outlook, finding happiness in everything, intellectual and emotional stimulation and focus on achievement. Among the average group, the emergent themes were relationship, focus on hobbies and passion, focus on self, helping others, sense of accomplishments and new experiences. Lastly, people with low scores had themes like intellectual stimulation, natural environment focused, relation- focused, focus on self, achievement focused, and focus on the negative. The overlap of the subtheme of reading was found to be intriguing, although further research needs to be conducted for more insight. The themes which turned out as expected by the author were – “positive outlook” and “happiness in everything” for the high scorers, and a “negative outlook” in the low scoring group. The results were surprising in case of components like relationship-focused because it seemed to dominate as a source among the average scorers. The study was inadequate to question the reason behind certain unique themes, like focus on natural environment among the low scorers. But it would be an interesting topic for future studies. Another theme which overlapped in all the groups was achievement-focus, although for the average scorers, it was denoted more as a sense of accomplishment than achievement of something. Reading as a sub-theme, too was found in all the groups. However, for the average scorers, focused on it as a hobby, while the other two groups saw it as a way for intellectual stimulation.

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