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## ભારતમાં નાના ખેડૂતોની વર્તમાન સમસ્યાઓ અને તેના ઉકેલની શક્યતાઓ

શ્રી મૌલિકભાઈ પ્રવિણભાઈ સેનમા  
Ph.D.વિદ્યાર્થી,  
સુરેન્દ્રનગર યુનિવર્સિટી, વઢવાણ

## ❖ પ્રસ્તાવના :-

ભારતીય અર્થતંત્ર માટે ખેતીક્ષેત્રે કરોડરજી સમાન છે. દેશના આર્થિક વિકાસનો આધાર ખેતી વિકાસ પર છે. આજે પણ દેશની કુલ વસ્તીના ૭૦% વસ્તી પ્રત્યક્ષ યા પરોક્ષ રીતે ખેતીક્ષેત્રમાંથી રોજગારી મેળવી પોતાનું ગુજરાન ચલાવે છે. ઉપરાંત માનવીની ૬૦% જીવન જરૂરી ચીજ વસ્તુઓ ખેતી પર નિર્ભર છે. દેશની રા. આ. માં વિદેશી હૂંડિયામણ એકત્રિત કરવામાં તથા દેશના ઔદ્યોગિક વિકાસના પૂરક તરીકે આજે પણ ખેતીક્ષેત્રનું વર્ચસ્વ છે. છતાં પણ આઝાદી પછી સત્તાધારી પક્ષો દ્વારા ખેતીક્ષેત્રને જોઈએ તેટલા પ્રમાણમાં પ્રાધાન્ય આપવામાં આવતું નથી. આજે મોટા ખેડૂતોને બાદ કરતાં નાના અને સી. ખેડૂતો તથા ખેતમજૂરો સુખી થયા નથી. દેશનો ખેડૂત સુખી થશે તો જ દેશનું અર્થતંત્ર મજબૂત થશે અને દેશનો આર્થિક વિકાસ થશે તે હકીકત છે.

ભારતીય ખેડૂતોને મુખ્યત્વે બે ભાગમાં વિભાજીત કરી શકાય. નાના ખેડૂતો અને મોટા ખેડૂતો. ભારત દેશમાં મોટા ખેડૂતોની સંખ્યા નહીવત છે. જ્યારે નાના ખેડૂતોની સંખ્યા ઘણી વિશાળ છે. આશરે ૭૫% ખેડૂતોએ નાના અને સીમાંત ખેડૂતો છે. ૧૯૮૦-૮૧ ના અંદાજ મુજબ ભારતમાં ૧૦ હેક્ટરથી વધુ જમીન ધરાવનાર ખેડૂતોનું પ્રમાણ માત્ર ૨૪% છે. આનો અર્થ એ થાય કે મોટાભાગના ખેડૂતો નાના ખેડૂતો છે. તેમની વાર્ષિક આવક પણ રૂ. ૬૦,૦૦૦/- થી ઓછી હોય. આથી દેશના આર્થિક વિકાસ માટે નાના ખેડૂતોની સમસ્યાઓ હલ કરવી પડે. ખેડૂતને સુખી કરવો પડે. આયોજન દરમિયાન સત્તાધારી પક્ષો દ્વારા અનેક પગલાંઓ ભરવામાં આવ્યા હોવા છતાં આજે નાના ખેડૂતોની સમસ્યાઓ હલ થઈ નથી. નાના ખેડૂતોને વર્તમાન સમયમાં અનેક સમસ્યાઓનો સામનો કરવો પડે છે. જેમ કે,

## (૧) અપૂરતી સિંચાઈ વ્યવસ્થા :-

ખેતીના પાકને નિયમિત અને પૂરતા પ્રમાણમાં પાણી પ્રાપ્ત થાય તો જ ખેતરમાંથી ધાર્યું ઉત્પાદન મેળવી શકાય. સિંચાઈ ખેતી પાક માટે આધાર સ્તંભ કહેવાય આજે પણ ૫૦% ભારતીય ખેતી વરસાદ પર આધારિત છે. જ્યારે ૫૦% જમીન વિસ્તારમાં સિંચાઈની સગવડો ઉપલબ્ધ છે તેમાં ટ્યુબવેલ દ્વારા સિંચાઈ અતિ ખર્ચાળ છે, તેમાં પૂરતા પ્રમાણમાં વીજળી પ્રાપ્ત થતી નથી. નહેરો દ્વારા સિંચાઈની સગવડો ઉપલબ્ધ છે તેમાં પણ પાણી અપૂરતું અને અનિયમિત પ્રાપ્ત થાય છે. તેથી ખેડૂત પૂરતા પ્રમાણમાં ખેત ઉત્પાદન મેળવી શકતો નથી. આમ, નાના ખેડૂતોને અપૂરતી સિંચાઈ વ્યવસ્થાનો સામનો કરવો પડે છે.

## (૨) ધિરાણની વ્યવસ્થા :-

ધિરાણની સમસ્યા ખેડૂતો માટે એક મહત્વની સમસ્યા છે. ખેડૂતોને માત્ર ઉત્પાદન કે વેચાણની પ્રક્રિયા માટે નહીં પણ વપરાશ અને બીન ઉત્પાદક હેતુઓ માટે ધિરાણની જરૂર પડે છે. આજે ઉત્પાદકતા વધારવા ટેકનોલોજીનો ઉપયોગ અનિવાર્ય છે તે માટે ધિરાણની જરૂરિયાત ઉભી થાય. આજે પણ મોટાભાગના ખેડૂતો શાહુકારો, વેપારીઓ કે ખાનગી એજન્સીઓ પાસેથી ધિરાણ મેળવે છે. તેમના વ્યાજદરો સરકારી કે સહકારી બેંકો કરતાં ઉંચા હોય છે. સરવાળે તેમનું શોષણ થતું હોય છે. સરકારી કે સહકારી બેંકોનું ખેડૂતોને ધિરાણનું પ્રમાણ ૬૦% જેટલું ગણાય છે. પણ તેનો લાભ નાના ખેડૂતો કરતાં મોટા ખેડૂતો વધુ મેળવે છે.

## (૩) નાના ખેડાણ ઘટકો :-

ભારતમાં વારસાપ્રથાને કારણે ખેતરોનું ખંડ વિભાજન ઉપખંડ વિભાજન થયેલું છે. ખેડાણ ઘટકો નાના કદના વધુ જોવા મળે છે તેથી ટેકનોલોજી કે યંત્રોનો વપરાશ, ટ્યુબવેલ દ્વારા સિંચાઈની વ્યવસ્થા ખર્ચાળ બને છે તેમજ નાના ખેડાણ ઘટકોમાં

શ્રમનો ઓછો વપરાશ મૂડીનો મર્યાદિત ઉપયોગ, જમીનનો બગાડ, જમીનની ફળદ્રુપતામાં ઘટાડો, ટેકનોલોજી કે અપૂરતી સિંચાઈ વ્યવસ્થા વગેરે પ્રશ્નોનો નાના ખેડૂતોને સામનો કરવો પડે છે.

(૪) નબળી આર્થિક પરિસ્થિતિ :-

મોટાભાગના નાના ખેડૂતોની આર્થિક પરિસ્થિતિ સારી હોતી નથી. તેમની આવક ઓછી અને અસ્થિર હોવાથી ખેતી તેમજ કુટુંબનું ગુજરાન ચલાવવા અને સામાજિક પ્રસંગો માટે પણ દેવું કરવું પડે છે. આજે મોટાભાગના ખેડૂતો દેવાદાર હોય છે. તેથી દેશમાં ખેડૂતો માટે દેવા માફીનો પ્રશ્ન ઉભો થયો છે. કહેવાય છે કે દેવામાં ફસાયેલો ખેડૂત ક્યારે બહાર નીકળી શકતો નથી. દેવાની પરિસ્થિતિને કારણે ખેડૂત ખેતરમાં ખેતી પાક માટે પુરતું મૂડી રોકાણ કરી શકતો નથી તેની ઉત્પાદન પર અવળી અસર પડે છે.

(૫) અપૂરતી સંગ્રહ - વેચાણ વ્યવસ્થા :-

ભારતમાં નાના ખેડૂતો પાસે રહેઠાણની પણ અપૂરતી સુવિધા છે. ખેતી પેદાશોનો સંગ્રહ ક્યાં કરવો તે પ્રશ્ન ખેડૂતો માટે સૌથી મહત્વનો છે. નાના ખેડૂતોની આર્થિક પરિસ્થિતિ સારી ના હોવાથી સિઝનમાંજ ખેત ઉત્પાદન વેચી દેવામાં આવે છે. સિઝનમાં ભાવ ઘણા નીચા પ્રાપ્ત થાય છે. તમાકુ કે કપાસના સંગ્રહ માટે ગોડાઉન વ્યવસ્થા પણ અપૂરતી છે. ખેડૂતો તમાકુ કે કપાસનો પણ સંગ્રહ કરી શકતા નથી પરિણામે તેના વ્યાજબી ભાવો પ્રાપ્ત થયા નથી. આમ, અપૂરતી સંગ્રહ - વેચાણ વ્યવસ્થાનો પણ નાના ખેડૂતોને સામનો કરવો પડે છે.

(૬) ટેકનોલોજીકલ ખેતીના અમલનો અભાવ :-

આજે પણ ભારતમાં ઘણા ખેડૂતો કાર્યશીલ અને કાર્યક્ષમ નથી તે પણ હકીકત છે. ખેડૂતો ખેતીને એક વ્યવસાય કે ઉદ્યોગ તરીકે સ્વીકારતા નથી. તેમના મતે ખેતી જીવન જીવવાની પદ્ધતિ છે. ખેતી દ્વારા કુટુંબનું ભરણપોષણ કેમ કરી શકાય તેવું વિચારે છે. ઘણા ખેડૂતો અશિક્ષિત હોવાને કારણે રાસાયણિક ખાતરો, સુધારેલા બિયારણ, જંતુનાશક દવાઓ કે નવા વૈજ્ઞાનિક સુધારાઓનો ઉપયોગ કરી શકતા નથી. ખેતીની આવકને મહત્તમ બનાવવાનો પ્રયત્ન કરતા નથી. આમ, ટેકનોલોજીકલ ખેતીના અમલના અભાવથી પણ વધુ ઉત્પાદન મેળવી શકતા નથી. પરિણામે ખેતી ઉત્પાદકતા નીચી રહે છે અને ખેતીમાંથી આવક ઓછી પ્રાપ્ત થાય છે.

ભારતમાં નાના ખેડૂતોને કુદરતી, માનવ સર્જિત કે આયોજનની ખામીઓને કારણે ઉપરોક્ત કેટલીક સમસ્યાઓનો સામનો કરવો પડે છે. આ સમસ્યાઓમાંથી ખેડૂતોને બહાર લાવવા માટે ખુદ ખેડૂતોએ કાર્યશીલ અને કાર્યક્ષમ બનવાની સાથે સરકાર, વિવિધ ખાનગી સંસ્થાઓ, સહકારી સંસ્થાઓ, નાબાર્ડ કે અન્ય સંસ્થાઓએ ઉકેલો સૂચવેલા છે. તેમાં પ્રશ્નોના ઉકેલની શક્યતાઓ રહેલી છે.

- નાના ખેડૂતોને સરકારી કે સહકારી બેંકો દ્વારા પૂરતા પ્રમાણમાં ઓછા વ્યાજ દરે ધિરાણ પ્રાપ્ત થાય તેવા પ્રયાસો સરકારે કરવા જોઈએ.
- નાના ખેડૂતોનું ભૂતકાળનું દેવું માફ કરવા અથવા ઘટાડો કરવો જોઈએ. દેશનો ખેડૂત સુખી થાય તેવા પ્રયાસો સરકારે કરવા જોઈએ.
- ખેડૂતોને પૂરતા પ્રમાણમાં ખેતીના સાધનો ઉપલબ્ધ થાય તેવી વ્યવસ્થા કરવી જોઈએ.
- નાના ખેડૂતોને આધુનિક ટેકનોલોજીથી માહિતગાર કરવા તે માટે શિક્ષણ, તાલીમ કે વિસ્તરણ સેવાની વ્યવસ્થા કરવી જોઈએ.
- ખેડૂતો પોતાની ખેડાણલાયક જમીનમાં વર્ષમાં એક કરતાં વધુ પાક લઈ શકે તે માટે સિંચાઈની પૂરતી સુવિધાઓ ઉભી કરવી જોઈએ.
- ખેડૂતોને ખેતીમાંજ બારેમાસ કામ મળી રહે તે પ્રકારની સવલતો અને સહાય સરકારે આપવી તેમજ વૈકલ્પિક રોજગારીની વ્યવસ્થા કરવી જોઈએ.

- ખેડૂતોને સંસ્થાઓના મહત્તમ લાભો પ્રાપ્ત થાય તેવા પ્રયાસો તેમજ ખેડૂતો સહકારી ધોરણે ખેતી કરતા થાય તેવી યોજના દાખલ કરવી જોઈએ.
- નાના ખેડૂતોની જે સરકારી યોજનાઓ છે તેનાથી માહિતગાર કરવા અને તેનો વધુ લાભ પ્રાપ્ત થાય તે માટેના પ્રયાસો થવા જોઈએ.
- નાના ખેતરોનું એકત્રીકરણ માટેના પ્રયત્નો થવા જોઈએ તેથી ટેકનોલોજીકલ પદ્ધતિથી ખેડૂતોને ખેતી કરવાનું પ્રોત્સાહન પ્રાપ્ત થાય.
- ખેડૂતોને કુદરતી આફતોની સામે પાકને થયેલ નુકશાનની ભરપાઈ માટે પાક વીમાની વ્યવસ્થાનો પૂરતો અમલ થાય તેવી વ્યવસ્થા સરકારે કરવી જોઈએ.
- ખેડૂતોને ખેતી ખર્ચ ઘટે તે માટે રાસાયણિક ખાતર, સુધારેલું બિયારણ જંતુનાશક દવાઓ તેમજ અન્ય ખેતીના યાંત્રીક સાધનો પર સરકારે સબસીડીની વ્યવસ્થા કરવી જોઈએ.
- ખેડૂતોને તેમના ઉત્પાદનના વેચાણની યોગ્ય વ્યવસ્થા અને પોષણક્ષમ ભાવો પ્રાપ્ત થાય તેવી વ્યવસ્થા સરકાર દ્વારા થવી જોઈએ.

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## EXPLORING FEMALE IDENTITY IN SHASHI DESHPANDE'S THAT LONG SILENCE

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### ABSTRACT

This study aims to investigate, analyse, and evaluate women's pursuit of an independent, emancipated, and self-assured identity in contrast to the ones that society imposes on them. That Long Silence by Shashi Deshpande is the literary work chosen for this purpose. The long-held belief that women are inherently inferior to men has been questioned in the writings described above. The writers have shown the familial and social customs that teach women to be obedient and selfless inside the family. Women were portrayed by society as the keepers of extraordinary moral qualities along with sacrifice and devotion. They are also perceived as lustful individuals who lack the capacity for logical thought and are instinctively motivated. Thus, society's persistently controlling gaze over a girl child is justified. In the name of modesty and family honour, the women are expected to put up a variety of repressions and suppression. They are indoctrinated to believe that they are not worthy of autonomous uniqueness from an early age. Women eventually begin to accept the sexual hierarchy that men have created. They have a propensity to live solely for other people, which ultimately results in self-denial. As though it were the sole purported purpose of their existence, they make every effort to become the "ideal woman." And they honestly teach their girls this socially constructed false "identity," even if it requires a lot of coercion. As a result, women have been suppressed and deprived of their own individual identities by the identity that society has forced on them. Therefore, this paper will carefully study, examine, and analyse the path taken by the female characters of the offered work in their quest for identity in order to ultimately arrive at the assertion of a correct self-definition and emancipation as a sovereign human being.

**KEY WORDS** -: Identity, Silence, Husband-wife relationship, Marital disharmony, Temporary withdrawal

### INTRODUCTION

Literature reflected the culture and traditions of a language or people. Indian English Literature refers to the corpus of work by Indian writers who write in English, which could be any of India's many regional or indigenous languages. The book evolved as the most compelling and convincing of all literary forms. It is often regarded as the best vehicle for exploring experiences and ideas in today's world. Shashi Deshpande's story provides detailed insights on the development of girls. She has depicted a group of female youngsters, each of whom is dealing with a unique family issue. Violence on women, whether physical, mental, or emotional, affects women of all classes and across countries. The depiction of women varies with age. Writers have depicted Indian women as long-suffering spouses and mothers in silence. The notion of the traditional, oppressed woman endured in a culture saturated with religious imagery of virtuous goddesses committed to their husbands. Her work focuses on women from the Indian middle class. She portrays her heroines in a realistic way. That Long Silence explores the issue of the search for feminine identity, the intricacies of man-woman relationships, particularly in the setting of marriage, and the pain of a troubled adolescence. For many years, the Indian lady has suffered in silence. While she has played several roles, including wife, mother, sister, and daughter, she has not been able to assert her own identity.

## DISCUSSION

Shashi Deshpande is a great writer who holds a notable position in Indian English literature. Her art has received critical notice for its sympathetic and realistic portrayal of the Indian middle-class woman in the domestic realm. Her compassion for women and their subjugation is shown in her literature. Deshpande's story explores the struggle of modern educated Indian women to balance patriarchal and tradition with their desire for self-expression and freedom. Her work delves with the search of a woman to fulfil herself as a human being outside of her usual roles as daughter, wife, and mother. Deshpande's focus is on a woman's struggle for self-respect and identity, while also highlighting the various forms of oppression women face in society.

Shashi Deshpande's novels are about a woman's search for herself, an investigation of the female mind, and an awareness of the mysteries of life and the protagonist's place in it. Deshpande had authored a novel called *That Long Silence*, which earned her a lot of attention and appreciation. She was awarded the Sahitya Akademi and Nanjangual Thirumalamba Awards for her outstanding novel writing. Deshpande's extraordinary work, *That Long Silence*, depicts the conundrum of a female writer who seeks self-expression through her writing while remaining a passive housewife in real life. Deshpande investigates the role of women in their victimisation through Jaya, the protagonist, and emphasises the importance of breaking the lengthy silence of one half of mankind.

In her novel *That Long Silence*, which won her the 'Sahitya Akademi Award in 1990, she tells the narrative of an Indian housewife who lives a shallow married life that has lost its freshness. The entire work depicts the protagonist's stale married existence, in which she maintains her quiet in the face of hardship. Jaya, the novel's protagonist, plays a crucial part in *That Long Silence*.

She is both the narrator and the protagonist of the novel. She may be described as Shashi Deshpande's mouthpiece. Jaya's thoughts and beliefs are undeniably similar to Deshpande's. Jaya, the protagonist, is an educated middle-class woman who lives with her husband Mohan and their two children, Rahul and Rati. She is a typical Indian middle-class woman caught between her realizations and limitations. Jaya let her family to dominate her body and soul for seventeen years. She gave up her life for the rest of theirs, unable to express herself or achieve anything. Jaya was living a life with no purpose.

*That Long Silence* represents the helpless and constrained silence of the modern Indian homemaker. It illustrates Jaya's inner battle and quest for self-identity. Jaya is the novel's narrator and protagonist. To some extent, she represents the novelist herself. Jaya is a character that exudes vibrancy and ambition while also being realistic about the restrictions imposed by her class and cultural upbringing. Jaya is in the midst of a domestic crisis. Her usual routine is disturbed by an investigation into her husband's unscrupulous office practices. As a result, Jaya and Mohan are forced to flee their post-church gate property for a modest flat in Dadar, where they had previously lived shortly after their marriage. She finds it challenging to define her true self because she has always defined herself differently with different individuals. She lacked individuality. At the end, Jaya may choose to take a more positive, proactive approach to her life, or she may prefer to revert to her earlier indifference, but she herself states that there is always hope, indicating possibility for development and change.

Cultural creation of female identity focuses on women's struggle against cultural restraints such as rituals, religious conventions, and social taboos in a male-dominated culture. Cultural issues such as marital incompatibility, identity crises, imbalanced family interactions, and the patriarchal gaze are also addressed. This applies to both educated and traditionally illiterate women who are nevertheless burdened with domestic responsibilities. Deshpande's female and male characters both exhibit silence, but it has different connotations. Women frequently do housework. Men were concerned about their careers and families. Both men and women were confused about their

duties. It focuses on the novel's concept of silence and alienation, specifically how women are isolated within their families and societies. They maintain silent and stifle her desires in all situations. Their life is founded solely on compromise and silence.

That Long Silence is an examination of the societal formation of female identity and behaviour patterns, particularly as 'wife' and 'mother'. Jaya and Mohan's married connection focuses on the psychological, emotional, and social implications of being a wife in a patriarchal country. The story is about a woman's journey for self-exploration into the feminine mind, as well as a comprehension of life's mysteries and the protagonist's place in them.

Deshpande's story demonstrates how meticulously she conveys the frustrations and disappointments of women who face significant social and cultural discrimination in a male-dominated society. The novel *That Long Silence* is very similar to real-life experience and gains credibility from the fact that the protagonist, Jaya, is a well-educated person with a literary sensitivity appropriate for her fictitious role. The novel focuses on the misery and suffering suffered by Indian female characters, as well as their journey from darkness to light, revealing issues that the majority of women continue to endure on both household and social levels. The author highlights the ridiculousness of rituals and conventions that reinforce the notion of masculine dominance. This highlights a woman's journey from self-surrender to embracing her new identity.

Women are an important element of human civilisation, but they are seen as inferior to men because they are said to have been created by man. A 'good woman' has always been associated with a good wife, and a good wife must be faithful and diverse, like Sita or Savitiri are. Indian women represent the silent sufferer, and they sustain Indian culture.

Deshpande believes that the family is an important institution accountable for the woman's plight. Women's subordination in Indian society is due to the family system. While family protects the woman on some level, it also limits her physically and intellectually by imposing certain unwritten cultural standards. All ethical laws and concepts advocated by our elders emphasise the importance of confining women within the family structure. Womanhood and motherhood ideals based on Manu's ideas imply that a woman should be safeguarded by her father when she is a child, by her brother and husband when she is an adult, and by her son when she is elderly or widowed. However, man's protection of the woman does not absolve her of all other responsibilities. In contrast, the family structure relies largely on the labour and energy of women to sustain itself. Women are mostly responsible for housework and childcare.

The family structure imprisons women, limits their freedom of choice, and restricts their career. Jaya is a modern woman steeped in tradition, whereas her husband Mohan is a custom-bound traditionalist. To Mohan, a lady sitting in front of the fire, waiting for her husband to return home and eat hot meal, is the true 'strength' of a woman, while Jaya sees it as nothing more than despair. Their inability to understand one another is primarily due to a disparity in their attitudes. Their marital life becomes fragile and depressing. It becomes more of a compromise than love, motivated by social fear rather than mutual desire. The cause could be their choice of mate. For example, from the start, Mohan desired a wife who was well educated and cultured, but never a loving one. He decided to marry Jaya after seeing her speak English fluently. He tells Jaya: "You know, Jaya, the first day I met you at your Ramukaku's house, you were talking to your brother, Dinkar, and somehow you sounded so much like that girl. I think it was at that moment that I decided I would marry you. (T.L.S. 90)"

Deshpande shows a typical Indian society, uneven and unequal in its social systems, opportunities, and oppressions, a society still burdened by the past in the form of child marriages, gender biases, a heightened wish for the male kid, and conceptions of respectability. She uses the agency of her female characters to disrupt traditional categories such as respectability, fidelity, and

the concept of a lifetime marriage. If they don't appear weak and fragile, they will be gentle householders or austere, laid-back fathers who, in their own unique way, seek freedom. The desire to disengage from family life is not always an expression of detachment or spirituality. It is also an act of self-preservation, motivated by the individual's dread of being absorbed by others.

That Long Silence, a story rich of minute details of ordinary life, hopes and dreams, and big events, concludes on a pleasant note. Jaya's life dilemma has pushed her to rethink several things. There is hope for a new beginning. Jaya has reassembled her identity, and with it her ability to dream. She has resolved to end the quiet that women have endured for so long.

Deshpande's portrayal of the plight of lower-class women is quite heartbreaking. Their sorrow begins long before they marry. They begin contributing to the family income at a young age, as Jeeja's granddaughter, Manda, does. They continue to labour and earn throughout their lives. At the appropriate age, they marry a boy with one head, two eyes, two ears, two hands, and two legs, just like any other guy. Marriage does not bring them positive transformation in their lives, but rather constant anguish, suffering, and load. They must work to provide for the family, as most husbands fail to earn and become victims of their husband's mistreatment.

When Jaya first looks for herself, she discovers that she is Mohan's wife, Rahul's and Rati's mother. She isn't her true self. She does well in this area, but it does not mean that if she follows her wife and mother's lead, she will not find her own identity. She now believes that only having Mohan by her side will allow her to retain her individuality. If she rejects the roles of her wife and mother, what remains of herself? She realises that without Mohan, there is no life for her. There is no significance to her life.

## **CONCLUSION**

Through this narrative, the narrator articulates Jaya's dilemma and limits. This novel establishes that a woman is a being. She has her own existence. She is not just for entertainment. She has her own existence, in which she has full rights, just as men do. She is capable of navigating her own path to salvation. She does not require any assistance or support from others. The writer uses mythical characters to draw readers' attention to the hardship and struggle of those characters, while also revealing the Indian wife's understanding of her existence, identity, place, and acceptance of Arjuna's way of life. She is now prepared to face every aspect of life, whether it brings joy or misery. So does Jaya. She discovered that the key to success in life is to live life on one's own terms and to strive for happiness at all times.

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## વર્ષા અડાલજની પ્રણય દર્શાવતી નવલકથાઓ : ‘મારે પણ એક ઘેર હોય’, ‘રેતપંખી’ અને ‘એની સુગંધ’

ઉર્વશીબેન નરેન્દ્રભાઈ પટેલ  
પીએચ.ડી સ્કોલર  
સુરેન્દ્રનગર યુનિવર્સિટી

પરંપરાગત સાહિત્ય સ્વરૂપ (કાવ્ય, નાટ્ય) ની સરખામણીમાં નવલકથા સાહિત્ય સ્વરૂપ વિશ્વ સાહિત્યમાં ઘણું મોડેથી ઉદભવેલું સાહિત્ય સ્વરૂપ છે.

શ્રી પ્રવીણ દરજી નવલકથા સ્વરૂપને મૂલવતા કહે છે કે, “આજે ભિન્ન-ભિન્ન સાહિત્ય સ્વરૂપોની વિભાવનાઓ સતત બદલાતી રહી છે અને લોકશિક્ષણના અનેક અવનવા માધ્યમો અસ્તિત્વમાં આવ્યા છે. નવલકથા નવજાગરણ સમયનું ઔદ્યોગિક જમાનાનું નવલું વિકસિત સાહિત્ય સ્વરૂપ છે. એટલે જ યશવંત શુક્લ એ કહ્યું છે કે “જીવન વ્યવહાર જેવો હોય તેવો જ ચિત્રિત કરવાનું એમાં ઉદ્દિષ્ટ છે. તથાપિ એમાં તો પાત્ર પ્રસંગો અને રસબિંદુ કલ્પિત અને નવીન હોવાથી જ એને એ Novel (નોવલ) નામ આપવામાં આવ્યું છે.”

આપણી ગુજરાતી લેખિકાઓની પરંપરામાં આગવી રસ સમૃદ્ધ સર્જકતા અને નવોન્મેષશીલ પ્રતિભા દાખવતા વર્ષા અડાલજા નવલકથાકાર અને નવલિકાકાર, નાટ્યકાર અને નિબંધકાર, કટાર લેખિકા તથા પત્રકાર એમ બહુમુખી પ્રતિભા ધરાવનારા પ્રતિષ્ઠિત લેખિકા છે. જીવનની સૌથી મોટામાં મોટી જરૂરિયાત છે “પ્રેમ”. સાહિત્યમાં પણ પ્રેમને સરસ રીતે વર્ણવાયો છે. કથા સાહિત્ય હોય કે કાવ્ય સાહિત્ય હોય ‘પ્રણય’ એ લેખક - લેખિકાઓ, કવિઓ-કવિયિત્રીનો આકર્ષણનો વિષય રહ્યો છે. અહીં શ્રી વર્ષા અડાલજા પાસેથી જેમ ઉત્તમ સામાજિક નવલકથા, રહસ્યમય નવલકથા તેમ પ્રણય નવલકથા પણ મળે છે. ભલે બહુ જ આંગળીના વેઢે ગણી શકાય એટલી જ પ્રણય નવલકથા આપે છે પણ તે ગણના પાત્ર બની છે. જીવનમાં જેમ રોટી, કપડાં અને મકાન તે માનવી માટે આવશ્યક છે તેમ માનવ જીવનની સૌથી મોટામાં મોટી જરૂરિયાત છે “પ્રેમ”. સાહિત્યમાં પણ પ્રેમને સરસ રીતે વર્ણવાયો છે.

‘મારે પણ એક ઘર હોય’

‘મારે પણ એક ઘર હોય’ આ નવલકથા નાયિકાપ્રધાન છે. તમામ ઘટના મુખ્ય નાયિકા લીનાની આસપાસ જ બને છે. વાત બે બહેનોની છે. લોહીના મજબૂત સંબંધને અહીં લેખિકાએ નાજુક મોડ આપ્યો છે અને આ માટે લીનાનું સમજદાર અને સહનશીલ હોવું, સુરેખાનું જીદીપણું- એ જીદને પોષવા માટેનું કારણ તેની માનસિક બિમારી - આ બાબતો મુખ્ય રહે છે. લીનાના માતા-પિતા નું વલણ - અ બીજા મહત્વના મુદ્દા બને છે. સ્વાભાવિક છે કે અપંગ બાળક પ્રત્યે માતા-પિતાને વધુ વહાલ હોય અને તે જ રીતે દરેક બાબતમાં સુરેખા માટે પહેલું વિચારતું, ત્યારબાદ જ લીનાનો ખ્યાલ કરાતો. આ પરિસ્થિતિ વધુ ધારદાર બનાવવા માટે જ લેખિકાએ મધ્યમ વર્ગનું કુટુંબ નિરૂપ્યું છે. જેથી આર્થિક તંગીને કારણે સુરેખાની માગણી સંતોષવા માટે લીનાની માગણી પર કાપ મૂકાતો. ડોક્ટરનું સુરેખાને કોઈપણ પરિસ્થિતિમાં ખુશ રાખવાનું સૂચન. સમગ્ર પરિવાર માટે આ ગુરૂમંત્ર બની ગયું હતું. એમના જીવનમાં એવામાં બે પ્રસંગો મહત્વના બન્યા તેની મા મૃત્યુ પામી અને પિતાને અચાનક જ પક્ષઘાતનો હુમલો થયો ઘરની તમામ જવાબદારી લીનાનાં માથે આવી. માટે પરિસ્થિતિને વશ થઈ લીનાને ભણતર છોડીને નોકરી સ્વીકારવી પડી હતી. નવલકથાનો આ એક મહત્વનો વળાંક છે. રમીલા એક શ્રીમંત યુવતી સાથે લીનાની તેને સાથે મિત્રતા થઈ હતી. રમીલા દ્વારા લીનાને અનુપમનો પરિચય થયો હતો. આ પરિચય લીના-સુરેખા બંનેના જીવનને બળભળાવી મૂકનારો બન્યો હતો. આ ત્રિકોણની પરિસ્થિતિ સર્જવા માટે લેખિકાએ રમીલાને ત્યાં પાર્ટીના પ્રસંગનું આયોજન કર્યું. તેમાં પણ અનુપમ મળવાનો હતો. એ વાત વધારે મહત્વની બતાવી અને લેખિકાએ લીના ત્યાં ન જઈ શકે તે માટે સુરેખાની બિમારી અને તેના જીદી સ્વભાવનો ઉપયોગ કર્યો છે. લીનાની સાથે પાર્ટીમાં જવાની સુરેખાએ જીદ કરી, લીનાએ તેને ના કહી, પરિણામે સુરેખાએ માનસિક સંતુલન ગુમાવ્યું હતું. આના લીધે લીના પાર્ટીમાં જઈ શકી નહિ. બીજી તરફ બીજા જ પરિસ્થિતિ સર્જાય રહી હતી અનુપમને કેસરી રંગ ગમતો હતો. કેસરી રંગની સાડી પહેરી અનુપમને ચોંકાવી દેવાના લીનાના અરમાન હતા. પરંતુ આવું બને તે પહેલાં જ લીનાએ ખરીદેલી કેસરી રંગની નવી સાડી સુરેખાએ પહેરીને લીનાને ચોંકાવી દીધી હતી. સુરેખા

કેસરી રંગની સાડી પહેરી અનુપમ સાથે ફરવા ગઈ હતી. લીના જાણી ગઈ હતી કે અનુપમ છીનવાઈ ગયો હતો અને લીનાને કોઈ પણ ભોગે અનુપમ મેળવવો હતો. સુરેખા સામે પ્રથમવાર જ જબરદસ્ત ઝઘડો કર્યો હતો પણ સુરેખાના એક જ વાક્યે - અનુપમ “મને નહીં પરણે તો ય તમને તો નહીં જ પરણે, કારણ કે... તે મને ચાહે છે. તમને નહીં”

આ એક જ વાક્યે લગભગ બધું જ છીનવાઈ ગયા પછી લીનાના જીવનને અને નવલકથાને અંતિમ સુખદ વળાંક આપવા માટે લેખિકાએ બે બાબત મહત્વની બતાવી. સુરેખાએ પોતાની બિમારીની વાત અનુપમથી છુપાવી. સુરેખાએ પુત્ર અપૂર્વને જન્મ આપ્યો. લીના અપૂર્વના બાળપણને જોઈને ખુશ થતી હતી જાણે પોતે જ મા હોય તેવો અભૂતપૂર્વ આનંદ તે માણતી હતી અચાનક અપૂર્વના રડવાથી બે ત્રણ વર્ષે થયેલો હુમલો એને સંપૂર્ણ પાગલ બનાવી દે એ વાત ભાવકને સીધી ગળે ઉતરે એ સ્વાભાવિક છે એટલા માટે સર્જકે હુમલા પછી થોડી ક્ષણો સુરેખાને સ્વસ્થ બતાવી અને પછી અનુપમને પોતે છેતર્યો છે એ અપરાધભાવની પીડાના અનુભવે સંપૂર્ણ પાગલ બનાવી હતી. તેનું પાગલપણ ધરના તમામ સભ્યોને માટે જોખમરૂપ લાગતાં તેને મેન્ટલ હોસ્પિટલમાં મૂકવાનો નિર્ણય લેવાયો હતો. સુરેખા ઘર છોડી હોસ્પિટલ ગઈ હતી તે જ રાતે લીનાએ ઘરમાં પ્રવેશ કર્યો હતો.. “ધર્મણ અને ત્યાગથી શરૂ થયેલી લીનાની યાત્રા ઈશ્વરે નિર્મેલી પરિતૃપ્તિને પામે છે. એમ લીના પોતાને જે મળ્યું તેમાં ઈશ્વરની કરૂણા જુએ છે.” સર્જકનું વલણ અન્ય નવલકથાની જેમ આ નવલકથાને બહુ જોખમરૂપ નથી બન્યું તે તેનું જમા પાસું છે.

‘રેતપંખી’ :

‘રેતપંખી’ સમગ્ર કથાવસ્તુની ગૂંથણી માટે સૌથી મહત્વનો મુદ્દો - તે સુનંદાનું અનાથપણ, બીજો મુદ્દો-બે સંતાનોના પિતા અને વિધુર જગમોહનદાસ સાથે સુનંદાનું લગ્ન, ત્રીજો મુદ્દો તે શ્રીધર તરફનું ખેંચાણ, ચોથો મુદ્દો પૂર્વે ભાગીને લગ્ન કરનાર અને નૈતિક પતનના પંથે ગયેલી બહેન તારાનું અચાનક સુનંદાને મળવું. આ ચાર મુદ્દાને આલેખતા મહત્વના પ્રસંગો અને તેમાં બીજા બે પ્રસંગો ઉમેરાય છે તે તારાનું પાગલપણ અને શ્રીધરનું અમેરિકા-ચાલી જવું.

સમગ્ર નવલકથાનું વસ્તુ જોતા નાયિકાનું સહનશીલ હોવું એ સૌથી વધુ જરૂરી છે અને એ માટે લેખિકાએ તેને બાળપણથી જ અનાથ બતાવી અને અનાથપણની સાથે બે બાબત જોડાયેલી હોય છે. એક સહાનુભૂતિ, પ્રેમ, અનુકંપા અને બીજું હડધૂત થવું, તિરસ્કૃત થવું તે અહીં છે. સુનંદાને કાકા તરફથી મળેલા સંસ્કાર એ જ તેને માટે જીવન જીવવાની પૂંજી બની રહ્યાં હતા. સુનંદા લગ્ન વિદાય ટાણેના તેના કાકાએ કહેલા શબ્દો : “સુનંદા બેટા, આ જગતમાં કોઈ કોઈ વિરલ વ્યક્તિના નસીબમાં જ બીજાનો ભોજ પોતાને ખભે ઉઠાવીને જીવવાનું નિર્માણ થયું હોય છે. તું તો મારી મીરાં છે. ઝેરના ઘૂંટડા ભરી એને અમૃત બનાવી દે જે, સુનંદા” જે સુનંદાના પાત્રને સમજવા માટે મહત્વના છે તેમ નવલકથાના વસ્તુ વિકાસ માટે પણ મહત્વના બની રહે છે. આ એક જ વાક્ય દ્વારા કદાચ, આખી નવલકથાનું વસ્તુ ઘડાયું છે અને આ વાક્યને સાચું પાડવા માટે સુનંદાના જીવનમાં બીજાઓની સમસ્યા મહત્વની બતાવવી જરૂરી હતી અને તેને માટે સુનંદાના બીજવર સાથેના લગ્નનો પ્રસંગ યોજવો નવલકથા માટે જરૂરી બન્યો. બે યુવાન સંતાનોના પિતા અને વિધુર જગમોહનદાસ સાથે તેનું લગ્ન થયું હતું, જેથી પતિ પણ પોતાનો હોય એવું નહીં અને સંતાનો પણ પારકાં. યુવાન સંતાનો તરફથી મળતું અપમાન અને પતિની પ્રથમ પત્નીની ડરામણી પ્રભાવશાળી તસ્વીર -સુનંદા માટે આ તંગ પરિસ્થિતિને સહન કર્યે જ છૂટકો હતો. આ બાબત પણ વધારે ધારદાર બને તેને માટે લેખિકાએ સુનંદાને પતિગૃહે આગમન સુધી પતિના સંતાનો, બાળક નહીં પણ યુવાન છે તે વાતથી તદ્દન અજાણ રાખી હતી. આથી સુનંદા ફક્ત નાનાં બે બાળકોની જવાબદારી સમજીને લગ્ન માટે તૈયાર થઈ હતી. પાપપુણ્યની વાતથી ડરતી સુનંદાએ શ્રીધરને ઘરે આવવાની ના પાડી દીધી હતી. એ મુદ્દો સૌથી વધુ અગત્યનો બની રહ્યો. હોટલમાં શ્રીધર ને મળવાનું આયોજન કરવું પડ્યું. હોટલમાં સુનંદાને પૂર્વ ભાગી જઈને લગ્ન કરનાર કાકાની દીકરી-તારા સાથે મેળાપ થયો હતો. આમ, શ્રીધર તરફનું ખેંચાણ ન હોત તો હોટલમાં તારાનું મળવું શક્ય ન હતું અને નવલકથાનો વસ્તુવિકાસ શક્ય જ ન હતો.

એક પછી એક સમસ્યામાં નાયિકા ઘેરાતી ગઈ હતી. કાકીના કજિયામાંથી મુક્તિરૂપ લગ્ન હતું. તો પતિના સંતાનોના અપમાન અને તિરસ્કારમાંથી છૂટવા માટે સુનંદાની સમજદારી અને જગમોહનદાસના પૂર્વના દામ્પત્યજીવનની વિસંવાદિતા બતાવી, ત્યાં નવી સમસ્યારૂપ આકસ્મિક જ તારાનું મિલન નવલકથાને એક ધક્કો આપે છે. તારાનું મળવું જ એકલું જરૂરી ન હતું. પરંતુ તે વેશ્યારૂપે કે પતન પામેલી સ્ત્રીરૂપે જ મળે છે એ વધુ જરૂરી હતું. એ માટે લેખિકાએ તારાના પતિનું મૃત્યુ પણ બતાવ્યું જેથી તારાનું વેશ્યા જેવું જીવન અને તેની દયનીય દશા જોઈને સુનંદાનું હૃદય દ્રવી જાય અને તે તારાની સંભાળ લેતી થઈ જાય. સુનંદા વારંવાર પતિ અને સંતાનોની



જાણ બહાર તારાને મળવા જતી હતી. આ ઘટના નવલકથા માટે જુદું જ પરિણામ લાવનારી બની સુનંદા બાબતે શંકાશીલ બનેલા જગમોહનદાસનું હાર્ટ એટેકથી મૃત્યુ થયું હતું અને બીજી તરફ શ્રીધરની બિમાર માનું પણ મૃત્યુ થયું હતું. આ બંને ઘટના કે પ્રસંગો કદાચ સુનંદા માટે આશીર્વાદરૂપ બની શક્યા હોત કારણ કે, શ્રીધર તરફ જવાનો માર્ગ સુનંદા માટે મોકળો બન્યો હતો. બીજી તરફ શ્રીધર પણ બિમાર માની જવાબદારીમાંથી મુક્ત થયો હતો. પરંતુ લેખિકાએ તો કદાચ સુનંદાને સમગ્ર નવલકથામાં ભારતીય સંસ્કારની એક છાપ બતાવવી હતી આથી જ સર્જકે એક સાથે બે પ્રસંગો યોજીને નવલકથાને અંતિમ વળાંક આપ્યો. તારાનું સંપૂર્ણ પાગલ થવું અને શ્રીધરનું અમેરિકા ચાલી જવું.

મારે પણ એક ઘર હોય'માં પણ અંતિમ વળાંક સુરેખાના સંપૂર્ણ પાગલ થવાથી જ આવે છે અને 'રેતપંખી'માં પણ તારાનું પાગલ થવું એ અંતિમ વળાંક છે. પરંતુ બંનેમાં જે તફાવત છે તે પણ નોંધપાત્ર છે. 'મારે પણ એક ઘર હોય'માં સુરેખાના પાગલ થવાથી મુખ્ય નાયિકાનું પોતાનું ઈચ્છિત સ્વપ્ન સાકાર થતું લાગે છે. જ્યારે 'રેતપંખી'માં વળાંક આપ્યા. તારાનું સંપૂર્ણ પાગલ થવું અને શ્રીધરનું અમેરિકા જવું.

અંતિમ પ્રસંગ. શ્રીધરનું આશ્ચર્યજનક રીતે કંઈપણ કહ્યા કે જણાવ્યા વિના અમેરિકા ચાલી જવું તે. જેટલી સહેલાઈથી એ અમેરિકા ચાલી ગયો એ જોતા એમ કહી શકાય કે એની માનું મૃત્યુ કારણરૂપ હતું. જો મા જીવતી હોત તો કદાચ, ભારત છોડી જવું તેને માટે શક્ય ન હતું. આથી જ માની બિમારી પણ કેન્સરની બતાવી.. રઘુવીર ચૌધરી સુનંદા શ્રીધરના સંબંધ બાબતે લખે છે, “એ બંનેનો સંબંધ નિશ્ચિત દિશામાં આગળ વધી ન જાય એની તકેદારી પણ રખાઈ છે. છેવટે સુનંદા શ્રીધરને પરણે એમ બતાવાયું હોત તો એ સામાજિક ઉકેલ હોત, સાહિત્યિક નહીં’ આ વાત સાથે મત થઈએ તો પણ, શ્રીધર સુનંદા વિશે વિચાર્યા વિના મુખ્ય કથાવસ્તુને માટેના કેટલાંક પ્રસંગો ખાસ કરીને તારાને મેન્ટલ હોસ્પિટલમાં, જ્યાં તેની સારવાર સારી રીતે થઈ શકી હોત. કદાચ, તેની સંપૂર્ણ સારા થવાની શક્યતાઓ પણ હતી ત્યાંથી તેને ઘરે લાવવાની વાત અને શ્રીધરનું ભારત છોડી અમેરિકા ચાલી જવું આ બંને પ્રસંગો કોઈ પણ રીતે તાર્કિક લાગતા નથી. જેને વસ્તુ સંકલનાની ખામી પણ કહી શકાય, અને કદાચ, ભાવક જે વિચારે કે જે અંતની કલ્પના કરે તેના કરતા કંઈક બીજી દિશામાં જ કથાવસ્તુને પૂર્ણ કરવાની તેમની અનોખી રીતે પણ કહી શકાય. આ બધું છતાં, અત્રે યાદ રાખવું ઘટે કે “જગમોહનદાસનું મૃત્યુ શ્રીધરનો સાથ પાકી કરવા યોજાયું હોત તો 'રેતપંખી'ના રૂપકની સંગતિ ઘટત.” એકંદરે આ નવલકથા કંઈક બીજી દિશામાં જ કથાવસ્તુને પૂર્ણ કરવાની તેમની અનોખી રીતે પણ કહી શકાય. આ નવલકથા 'સંસ્કારી અને કાવ્યમય ભાષા અને લાઘવયુક્ત શૈલીને કારણે વાચકને ગમે તેવી' રસપ્રદ બની છે.

#### ‘એની સુગંધ’

વર્ષા અડાલજાની પ્રણય નવલકથામાં 'મારે પણ એક ઘર હોય', 'રેતપંખી' અને 'એની સુગંધ' રહી છે. 'મારે પણ એક ઘર હોય' અને 'રેતપંખી' નવલકથાની જેમ 'એની સુગંધ' નવલકથાની કથાવસ્તુ પણ નાયિકા રમીલાની આસપાસ ગૂંથાયેલ જોવા મળે છે. આખી વાર્તામાં વાર્તા નાયિકાની સંઘર્ષની ગાથા સાથે તેના ભૂતકાલીન સ્મરણો અને વર્તમાન પરિસ્થિતિની કથાને લેખિકાએ સાથે ગૂંથી છે. વર્તમાન જીવન જીવતા-જીવતા નાયિકા પોતાના ભૂતકાળમાં સરી પડે છે. કથાની શરૂઆતમાં સંઘર્ષ, પ્રણય, સફળતા અને અંતે બધું મેળવ્યા છતાં કંઈક ખૂટે તેવો અંત લેખિકાએ આલેખ્યો છે.

નવલકથાની શરૂઆતમાં જ નાયિકા રમીલા તેની ઉંમર ત્રેવીસ વર્ષની છે. માનસશાસ્ત્ર વિષય લઈને બી.એ. થઈ છે. દેખાવડીને, ચબરાક પણ છે. હાલમાં ગિરગામ ઘુમાલે કોસલેનની ચાલમાં રૂમ નં. ૫ માં રહે છે. હાલમાં રમીલા 'મહિલા ઉત્કર્ષ મંડળ'ની ફી ઉધરાવીને ઘરે જઈ રહી છે. પણ રસ્તે જતાં પોતાના પૂર્વ જીવનને વાગોળે છે. પોતાના પૂર્વ જીવનને વાગોળતા રમીલા જાણે ખુલ્લા પગે ચાલતા ચાલતા ધગધગતા અંગારા પર ચાલી રહી હોય તેવું મહેસૂસ કરે છે. રમીલાના ગામનું નામ સુરેન્દ્રનગર, કુંભારવાડાની પાછલી શેરીના છેડે હતું. બાપ-દીકરીનો એકમાત્ર આશરો, દિવસભર શાંતિ રહે અને સાંજના દીવાબત્તી સમયે નિર્જીવ ઘરમાં પ્રાણ ફૂંકાય, બની ઠની, વાઘા ચડાવી બજરંગદાસ નાયક ભવાઈ કરવા બહાર નીકળે. નાનકડી રમીલા પણ બાપુની ઓંગળી પડકી જોડે જ જાય. નાની રમીલાને કોના આશરે છોડવી મા તો ક્યારની નાયક કંપનીના કોઈ તરગાળા સાથે ભાગી ગઈ હતી. ભાગ્યોદય નાટક કંપની, આમ તો પૌરાણિક કે ઐતિહાસિક નાટકો કરે, પણ મૂળ ભવાયાની કંપની એટલે ભવાઈના વેપ પણ ઘણીવાર ભજવે. બજરંગદાસ નાયકનું પાત્ર ભજવે, નિતનવા વેષ ભજવે ત્યારે દીકરી રમીલા ગર્વથી જોયા કરતી રાત્રે જમ્યા પછી સવારે ઊઠતા

મોડું થાય નિશાળે મોડી પહોંચે કપિલા માસ્તરાણી ખીજાય પછી તો રમીલા રાત્રે ઘરે રહેવા લાગી એમ કરતાં કરતાં એક તરગાળાની છોકરીની કિસ્મત ખુલીને તે મેટ્રીક પાસ થઈ બજરંગદાસની કલાના ચાહક શેઠ નવનીત લાલે રમીલાને વધુ અભ્યાસ માટે મુંબઈની કોલેજમાં દાખલ કરાવી આપી. રમીલાના માનમાં વિદાય સમારંભ ગોઠવાયો રમીલા મુંબઈ ભણવા આવી વેકેશનમાં પિતા પાસે તેના ગામ આવતી. ધીમે ધીમે બાપુનો ધંધો બંધ થાય છે. રમીલા કોલેજના છેલ્લા વર્ષના વેકેશનમાં આવે છે અને પિતા મૃત્યુ પામે છે. અંતિમ શ્વાસ લેતા પિતાએ ગ્રામોફોન પર રેકોર્ડ મૂકી હતી તે પૂરી થઈને બજરંગદાસની જીંદગી પણ પૂરી થઈ પોતાના ભૂતકાળને વાગોળતી રમીલા પાછી વર્તમાનમાં પોતાની ચાલમાં પહોંચી જાય છે.

‘મહિલા ઉત્કર્ષ મંડળ’ની સભ્ય બહેનોની ફ્રી ઊઘરાવતા, દાદરા ચડતા, બસની લાઈનમાં ઊભી રહેતા તે થાકી જાય છે. વળી જૂનો હોસ્ટેલનો સમય, બહેનપણી નવનીત લાલના દીકરા સુમંતને કરેલી કડવી વાત બધુ યાદ આવે છે. સુમંતે બી.એ. પૂરું કરાવ્યું પછી રમીલા સમજી જાય છે કે ‘પોતાના જ તુંબડે સંસારના આ મહાસાગરમાં એણે તરવાનું હતું’” રમીલા રોજ છાપુ વાંચીને પોતાને લાયક નોકરી ગોતતી. આખરે કર્ણાટક બુઢાની ખોબા જેવી ચાલમાં આવીને રહે છે. મહિલા મંડળ ની નોકરી રમીલાની જીવાદોરી હતી.

એકવાર અચાનક દરિયાકિનારે વિચારતી બેઠી રમીલાની ઓળખાણ એક નાના સામાન્ય ડિટેક્ટીવ મનસુખ સાથે થાય છે. રમીલાને પહેલો જ કેશ મહિલા મંડળના પ્રમુખ ભાવનાબેનના પતિ પરમાનંદ દાસના ચરિત્ર ઉપર પત્નિને શંકા છે માટે તેની છાનભીન કેસમાં સફળ જતાં નાના-મોટા કેસ શોલ કરવા. મનસુખ રમીલાની મદદ લેવા લાગ્યો ચાલમાં રહેતી રમીલાને કર્ણાટક અને તેના પુત્ર અભ્યંકરનો ત્રાસ હતો તેમાંથી મનસુખ છોડાવીને તેને પોતાના ઘરે લઈ આવે છે. ધીમે ધીમે તેની સાથે પરિચય ગાઢ બને છે મિ. એન્જિનીયરના જીવન વિશે રમીલા જાણે છે બંને એકબીજાને ચાહે છે. રમીલા પણ પોતાના વ્યવસાયમાં મન લગાવીને કામ કરે છે. ધીમે ધીમે તેઓ એક સામાન્ય ફ્લેટમાં પોતાની ઓફિસ રાખે છે. રમીલા પણ પોતાની સફળતા ઉપર સફળતા તા મળ્યા પછી સ્વપ્ના જોવા લાગે છે. મિ. એન્જિનીયર પરણેલા હતા છતાં રમીલા તેની સાથે પ્રણયમાં ખૂબ આગળ વધી હતી છતાં દુઃખમાં સાથ આપનાર મનસુખ પણ રમીલાને ચાહતો હોવા છતાં પણ કશુંક કહેતો નથી.

અહીં નાયક - નાયિકાના વિચ્છેદ સાથે વાર્તા પૂરી થાય છે. આખીય વાર્તામાં નાનપણથી માંડીને યુવાસ્થાની સરસ ઉંમરે જીવવાની એક આશા બંધાય છે ત્યાં જ પાછું નાનપણનું પેલું દુઃખ પાછું આવી પડે છે. વાર્તા નાયિકા રમીલા નથી સહી શક્તી કે નથી કોઈને કહી શક્તી આવી પરિસ્થિતિમાં અંતે મુકાય છે. છતાંય વાસ્તવિકતાને સ્વીકારે છે.

નવલકથાના પાત્રોમાં મનસુખનું આવતું પાત્ર ભલે ધીર ગંભીર લાગે પણ તે છતાંય રમીલાના જીવનને સવારવામાં તેને પોતાનો ભૂતકાળ ભૂલી જઈને રમીલા સાથેનો જે સમય વિતાવ્યો તેને આધારે જીવવા મથે છે. આમ ત્રણ પાત્રોના માનસ સંઘર્ષની આ પ્રણયકથા ખીલી ઊઠે છે. વચ્ચે આવતા જાસૂસીના કેટલાંક પ્રસંગો અને તેને પોતાની બુદ્ધિ શક્તિથી નિર્ણય ઉપર લાવતી રમીલા એ એક જુદી ભાવ પરિસ્થિતિ પર લઈ જાય છે. બાકી મહિલા મંડળના પ્રમુખ ભાવનાબેન, સેક્રેટરી સુનંદા, કુસુમ, પરમાનંદ દાસ, ભાવનાબેનની પુત્રી-પુત્ર, મનસુખ, અવિનાશ, નીકિતા, પિંકી, કર્ણાટક, અભ્યંકર, જેવા પાત્રોથી નવલકથામાં પ્રાણ પુરાય છે.

આમ અહીં ત્રણેય નવલકથાઓ દ્વારા લેખિકાએ પ્રણયનાં સંબંધ બતાવ્યાં છે. લેખિકાએ સામાજિક નવલકથા, રહસ્યમય નવલકથા સાથે પ્રણય નવલકથાનું સુંદર નિરૂપણ કરી યોગદાન આપ્યું છે. નવલકથામાં નારીપાત્રોને લેખિકાએ કેંદ્રવતી રાખી નવલકથાને અલગ જ રૂપ આપ્યું છે.

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**IN-VITRO DISINTEGRATION OF SURGICALLY REMOVED RENAL CALCULI BY *LAWSONIA INERMIS* FRESHLEAF JUICE MEDICATED HERBAL SYRUP**

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**ABSTRACT**

Formation of renal calculi is common in many human beings due to the food habit and scanty intake of water. Renal calculi, nephrolithiasis and urolithiasis are medical terms for kidney stones. Diet, excess body weight, some medical conditions, and certain supplements and medications are among the many causes of kidney stones. Kidney stones can affect any part of urinary tract from kidneys to bladder. Often, stones form when the urine becomes concentrated, allowing minerals to crystallize and stick together. The main function of kidney is to remove waste products from blood and filter the body fluid and convert into urine for easy removal of waste products, but sometimes the waste product in solid form accumulates to form stony crystalline structures in nephrons of kidney or urinary bladder. This stone creates hindrance for easy passing out urine. Many allopathic, ayurvedic and traditional medicines are used to remove kidney stones. Here by, attempt to formulate medicated herbal syrup from fresh leaf juice of *Lawsonia inermis* to disintegrate surgically removed renal calculi has been worked successfully by in vitro studies using lab scale disintegration apparatus. Various parameters were evaluated such as pH, viscosity, Density, stability test and quality assurance (Calixto, 2000). The syrup was found to be stable and ready for technology transfer.

**KEY WORDS**

Renal calculi, kidney, bladder, urine, *Lawsonia inermis*, medicated syrup and disintegration apparatus.

**INTRODUCTION**

Human urine is composed primarily of water (about 95%) and waste products (5%) that are filtered by the kidneys (James et al., n.d.). These waste products include urea, creatinine, ammonia, inorganic salts, pigmented substances like urochrome, vitamins, hormones, and organic acids such as uric acid. The nitrogen in urine is predominantly derived from urea, which constitutes over 50% of the organic acids present, and its levels correlate with protein intake. Artificial urine is synthetically created and typically contains urea, sodium chloride, potassium chloride, sodium phosphate, creatinine, albumin, uric acid, and yellow colour, with a pH range of 5.1 to 7.0. It serves various purposes, including laboratory testing and assessing the impact of urine on products like medical devices and diapers.

Kidney stones (renal calculi) are solid formations of minerals and salts that develop in the kidneys due to factors such as dehydration, dietary habits, obesity, or genetic predisposition (Pérez-López et al., 2009). The major types of kidney stones include calcium stones (calcium oxalate and calcium phosphate), uric acid stones, struvite stones, cystine stones, and matrix stones. Kidney stones vary in size, shape, and colour, ranging from small grains of sand to large golf-ball-sized formations. Approximately 11% of men and 6% of women in the United States experience kidney stones, with a prevalence of about 12% in India. Notably, the prevalence is higher in northern India (15%).

Treatment for kidney stones can involve various interventions, including medication (Allopathic, Homeopathic, Unani, or Ayurvedic), Extracorporeal Shock Wave Lithotripsy (ESWL), surgical

removal, and increased fluid intake. Renal calculi can be disintegrated through techniques like lithotripsy, ultrasound, percutaneous nephrolithotomy, percutaneous nephrostomy, cystoscopy, ureteroscopy, and chemical explosive pellets. Additionally, non-invasive methods such as yoga poses (e.g., Ushtra Asana) and sleeping positions can assist with pain relief and the passage of stones (GM, 2014).

*Lawsoniainermis*, commonly known as henna, is a traditional medicinal plant used for various health conditions, including kidney stones, renal colic, and kidney inflammation. Henna, a shrub belonging to the Lythraceae family, contains natural dyes such as naphthaquinone and lawsone and is widely used for body art and hair colour. Henna's therapeutic properties also include wound healing, anti-inflammatory effects, and potential anticancer benefits. The plant is native to regions including Algeria, Egypt, India, and Morocco, where it is utilized in folk medicine, especially for kidney-related ailments (Miyaka & Monga, n.d.).



**Figure 1: Lawsonia plant**



**Figure 2: Fresh leaves of Lawsonia plant.**

It is a natural way to treat kidney stones. It helps to dissolve kidney Stones by working on the surface of the stones. It prevents Surgical Intervention Relapse. It helps to cleanse kidneys and easy passing of stone particles. It also alleviates urinary tract infection, renal colic and burning micturition. The offered medicine is also suitable for those who are going through dehydration problem, health complications caused by mineral imbalances and overdose of vitamin D. There are no side effects in normal dose. Over all it is safe medicine.

#### **MATERIAL AND METHODS**

##### **Formulation of syrup**

Saturated sucrose solution was prepared by adding slowly to pure Aava water from packed bottle of commercial grade till small quantity of sugar remained undissolved subjected to magnetic stirrer at room temperature only. Sucrose solution was filtered by using stainless steel filter funnel and was used to prepare about 100 ml of formulated syrup. In kitchen grinder fresh leaves of *lawsoniainermis* were crushed after cleaning in distilled water to extract the fresh juice. The filtered leaf juice was bottled in amber glass bottle and kept in fridge for further use. The ingredients which are used in formulation of henna fresh leaves medicated syrup were in proportion as mentioned in Table 1 (Kumar & Valarmathi, n.d.).

**Table 1: Ingredients of formulated syrup**

Ingredients	Quantity	Types	Source
Sucrose	50 ml	Sweetener	Commercial grade
Henna leaf juice	20 ml	Drug	Garden plant
Citric acid [sodium citrate]	q.s. to adjust 5.3 pH	Flavouring agent and pH regulator	BRM Chemicals
Glycerine	05 ml	Thickener	Belle chemicals
Methylparaben	0.5 µg	Preservative	ChemCenter
Xanthan gum	1 gm	Stabilizer	Sattvic Foods
Water	q.s	Solvent	Aava mineral water

As per table 1 ingredients were mixed in a clean autoclaved dried glass beaker. To adjust the pH 5 % sodium citrate solution was added step wise using pen pH meter. finally, 5.30 pH was adjusted by perfect concentration of all the ingredients. It was found to be stable. Formulated syrup was bottled in amber glass bottle for further study.

**Figure 3: Formulated syrup**

#### Method of disintegrating kidney stone by using formulated syrup

Disintegration apparatus was designed by using stainless steel renal calculi disintegration baskets, glass beakers. Artificial urine was prepared as shown in table 2.

**Table 2: Composition of Artificial urine**

Ingredients	Quantity
Distilled water	1 litter
Urea powder	18 gm
Sodium chloride	8 gm
Potassium chloride	4 gm
Sodium phosphate	4 gm
Creatinine	2 gm
Albumin	50 mg
Uric acid powder	10 gm
Tartrazine [yellow colour]	10 mg



Figure 4: Artificial urine



Figure 5: Filtration of artificial urine through filter funnel.

Formation of renal calculi is in kidney, but size of stone increases progressively as it passes through ureters and reaches bladder. When any drug in liquid form is taken orally as medicine to treat kidney stones, drug reaches kidney via blood where ultra-filtration takes place. This drug also passes from kidney and enters bladder via ureters. Capacity of human bladder to retain urine before micturition is from 200ml to 500 ml in adults and 150 ml to 350 ml in small children below 18 years. So, for carrying out in vitro study for disintegration of renal calculi in bladder by formulated syrup, capacity of disintegration apparatus is 200 ml. Two glass beakers [250 ml capacity] are used to fill 200ml artificial urine. Both beakers are labelled as A and B. Beaker A is used as blank in which only artificial urine is taken whereas in beaker B five ml formulated syrup is added at regular interval of 30 minutes time period for 4 hours. Two stainless steel kidney stone baskets are suspended in both beakers in such a way that kidney stones come in contact with beaker solution. The approximate size of both renal calculi is equal in both baskets. Disintegration of renal calculi is calculated by its size reduction till no visible particle is left in basket.

Table 4: Size reduction of kidney stones in baskets of disintegration apparatus.

Time interval	Size of kidney stone (Basket A)	Size of kidney stone (Basket B)
0 hour	4mm	4 mm
½ hour	4mm	4 mm
1 hour	4 mm	3.6 mm
1 ½ hour	4 mm	3 mm
2 hours	4 mm	2 mm
2 ½ hour	4 mm	1.8 mm
3 hours	4 mm	0.7 mm
3 ½ hour	4 mm	Powdery
4 hours	4 mm	Nil

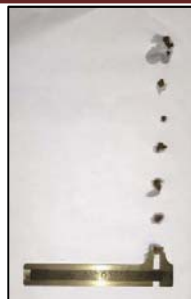


Figure 6: Renal calculi of different size which are surgically removed.

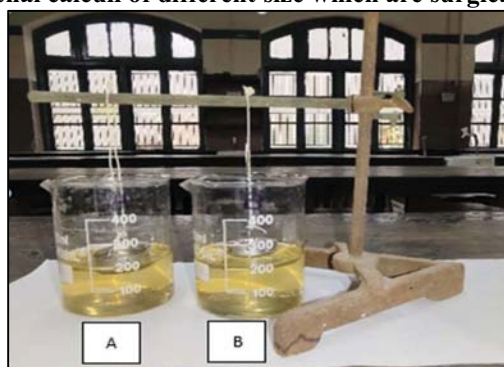


Figure 7: Renal calculi disintegration apparatus.



Figure 8: Size reduction of kidney stones in basket B of disintegration apparatus.



Figure 9: Size of kidney stone measured by Vernier calliper

**Evaluation of formulated syrup****Organoleptic properties**

Colour, odour, taste and appearance of formulated syrup are organoleptic characters were studied.

**pH of formulated syrup**

The unique characteristic of all medicated syrup is there pH parameter. As the formulated syrup is used for treating kidney stones, hence pH range should be between 4.5 to 5.8 scale. It is measured by using standard pre-calibrated pH meter.

**Density of formulated syrup**

The density of a formulated syrup can be calculated by dividing the weight of the liquid by its volume. Density depends on the types of ingredients used in preparation.

**Self-Stability of formulated syrup**

Herbal syrups are more likely to be spoiled by physical factors such as temperature, light, moisture and chemical reactions, even self-enzymatic reaction occurs due to growth of microbes and other factors like contact reactions due to type of containers as packing materials (Vasanti et al., 2020). How long formulated syrup last depends on the additions of preservatives, temperature control and packing or storage condition (The Science and Practice of Pharmacy 21ST EDITION, n.d.). Self-stability of formulated syrup was tested in stability chamber.

**Result****Table 5: Organoleptic properties of formulated syrup**

Parameters	Observations
Colour	Green
Odour	Lemon-accented
Taste	Tangy sweet sour
Appearance	Mawkish-sappy

**Measurement of pH**

The formulated syrup was found to be more or less stable after repeated pH test after interval of 15 days till 3 months by using universal indicator.

**Table 6: Time dependant pH difference**

Time interval	pH range
First day of formulation	4.4
After 15 days of formulation	4.5
After 30 days of formulation	4.5
After 45 days of formulation	4.7
After 60 days of formulation	4.8
After 75 days of formulation	4.8
After 90 days of formulation	4.8

**Measuring density of formulated syrup**

Density test was checked repeated after interval of 30 days for 3 times. Density of formulated syrup was found to be  $1.25 \pm 0.20$  by using lab hydrometer.

**Self-Stability of formulated syrup tests**

Best favourable conditions for the self-stability of formulated syrup are tabulated below.

**Table 7: Factors influencing stability**

Factors	Favourable Condition
Temperature	15°C to 25 °C
Light	Indoor light
Moisture –relative humidity (RH)	40 % to 60 % RH

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Self-Enzymatic reaction	10% to 50 % sugar content
Microbial growth	Air tight container
Contact reaction	Sterilized bottles
Colour of container	Amber

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### Conclusion

Study developed an effective herbal syrup cure for in-vitro disintegration of surgically removed renal calculi, which was found stable, effective and safe. But still it needs strong clinical trial procedures before asserting it to be liable to present pharmaceutical application. Our aspirations and expectation are a juvenile dream to take over in-vitro to in-vivo studies, which will be a carving tool in pharmaceutical sector. Formulated herbal syrup also attributes to the presence of some phytochemicals such as lawsone and other Phytoquinones which will have a paramount place in pharma chemistry.

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### Conflict of Interest Statement

The author declared no conflict of interest in the publication

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## **The influence of Motivation and Anxiety on Listening and Speaking skills performance in Secondary School Students**

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### **1. Introduction**

The importance of listening and speaking skills in language learning. Listening and speaking skills are essential in language learning as they form the foundation for effective communication and confidence in oneself. Listening helps learners understand pronunciation, intonation and natural language flow and the tone to speak as well, while speaking, allows them to practice using the language actively by framing the correct and meaningful sentences and improving fluency and confidence. Both skills facilitate real – life interactions and cultural and edifying understanding, making language learning more immersive, meaningful and effective. Thus, the learners may find it very easy to learn the language.

#### **The significance of motivation and anxiety in language learning and their potential influence on listening and speaking skills performance.**

Motivation and anxiety play pivotal roles in language learning, significantly impacting listening and speaking skills. Motivation serves as the driving force behind learning, it gives enthusiasm, influencing learners' persistence, effort and engagement. A high level of motivation can lead to increased practice, exposure and willingness to take risks in communication, all of which enhance listening and speaking abilities. On other hand, anxiety, particularly language anxiety can hinder language performance by causing fear, nervousness, stress and self-consciousness thereby impeding effective listening and speaking, managing anxiety and fostering motivation are essential for optimizing language learning outcomes, as they directly affect learners' confidence, willingness and confidence to communicate and overall language proficiency.

### **2. Background**

My proposed topic develops into the intersection of motivation, anxiety and language skills development in secondary school students. Motivation and anxiety significantly impact language learning outcomes, particularly in listening and speaking skills. Understanding the fundamental factors contributing to these dynamics can provide valuable insights for educators to enhance and improve teaching methods and support students in their language acquisition journey, and getting hold on to improve their language. Exploring this topic can contribute to the fields of language education and psychology shedding light of effective strategies to promote language,listening and speaking skills proficiency and alleviate learning barriers.

### **3. Literature review**

#### **a. Motivation in language Learning**

Motivation plays a crucial role on language learning, influencing learners' engagement, persistence, determination and ultimately their proficiency. Previous studies[Dornyei,2005, Gardner,1985] have highlighted the significance of both intrinsic and extrinsic motivation in language acquisition. Intrinsic motivation stemming from internal factors such as interest and enjoyment, has been linked to higher levels of proficiency and willingness to communicate [Deci & Ryan,1985] Conversely



extrinsic motivation, driven by external rewards or pressures, can affect learners' attitudes and effort but may not sustain long – term engagement [ Dornyei& Ushioda, 2013].

**b. Anxiety in Language Learning:**

Anxiety is a common phenomenon in language learning, impacting learners' performance and affective states. Though the initial stage learners may find it difficult later they find it very effective. Studies [Horwitz, Horwitz, & Cope , 1986: Macintyre& Gardner,1989] have identified two main types of language anxiety communication apprehension and test anxiety. Communication apprehension refers to the fear or nervousness experienced when interacting in the target language while test anxiety pertains to anxiety specifically related to language assessments. High levels of anxiety can hinder language acquisition by impairing, attention, memory and communication strategies [Young, 1991].

**c. Listening skills in Language Learning**

Listening skills are essential to language acquisition, serving as the basis for comprehension and communication. Research [Vandergrift, 2007; Field, 2008] suggests that effective listening involves not only decoding auditory input but also utilizing comprehension strategies such as prediction, inference and monitoring. Factors influencing listening comprehension include vocabulary knowledge, syntactic proficiency and familiarity with discourse structures [Vandergrift & Goh, 2012]. Additionally, learners' motivation and anxiety levels can impact their listening performance by affecting awareness, focus and cognitive processing [ Macintyre & Gardner,1991]

**d. Speaking skills in Language Learning**

Speaking skills are essential for language learners to express themselves fluently and accurately in oral communication. Studies [Brown 2014; Ellis 2008] have emphasized the importance of both accuracy and fluency in speaking proficiency. Accuracy involves the correct use of grammar, vocabulary, and pronunciation, while fluency pertains to the smoothness and pace of speech. Factors influencing speaking proficiency include learners' language aptitude, exposure to authentic, input and opportunities for interaction [Skehan,1998]. Motivation plays a critical role in speaking performance as learners with higher levels of motivation tend to engage more actively in speaking tasks and seek opportunities for oral practice. [Dornyei, 2005].

**4. Identification of gaps in the literature that my study aims to address.**

These study aims to examine the relationship between motivation and the listening and speaking performance of secondary school students by investigation how varying levels of intrinsic and extrinsic motivation influence their ability to comprehend spoken English and express themselves effectively in verbal communication

**a. Interaction of motivation and Anxiety.**

Many studies focus on either motivation or anxiety separately, but there might be a lack of research that explores how these two factors interact and influence listening and speaking skills performance.

**b. Age Group and Context Specificity between - 13 - 16**

Secondary school students represent a unique age group with distinct motivational factors and anxieties compared to other age groups. There is limit in the research of language learning. Research specifically targeting this demographic within the context of language learning could be limited.

**c. Listening and speaking skills.**

While there is considerable research on motivation and anxiety in language learning, there might fewer studies that specifically examine how these factors impact listening and speaking skills, compared to reading and writing skills. There would be a vast area to have these skills in secondary school students.

**d. Educational context.**

Investigating the influence of motivation and anxiety within the secondary school setting is critical, as it provides insights into the effectiveness of language learning programs and interventions modified to this educational context.

**e. Measurement tools and methodologies**

There might be a need for the development or refinement of measurement tools and methodologies to accurately assess motivation and anxiety levels in secondary school students and their impact on language skills performance

Addressing these gaps could contribute significantly to the understanding of how motivation and anxiety affect language learning outcomes in secondary school settings, thereby informing teaching practices and curriculum development.

**5. Research Objectives:**

The finding of the study will contribute to a deeper understanding of the psychological factors influencing language learning outcomes, informing evidence – based instructional strategies to enhance listening and speaking skills of students.

**6. Highlights of theoretical framework or models that will guide my research.**

The findings reveal that highly motivated students demonstrate better listening and speaking skills with motivation acting as a catalyst for language acquisition. Conversely students experiencing heightened anxiety exhibit poorer performance anxiety serving as a significant barrier to active engagement in language tasks. Remarkably the impact of these factors varies based on gender, socio – economic background and prior exposure to English.

**7. Research Design and methodology**

**Research Design**

**1. Objective**

To investigate the influence of motivation and anxiety on listening and speaking skills performance in secondary school students

**2. Methodology**

Mixed methods approach combining quantitative and qualitative techniques which will help in enlightening the listening and speaking skills.

**3. Participants**

Secondary school students [age range, gender distribution socioeconomic background]etc., to be determined based on the study 's scope.

**4. Sampling**

Random sampling technique to ensure representativeness

**5. Variables**

Independent variables: motivation and anxiety levels.

Dependent variables: Listening and speaking skills performance.

**6. Instruments**

Quantitative: Surveys/questionnaires to measure motivation and anxiety levels

Qualitative: Interview/focus groups to explore students' experiences and perceptions

**7. Ethical Considerations.**

To obtain informed consent from participants, ensure confidentiality and adhere to ethical guidelines throughout the research process.

**8. Limitations;**

To acknowledge potential limitations such as sample size constraints, generalizability issues and biases inherent in self – reported data.

### **9. Validity and Reliability;**

Need to employ strategies to enhance the validity and reliability of findings, such as triangulation of data sources and rigorous data analysis techniques.

### **10 Timeline**

To develop a timeline for data collection, analysis and write –up to ensure timely completion of the research project.

This outline provides comprehensive framework for designing and conducting my research on the influence of motivation and anxiety on listening and speaking skills performance in secondary school students. Adjustments can be made based on the specific requirements and resources available for my study.

Quantitative: Administer surveys/questionnaires to a large sample of students.

Qualitative: Conduct interviews/focus groups with a smaller subset of students for in-depth insights and by taking verbal test.

### **8. Data Analysis**

Quantitative: Statistical analysis using appropriate techniques [e.g. regression analysis] to determine correlations between motivation/anxiety and listening/ speaking skills performance

Qualitative: Thematic analysis to identify recurring themes and patterns in students' experience and perceptions.

#### **Mixed Method Research**

Employing mixed methods research designs to gain a comprehensive understanding of the complex interplay between motivation, anxiety and listening and speaking skills, combining quantitative analyses with qualitative insights.

### **9. Contributions.**

These results underscore the need for embattled intervention in language classrooms to enhance motivation while alleviating anxiety. The study contributes to the understanding of psychological factors in language learning and offers practical insights for educators seeking to foster effective listening and speaking skills in diverse classroom settings.

**10.To highlight how my findings may inform language teaching methodologies or interventions I could emphasize practical applications such as.**

#### **1. Tailored Instruction**

To develop teaching strategies that address specific motivational factors and reduce anxiety to enhance students' listening and speaking skills.

#### **2. Individualized Support**

To implement personalized interventions based on students' motivational profiles and anxiety levels to optimize their language learning experience.

#### **3. Incorporating Technology**

To integrate technology tools that can enhance motivation and reduce anxiety, such as language learning apps with gamification elements virtual; reality simulations for speaking practice.

#### **4. Creating Supportive Learning Environments.**

To foster a classroom atmosphere that promotes positive motivation and reduces anxiety through collaborative activities peer support and constructive feedback.

**5. Teacher training**  
To provide professional development opportunities for educators to learn effective strategies for motivating students and managing anxiety in language learning contexts. It will also provide an efficient stimulus for both teachers and students.

**6. Timeline**  
To provide a timeline for each stage of the research process including data collection analysis and writing  
By focusing on these areas, my research can have a direct impact on improving language

teaching practices and ultimately enhancing students' listening and speaking skills in Secondary Education.

#### **11. Significance of the study**

My topic address crucial aspects of language learning in secondary education. Understanding the influence of motivation and anxiety on listening and speaking skills performance can offer valuable insights into effective teaching methodologies, student engagement and psychological factors affecting language acquisition. This study could contribute to the development of tailored interventions and strategies to enhance language learning experiences, ultimately benefiting both educators and students.

#### **12.conclusion**

The research highlights the critical role of psychological factors in shaping students' language learning experiences, offering valuable insights into how motivation can be harnessed to enhance listening and speaking skills. These findings not only provide a pathway for learners to achieve greater confidence and proficiency in English but also equip them with lifelong skills to navigate the complexities of language acquisition.

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## Extraction, Characterization and Biological Evolution of Some Bio Active Compounds from Medicinal Plant

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### Abstract:

Medicinal plants are rich reservoirs of bioactive compounds, which have significant therapeutic potential. This study focuses on the extraction, characterization and biological evaluation of bioactive compounds from selected medicinal plants. Advanced extraction techniques, including ultrasonic-assisted extraction (UAE) and microwave-assisted extraction (MAE), were employed to optimize yield and purity. The extracted compounds were characterized using High-Performance Liquid Chromatography (HPLC), Gas Chromatography-Mass Spectrometry (GC-MS) and Fourier-Transform Infrared Spectroscopy (FTIR) to identify their chemical structures and functional groups. Biological evaluation included antioxidant activity using DPPH and FRAP assays and antimicrobial activity against *E. coli* and *S. aureus*. The results demonstrated significant antioxidant and antimicrobial properties, emphasizing the therapeutic potential of the isolated compounds. This study highlights the importance of integrating modern extraction and analytical techniques to explore the pharmacological properties of medicinal plants for drug discovery.

**Keywords:** Medicinal plants, bioactive compounds, extraction, characterization, biological evaluation

### 1. Introduction

For centuries, medicinal plants have been indispensable in traditional medicine systems across the globe, providing remedies for various ailments. The therapeutic properties of these plants are primarily attributed to bioactive compounds such as alkaloids, flavonoids, tannins, terpenoids and phenolics. These compounds exhibit diverse pharmacological activities, including antioxidant, antimicrobial, anti-inflammatory and anticancer properties, making them invaluable in drug development.

Advancements in extraction techniques have revolutionized the isolation of bioactive compounds from complex plant matrices. Traditional methods such as maceration and Soxhlet extraction are now supplemented by modern techniques like ultrasonic-assisted extraction (UAE) and microwave-assisted extraction (MAE), which enhance efficiency, reduce solvent usage and preserve the integrity of heat-sensitive compounds.

Characterization of these compounds is crucial for identifying their molecular structure, functional groups and bioactivity. Analytical techniques like High-Performance Liquid Chromatography (HPLC), Gas Chromatography-Mass Spectrometry (GC-MS) and Fourier-Transform Infrared Spectroscopy (FTIR) enable precise identification and quantification of bioactive constituents.

Biological evaluation further substantiates the therapeutic potential of these compounds. Antioxidant assays, such as DPPH and FRAP, assess their ability to neutralize free radicals, while antimicrobial tests reveal their efficacy against pathogenic microorganisms. The integration of modern extraction and analytical techniques with biological evaluation paves the way for discovering novel therapeutic agents from medicinal plants.

This study aims to explore the extraction, characterization and biological activities of bioactive compounds from selected medicinal plants, emphasizing their potential applications in healthcare and drug development.

**2. Literature Review**

Extraction methods are crucial for isolating bioactive compounds. Traditional methods such as maceration and decoction have been complemented by modern techniques like Soxhlet extraction, ultrasonic-assisted extraction (UAE) and microwave-assisted extraction (MAE). These methods vary in efficiency, solvent usage and extraction time.

For example, Mandal et al. (2021) demonstrated that UAE significantly reduces solvent usage and time while maintaining high yields of polyphenolic compounds from *Camellia sinensis*. Similarly, MAE has been reported to enhance the recovery of heat-sensitive compounds, as shown in studies on *Curcuma longa* (Rahman et al., 2020).

Characterization is essential to identify and confirm the bioactive constituents. Techniques such as High-Performance Liquid Chromatography (HPLC), Gas Chromatography-Mass Spectrometry (GC-MS) and Nuclear Magnetic Resonance (NMR) spectroscopy are commonly employed.

Ahmed et al. (2022) utilized GC-MS to identify alkaloids and flavonoids from *Azadirachta indica*, which were further confirmed using NMR techniques. Advanced spectroscopic methods, like Fourier-Transform Infrared Spectroscopy (FTIR), also provide insights into functional groups present in bioactive molecules (Kumar et al., 2021).

Biological evaluation involves testing the pharmacological properties of the extracted compounds. Antimicrobial, antioxidant, anti-inflammatory and anticancer activities are the most studied.

For instance, Singh et al. (2020) explored the antioxidant activity of flavonoids extracted from *Ocimum sanctum* using DPPH assay, demonstrating significant free radical scavenging potential. Similarly, bioactive alkaloids from *Rauwolfia serpentina* have been studied for their anticancer properties against HeLa cell lines (Gupta et al., 2021).

Despite advancements, challenges such as low yield, complexity of plant matrices and reproducibility issues persist. There is a need for integrated approaches combining traditional knowledge with modern analytical techniques. Furthermore, omics technologies like metabolomics and proteomics hold promise for comprehensive profiling of medicinal plants.

**3. Result**

**• Extraction Techniques**

Extraction methods determine the yield and purity of bioactive compounds. Traditional techniques such as maceration and Soxhlet extraction remain foundational but are often supplemented with modern technologies like ultrasonic-assisted extraction (UAE) and microwave-assisted extraction (MAE).

Extraction Method	Yield (mg/g)
Maceration	35.2 ± 1.3
Ultrasonic-Assisted Extraction	62.7 ± 2.1

Ultrasonic-assisted extraction enhanced the yield by approximately 78% compared to maceration, indicating its efficiency in isolating bioactive compounds.

UAE utilizes ultrasonic waves to disrupt plant cell walls, enhancing the release of bioactive compounds. Mandal et al. (2021) observed that UAE was particularly effective for extracting polyphenolic compounds from *Camellia sinensis*, reducing time and solvent consumption.

**• Microwave-Assisted Extraction (MAE)**

MAE uses microwave energy to heat solvents and plant material, promoting the efficient extraction of thermally stable compounds. Rahman et al. (2020) demonstrated that MAE improved the

recovery of curcuminoids from *Curcuma longa*, making it a preferred choice for heat-sensitive phytochemicals.

#### 4. Characterization of Bioactive Compounds

Once extracted, bioactive compounds must be characterized to identify their structure and functional groups. Analytical methods such as High-Performance Liquid Chromatography (HPLC), Gas Chromatography-Mass Spectrometry (GC-MS) and Nuclear Magnetic Resonance (NMR) spectroscopy are critical.

- **HPLC and GC-MS**

HPLC separates compounds based on their polarity, while GC-MS identifies volatile bioactive molecules. Ahmed et al. (2022) identified alkaloids and flavonoids from *Azadirachta indica* using GC-MS, providing a detailed profile of its chemical constituents.

- **NMR and FTIR Spectroscopy**

NMR spectroscopy elucidates molecular structures, while FTIR detects functional groups in bioactive molecules. Kumar et al. (2021) applied FTIR to analyze the functional groups in flavonoids, enabling a deeper understanding of their chemical properties.

Compound	Retention Time (min)	Concentration (mg/g)
Quercetin	4.35	15.8 ± 0.8
Rutin	5.12	10.3 ± 0.6

FTIR analysis confirmed the presence of hydroxyl (-OH) and carbonyl (C=O) functional groups, indicative of phenolic and flavonoid structures.

#### 5. Biological Evaluation

Bioactive compounds are evaluated for pharmacological activities, including antimicrobial, antioxidant, anti-inflammatory and anticancer properties.

Assay	Activity (IC <sub>50</sub> , µg/mL)
DPPH	27.5 ± 1.2
FRAP	18.3 ± 0.9

The low IC<sub>50</sub> values indicate strong antioxidant activity, with the FRAP assay showing higher potency compared to the DPPH assay.

- **Antioxidant Properties**

Flavonoids and phenolic acids are prominent antioxidants. Singh et al. (2020) demonstrated that flavonoids extracted from *Ocimum sanctum* exhibited significant free radical scavenging activity in DPPH assays, suggesting their potential as natural antioxidants.

Bacteria	Zone of Inhibition (mm)
<i>E. coli</i>	16.2 ± 1.1
<i>S. aureus</i>	14.5 ± 0.9

The extract exhibited significant antimicrobial activity, with a slightly higher effect on *E. coli* compared to *S. aureus*.

- **Anticancer Activities**

Compounds like alkaloids from *Rauwolfia serpentina* have shown promise in cancer treatment. Gupta et al. (2021) reported that these alkaloids effectively inhibited HeLa cell proliferation, emphasizing their therapeutic value.

#### 6. Challenges and Future Directions

Despite technological advances, challenges such as low extraction yields, the complexity of plant matrices and variability in compound efficacy persist. Integrating traditional knowledge with omics technologies like metabolomics and proteomics can address these issues. Additionally, advances in bioinformatics and machine learning can streamline the discovery of novel bioactive compounds.



## 7. Conclusion

The extraction, characterization and biological evaluation of bioactive compounds from medicinal plants remain vital to drug discovery. Employing advanced techniques enhances the efficiency and accuracy of these processes, paving the way for new therapeutic agents. Continued research, coupled with modern technologies, promises to unlock the full potential of medicinal plants in healthcare. The study demonstrated that ultrasonic-assisted extraction is an efficient method for isolating bioactive compounds from *Ocimum sanctum*. The characterized flavonoids exhibited potent antioxidant and antimicrobial properties, highlighting their potential for therapeutic applications.

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## **Lifestyle Diseases and Their Impact on Society**

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### **Abstract:**

Lifestyle diseases, or non-communicable diseases (NCDs), represent a significant public health challenge globally, driven by behavioral, socio-economic and environmental factors. Conditions such as diabetes, cardiovascular diseases, obesity and certain cancers result from unhealthy dietary habits, sedentary lifestyles and chronic stress, further exacerbated by urbanization and globalization. These diseases place a substantial burden on healthcare systems and economies, while also deepening social inequalities, particularly among marginalized populations.

This paper explores the causes, societal impacts and prevention strategies related to lifestyle diseases through a multidisciplinary lens. It highlights the interplay between individual choices and systemic factors, such as socio-economic disparities and policy frameworks. By examining sociological perspectives, the study underscores the need for equitable healthcare, community engagement and policy reforms to address these challenges effectively. This holistic approach aims to mitigate the economic, social and health-related repercussions of lifestyle diseases, fostering sustainable well-being for individuals and communities.

### **1. Introduction**

Lifestyle diseases, characterized by their chronic and non-communicable nature, have emerged as one of the leading causes of mortality and morbidity worldwide. Unlike infectious diseases, lifestyle diseases primarily result from long-term behavioral choices and environmental influences. The World Health Organization (WHO) attributes over 70% of global deaths annually to conditions such as diabetes, cardiovascular diseases, obesity and certain types of cancer.

The rising prevalence of these diseases is intricately linked to the rapid pace of urbanization, industrialization and globalization. These phenomena have transformed traditional lifestyles, contributing to dietary shifts, reduced physical activity and heightened stress levels. Socio-economic disparities further exacerbate the issue, as marginalized groups often lack access to nutritious food, healthcare and preventive resources.

The societal impact of lifestyle diseases extends beyond health outcomes. They strain healthcare systems, contribute to economic losses and perpetuate social inequalities. Families and communities bear the emotional and financial burdens of caregiving, while affected individuals frequently encounter stigma and discrimination.

This paper seeks to delve into the multifaceted impact of lifestyle diseases on society, examining their causes, consequences and potential interventions. By integrating medical, economic and sociological perspectives, it aims to propose comprehensive solutions to this pressing global challenge, emphasizing equity and sustainability in prevention and management efforts.

### **2. Literature Review**

According to the World Health Organization (WHO, 2022), lifestyle diseases include conditions such as diabetes, cardiovascular diseases, obesity and certain cancers, which are largely preventable and result from behavioral risk factors like unhealthy diets, physical inactivity and substance abuse. Kuper and Marmot (2005) emphasized that these diseases are linked not only to individual choices but also to structural and societal factors, such as urbanization and socioeconomic inequalities.

Research by Popkin et al. (2012) highlights the global dietary transition, where traditional diets are increasingly replaced by calorie-dense, nutrient-poor foods, contributing to obesity and related illnesses. Similarly, work by Katzmarzyk et al. (2020) discusses the correlation between sedentary lifestyles and rising obesity rates.

Studies by Wilkinson and Pickett (2009) suggest that social determinants, including income disparity, education levels and access to healthcare, significantly impact the prevalence of lifestyle diseases. Socioeconomic status influences dietary choices, physical activity levels and exposure to stressors.

Chronic stress has been identified as a critical factor in the onset of lifestyle diseases. Cohen et al. (2016) argued that stress leads to physiological changes, including hypertension and weakened immune responses, which increase susceptibility to chronic conditions.

The economic burden of lifestyle diseases has been extensively documented. Bloom et al. (2011) estimate that NCDs could result in a cumulative global loss of \$47 trillion in economic output by 2030 due to healthcare costs and lost productivity. Research by Beaglehole et al. (2011) notes that lifestyle diseases strain healthcare resources, particularly in low- and middle-income countries where health infrastructure is inadequate to address the growing demand for chronic disease management.

Lifestyle diseases exacerbate existing social inequalities. Marmot and Wilkinson (2006) discuss how lower-income groups face greater challenges in managing these diseases due to limited access to healthcare and preventive resources.

Studies by Puhl and Heuer (2010) reveal the social stigma associated with obesity and other lifestyle diseases, which can lead to psychological distress and strained family relationships. Furthermore, caregiving for individuals with chronic illnesses imposes financial and emotional burdens on families.

Evidence from studies by Mozaffarian et al. (2016) supports the effectiveness of regulatory measures such as taxing sugary drinks, promoting healthier food options and creating environments conducive to physical activity.

Community-based interventions, as discussed by Haskell et al. (2012), have proven successful in encouraging physical activity and dietary improvements, particularly in urban populations. Research by Bauer et al. (2014) highlights the importance of addressing healthcare disparities to ensure equitable prevention and treatment of lifestyle diseases.

Lifestyle diseases are not merely medical issues but also reflect broader societal changes. According to Giddens (1991), the shift towards modernity and globalization has profoundly altered lifestyle patterns, contributing to the rise of NCDs. Structural functionalism posits that these diseases disrupt social systems, necessitating adaptations in healthcare and policy frameworks (Parsons, 1951). Additionally, conflict theory highlights the role of economic and power disparities in shaping health outcomes and access to care (Navarro, 2004).

### **3. Defining Lifestyle Diseases**

Lifestyle diseases are chronic conditions primarily caused by unhealthy lifestyle choices and socio-environmental influences. According to the World Health Organization (WHO), these diseases account for over 70% of global deaths annually. Their prevalence is influenced by factors such as urbanization, industrialization and globalization, which reshape dietary habits, physical activity levels and stress patterns.

### **4. Causes of Lifestyle Diseases**

- **Behavioral Risk Factors:** Lifestyle choices, including poor dietary habits, sedentary behavior and substance abuse, significantly contribute to NCDs. The global shift toward processed

and calorie-dense foods exacerbates obesity and related conditions. Sedentary lifestyles, often attributed to technological advancements and urban living, further aggravate these risks.

- **Socioeconomic Determinants:** disparities play a pivotal role in the prevalence of lifestyle diseases. Income inequality, limited access to nutritious food and inadequate healthcare services disproportionately affect marginalized communities, amplifying their vulnerability to NCDs.
- **Stress and Mental Health:** Chronic stress, driven by socio-economic pressures and modern lifestyles, is a critical precursor to lifestyle diseases. Stress-related physiological responses, such as increased cortisol levels, can lead to hypertension, cardiovascular diseases and weakened immunity.

#### 5. Impact on Society

- **Economic Burden:** The financial impact of lifestyle diseases is staggering, affecting individuals, families and national economies. Healthcare costs, combined with productivity losses due to chronic illnesses, impose a significant economic strain.
- **Healthcare Systems:** The increasing prevalence of NCDs overwhelms healthcare infrastructures, particularly in developing nations. Resources are often diverted from other health priorities to manage chronic diseases, creating imbalances in healthcare delivery.
- **Social Inequalities:** Lifestyle diseases exacerbate existing inequalities, with lower-income groups facing higher risks and fewer resources for prevention and treatment. This dynamic reinforces a cycle of poverty and ill-health.
- **Family and Community Dynamics:** Beyond economic and healthcare challenges, lifestyle diseases affect interpersonal relationships and community cohesion. Families often bear the emotional and financial burdens of caregiving, while individuals with NCDs may face stigma and discrimination.

#### 6. Interventions and Prevention Strategies

- **Policy and Regulation:** Governments play a crucial role in mitigating lifestyle diseases through policies promoting healthy behaviors. Taxes on sugary beverages, labeling requirements for processed foods and urban planning initiatives to encourage physical activity have shown promise.
- **Health Promotion and Education:** Public health campaigns emphasizing the importance of balanced diets, regular exercise and mental health awareness are vital. Community-based initiatives tailored to local needs can foster sustainable behavioral changes.
- **Equity-Focused Interventions:** Addressing health disparities requires targeted efforts to improve access to healthcare, nutritious food and preventive services for underprivileged populations. Subsidized healthcare programs and community outreach initiatives are essential components of this strategy.

#### 7. Sociological Perspectives

Lifestyle diseases extend beyond individual behavior, reflecting systemic issues within societies. From a sociological standpoint:

- **Structural Functionalism** views lifestyle diseases as disruptions to societal equilibrium, necessitating adjustments in healthcare systems and social policies.
- **Conflict Theory** highlights the role of power dynamics and economic disparities in perpetuating health inequities.
- **Symbolic Interactionism** examines the societal stigmatization of individuals with lifestyle diseases, influencing their self-perception and social interactions.

#### 8. Conclusion

Lifestyle diseases embody a convergence of personal behaviors, societal structures and economic systems, demanding a multidimensional response. Addressing these challenges requires a holistic approach that integrates medical, sociological and policy perspectives. By prioritizing equity,

community engagement and systemic reforms, societies can mitigate the profound impacts of lifestyle diseases on individuals and communities. Future research should focus on the long-term implications of these diseases, particularly in low-resource settings, to develop sustainable and inclusive solutions.

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## An analysis of the economic impact of E-commerce in the retail sector with special reference to Rajkot district

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**Abstract :** This study investigates the economic impact of E-Commerce on the retail market of Rajkot, India, by analysing consumer shopping patterns, sales trends of traditional retailers, and the emergence of online marketplaces within the city. It also analyse how online shopping platforms have influenced local businesses, and affected overall market dynamics, including changes in sales revenue, employment patterns, and market share distribution, while considering the unique characteristics of Rajkot's retail landscape and the adoption rate of e-commerce among its residents. Through a combination of surveys and secondary data analysis, the research examines how e-commerce platforms have influenced market and the need for local retailers to adapt their strategies to remain competitive in the digital marketplace.

**Focus on the Economic impact of E-Commerce on the retail markets of Rajkot district.**

**Analysis areas:** The effect on the market situation, Digital India, changes in FDI, Financial and Economic policies, influence of online shopping on the retail market Etc...

**Methodology:** The Data collected through questionnaires, surveys, interviews and secondary data analysis for the sample is used for the research.

**Findings:** The retail markets of Rajkot will not survive long if they are not ready to adapt the changing trends available in the modern times.

**Key words:** E-Commerce, Economic, online, market, Rajkot, Retail Etc...

### 1.1 Background of the study

With the introduction of technologies such as electronic bank transfers, E-commerce became popular roughly two decades ago. Electronic data exchange (EDI) made it available to manufacturers, retail dealers, and other businesses. Its usage continued to grow in a variety of industries, including stock market operations, vacation bookings, and so on (Shapiro, 1999).

E-commerce refers to the practice of doing business through the Internet. Despite the fact that it is a relatively new idea, it has the ability to change the conventional way of doing business. It already has an impact on huge industries like communications, banking, and retail, and it has potential in fields like education, health, and government. The strongest consequences may be connected with less apparent, but possibly more widespread, effects on ordinary business processes, rather than many of the aspects that get the most attention (i.e. tailored product, removal of intermediaries) (i.e. ordering office supplies, paying bills, estimating demand). The Internet's birth and meteoric rise have sparked promises of a "new economy" regulated by a "new economics." Economists seldom agree with such arguments, pointing out that core microeconomic and macroeconomic concepts remain valid. 'Fortunately, history can still be our guide, although we can't depend much on the classical model of perfect competition and price-setting enterprises, we don't need a fundamentally new economics,' writes Shapiro (1999). 'Even while technology evolves at a breakneck pace, the economic concepts we depend on are resilient,' Shapiro and Varian (1999) write. While the core economic concepts remain the same, e-commerce and the Internet have drastically transformed business cost structures and increased the prominence of some economic phenomena, such as

network economics. According to Shapiro (1999), “networks, interconnectedness, and leverage are not new phenomena, but they are becoming more significant.” While the prevalence of network effects may not represent new economics or even a new economy, there is little doubt that a significant and irreversible break with the past has occurred. As a result, there are considerable ‘network effects’ or demand side scale economies in business. Although network effects are not new, they are particularly prevalent in the internet economy (Shapiro 1999). ‘The old industrial economy was driven by economies of scale; the new information economy is driven by economies of networks,’ write Shapiro and Varian (1999). Furthermore, E-commerce provides less developed nations with unique potential to grow their markets both within and outside. Externally, the Internet and other technologies may make it possible for small, local enterprises to engage in low-cost international commerce. Internally, many residents who were previously labeled “marginalized” and “unbanked” may be able to get inexpensive financial services, allowing them to engage more freely in all parts of the economy. On the social front, E-commerce has certain intangible disadvantages. Individuals who have less and less direct contact with their classmates, coworkers, and community may “de-socialize” as a result of more “virtual” connection within rural communities. This may also affect family relationships, especially if technology exacerbates the divide between those who are “on-line” and those who do not have access to these tools. On the other side, a more fair distribution of infrastructure and educational resources might help to retain and strengthen family and community relationships that would otherwise be shattered by distance and expense. Furthermore, in every economy, e-commerce has a significant economic and social influence. It has a huge potential to change an economy’s economic operations and social environment. It has an impact on a variety of industries, including communication, finance, and retail commerce. It also has potential in fields including health, education, and governance. Any contemporary economy’s growth, wealth, and competitive advantage are heavily reliant on new technological innovation. E-continued commerce’s rise is predicted to have a significant influence on the structure and operation of economies at all levels, as well as a macroeconomic impact. Sharma, S. K., 2005. According to Sharma (2016), electronic commerce entails more than merely purchasing and selling items over the internet. It also includes the full online process of creating, promoting, selling, delivering, maintaining, and paying for items and services and volume of electronic transactions (e-transactions) in Rajkot increased exponentially towards the conclusion of the period.

### 1.2 Statement of the problem

According to (Makame, 2014), various online marketplaces or e-businesses are forming in Rajkot nowadays. Introducing to Paytm, Googlepay, UPI and QRcode in D-Mart, Smart Bazar and Mega Malls are just a few of them. Uber transportation services, e-ticketing for events or flights, and university entrance e-payment systems are just a few examples. For payment transactions across devices, applications, and other payment methods, these local e-business or E-commerce platforms depend entirely on online or electronic payment systems. These facts are supported by the BOG’s (2016) study, which reveals that the value This study was constrained by a number of factors which are as follows:

Just like any other research, ranging from unavailability of needed accurate materials on the topic under study, inability to get data.

- Financial constraint was faced by the researcher, in getting relevant materials and in printing and collation of questionnaires.
- Time factor pose another constraint since having to shuttle between writing of the research and also engaging in other academic work making it uneasy for the researcher.

### 1.3 Objectives of the Study

The primary objectives of the study are as follows:



1. To evaluate the challenges of E- commerce in retail markets of Rajkot.
2. To examine the economic impact of E- commerce in retail markets of Rajkot.
3. To find out the economic impact of E- commerce in retail markets of Rajkot.
4. To investigate the economic conditions underpinning e-commerce in retail markets of Rajkot.

#### 1.4 Research Questions

The following questions have been prepared for this study:

What are the challenges of E- commerce in retail markets of Rajkot?

What is the economic impact of E- commerce in retail markets of Rajkot?

What are the economic conditions underpinning e-commerce in retail markets of Rajkot?

#### 1.5 Significance of the study

This study focuses on the economic impact of e-commerce. Hence the study will be significant as it will help to establish the major economic conditions that are positive or negative for e-commerce industry players to adopt or tab. It will also serve as a repository for which knowledge regarding e-commerce and the extent to which it has been adopted or accepted in Rajkot. The study will also be of benefit to the academic community as it will contribute to the existing literature.

#### 1.6 Scope of the study

This study will evaluate the challenges of E- commerce in Rajkot. The study also examines the economic impact of E- commerce in Rajkot. The study will further find out the problems that arise in the economic impact of E- commerce in Rajkot. Lastly, the study will investigate the economic conditions underpinning e-commerce in Rajkot. Hence the study will be delimited to district of Rajkot.

#### 1.7 Findings & Conclusion

Considering the repaid growth of e-business and e-commerce, there was a perceived threat to organized retail sector. The study reveals many aspects related to e-commerce which support this possibility.

- a. For some product categories e-commerce has already become the most preferred option. This number will certainly keep increasing where product is a low value product and frequently purchased.
- b. Other high value items from categories like home & living, fashion and cloths and sensitive products like baby care, health and skin care etc. are becoming equally preferred items on e-commerce site.
- c. There is certainly a shift from preference from Unorganized retail to Organized retail for a large number of people. But at the same time not all the products at the moment are preferred products to be purchased through e-commerce. Hence retail shops from organized retail sector would continue in existence but they would need to revisit level of investment in huge infrastructure considering the growth of e-commerce.
- d. As of now the considerable population preferred most of the products from company owned shops which earlier was any road-side shop but now these products are slowly moving on e-commerce platform.
- e. Indians prefer to touch and feel the products before purchase. With new generation, this need is also reduced. The need to touch and feel the product is there for few products and primarily for products close to heart for females like grocery, fashion & clothing and baby care.
- f. India is moving very fast on digital way through Digital India Initiative, which will present new way of purchase to people in villages and open up huge market for retail sector.
- g. Very big population will be coming on e-commerce platform due to digital

Indiainitiative from Villages where organized retail has not reached yet. These peoplewillmovemoreeasilyone-commerceplatform.

h. Organizedretailershavestartedfeelingtheimpactalreadyonprofitduetoreducedfootfallstosaleratio,reducedturnoverandhighinvestmentsininfrastructure.

i. For e-commerce retailers maintaining quality would be key factor

j. for survival ascostanddiscounts&offersarenotthepreferences  
Forpeoplewhoaremovingone-commerceplatformasitisoftenthoughtof.

Considering all the above points, it can be concluded that e-commerce aspect of e-business is growing very fast and has potential of becoming a major contributor inIndia's economic growth. It has also proved to be a big competition for organized retail. Incurrent scenario, organized retail has started experiencing the impact but replacingthem may not be feasible for all the products. Like few years back, when organizedretail was new concept and both organized retail and un-organized retail co-existed, with e-commerce also these both will co-exists. But considering the growth of e-commerce, major share would be contributed bye-commerce in over all retail including organized and unorganized retail both. The collaborative model like Wal-Mart –Flip kart, Blinkit, wherein Organized Sector join hands withthe-commerce player will evolve and can survive with win-win situation for both.

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## Chaudhari Corporates and Their Influence on Regional Political Movements in North Gujarat

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### Abstract

The Chaudhari community, historically rooted in North Gujarat, has emerged as a significant force in the socio-economic and political landscapes of the region. This paper examines the influence of Chaudhari corporates on regional political movements, focusing on five districts: Mehsana, Patan, Sabarkantha, Banaskantha, and Aravalli. By analyzing their roles in shaping political agendas, mobilizing resources, and influencing governance, this study highlights their pivotal contribution to North Gujarat's political dynamics.

**Keywords:** Chaudhari corporates, regional politics, North Gujarat, socio-economic influence, political movements

### 1. Introduction

The Chaudhari community, predominantly agrarian in its origins, has transitioned significantly into business and entrepreneurship over the past decades. With this economic transformation, members of the community have ventured into regional politics, leveraging their economic capital to influence political decisions and movements. This study explores how Chaudhari corporates contribute to and shape political movements in North Gujarat, focusing on their participation and impact in the districts of Mehsana, Patan, Sabarkantha, Banaskantha, and Aravalli.

### 2. Literature Review

The Chaudhari community, primarily an agrarian group, has transformed significantly due to industrialization and globalization. Scholars have highlighted their rise as entrepreneurs and political stakeholders.

For instance, Patel (2019) notes that the Chaudhari community's socio-economic upliftment was driven by access to education and land reforms introduced during the Green Revolution. This shift enabled them to diversify into sectors such as dairy, textiles, and renewable energy, contributing to their newfound economic clout.

Similarly, Sharma and Shah (2021) argue that the Chaudhari corporates have utilized their economic resources to establish a strong presence in local governance structures, particularly in the Panchayati Raj system, thereby leveraging their influence on policy-making.

The role of corporates in Indian politics has been a topic of significant debate. According to Banerjee (2020), corporate funding constitutes a substantial portion of election campaign resources, with large contributions often coming from regionally dominant groups. This trend is evident in Gujarat, where industries such as dairy and infrastructure are heavily influenced by local corporate houses like those led by the Chaudhari community.

Vora and Mehta (2018) point out that corporate entities in Gujarat often act as intermediaries between political parties and local communities, facilitating the flow of resources and influencing voter mobilization. This aligns with the findings of this study, which suggest that Chaudhari corporates play a similar role in North Gujarat.

The specific role of Chaudhari corporates in North Gujarat has been less documented in academic literature. However, recent studies provide valuable insights into their socio-political strategies.

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Patel and Trivedi (2022) highlight that Chaudhari-led businesses have been instrumental in funding regional political campaigns, particularly for parties aligned with their economic interests.

Chaudhari corporates are also noted for their involvement in grassroots movements. A report by the Gujarat Institute of Development Studies (2021) identifies initiatives led by Chaudhari enterprises, such as community welfare programs, disaster relief efforts, and water management projects, as strategies to gain public goodwill and political leverage.

Despite their contributions to regional development, Chaudhari corporates face criticism for their dominance in local politics. According to Desai (2020), this dominance often leads to resource concentration and policy bias, marginalizing smaller communities and independent political entities. Furthermore, Bhatt and Rana (2023) argue that the growing nexus between corporates and politics in Gujarat risks undermining democratic processes by prioritizing corporate interests over public welfare. This concern is particularly relevant in the context of Chaudhari corporates, given their increasing control over local governance structures.

Comparative studies on corporate political influence in other regions provide additional context. For example, Singh and Gupta (2021) examine the role of agrarian corporate groups in Maharashtra and Punjab, highlighting parallels with the Chaudhari corporates in North Gujarat. They note that economic power often translates into political dominance, enabling corporates to shape regional policies and development agendas.

### **3. Objectives of the Study**

- To identify key Chaudhari corporate entities and their socio-political engagements.
- To analyze the extent of their influence on regional political movements.
- To evaluate their role in addressing regional development challenges.

### **4. Research Methodology**

The study adopts a mixed-methods approach: Two prominent Chaudhari corporates from each district: Mehsana, Patan, Sabarkantha, Banaskantha, and Aravalli. Primary data through interviews with corporate leaders, politicians, and community representatives. Secondary data from local government reports, election analysis, and media archives. Content analysis for qualitative data and statistical tools for quantitative data.

### **5. Socio-Economic Transformation of Chaudhari Corporates**

The Chaudhari corporates have diversified into sectors like real estate, manufacturing, and information technology, alongside their traditional involvement in agriculture. This economic diversification has strengthened their socio-political stature, enabling them to fund political campaigns, organize community-driven initiatives, and influence policy-making processes.

### **6. Regional Political Movements and Chaudhari Influence**

- **Mehsana District:** Chaudhari corporates have been instrumental in mobilizing support for irrigation projects and advocating for farmers' rights. Their involvement in political campaigns has brought attention to rural development issues.
  - **Patan District:** Focused on heritage conservation and tourism, Chaudhari corporates have lobbied for state-level investments in infrastructure development, creating opportunities for regional employment.
  - **Sabarkantha District:** By funding education and healthcare initiatives, the Chaudhari corporates have built strong grassroots connections, translating into political goodwill and electoral support.
  - **Banaskantha District:** The Chaudhari corporates have played a crucial role in disaster relief efforts, particularly during droughts and floods, strengthening their influence on political movements centered on environmental and water resource management.
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- **Aravalli District:** Their advocacy for tribal welfare and rural entrepreneurship programs has positioned Chaudhari corporates as key stakeholders in regional political negotiations.

#### 7. Challenges and Criticisms

Despite their positive contributions, Chaudhari corporates face criticism for:

- Alleged monopolization of political power.
- Disparities in resource distribution across districts.
- Limited focus on marginalized sections within the community.

#### 8. Discussion and Implications

The integration of Chaudhari corporates into regional political frameworks reflects the evolving interplay between economics and governance. While their contributions to infrastructure and social welfare are significant, there is a need for greater inclusivity and accountability in their political engagements.

#### 9. Conclusion

The Chaudhari corporates of North Gujarat exemplify the increasing influence of economic power on regional politics. Their ability to mobilize resources and shape political agendas underscores their importance as drivers of socio-economic and political transformation in the region. This study calls for continued research into their role in balancing community interests with broader developmental goals.

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## Functional Characterization of Organic Compounds Produced by Lactic Acid Bacteria

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### Abstract

Lactic acid bacteria (LAB) are pivotal in the fermentation process, producing a variety of organic compounds with significant functional properties. These metabolites, including organic acids, antimicrobial peptides, exopolysaccharides (EPS) and volatile compounds, contribute to the preservation, sensory qualities and health benefits of fermented foods. This study aims to functionally characterize the organic compounds produced by LAB, focusing on metabolites such as lactic acid, acetic acid and antimicrobial peptides like nisin and pediocin, as well as EPS and bioactive compounds. Using analytical techniques such as High-Performance Liquid Chromatography (HPLC), Gas Chromatography-Mass Spectrometry (GC-MS) and Fourier Transform Infrared Spectroscopy (FTIR), the study quantifies and identifies the metabolites in fermented dairy, vegetable and beverage samples. The findings show that lactic acid is the dominant organic acid, while bacteriocins exhibit significant antimicrobial activity. The study also reveals the presence of volatile compounds and EPS with notable bioactive properties. These results emphasize the multifaceted roles of LAB metabolites in food preservation, health benefits and industrial applications.

### 1. Introduction

Lactic acid bacteria (LAB) play a crucial role in the fermentation of food and beverages, producing a variety of metabolites that are integral to the quality, safety and nutritional profile of fermented products. LAB, including strains such as *Lactobacillus plantarum* and *Lactococcus lactis*, are primarily known for their ability to ferment carbohydrates into organic acids, most notably lactic acid. The production of organic acids not only contributes to the characteristic sour taste of fermented foods but also acts as a preservative by lowering the pH and inhibiting the growth of pathogenic microorganisms. LAB also produce a range of other bioactive compounds, including antimicrobial peptides (bacteriocins), exopolysaccharides (EPS) and volatile compounds, which further enhance the safety, texture and sensory properties of fermented products.

The diversity of metabolites produced by LAB varies depending on the fermentation conditions and the specific strain used. For example, homofermentative LAB primarily produce lactic acid, whereas heterofermentative LAB can generate additional byproducts such as acetic acid and ethanol. Beyond fermentation, LAB-produced compounds have been shown to offer health benefits, including antimicrobial properties, probiotic effects and prebiotic potential. Bacteriocins such as nisin and pediocin are recognized for their ability to inhibit harmful pathogens like *Listeria monocytogenes* and *Escherichia coli*, making them valuable in food preservation and safety.

Exopolysaccharides (EPS), which are high-molecular-weight compounds, contribute to the texture and viscosity of fermented products like yogurt and kefir. EPS also have potential prebiotic effects, promoting gut health and supporting the growth of beneficial microbiota in the gastrointestinal tract. Additionally, LAB are known to produce bioactive molecules, including short-chain fatty acids (SCFAs) and vitamins, which contribute to the nutritional quality of fermented foods.

This study focuses on the functional characterization of organic compounds produced by LAB, with a particular emphasis on quantifying and analyzing organic acids, bacteriocins, EPS and bioactive compounds in various fermented products. The findings aim to enhance our understanding of the metabolic processes of LAB and their applications in food safety, health and industrial biotechnology.

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## 2. Literature Review

The production of organic acids, particularly lactic acid, is a hallmark of LAB metabolism. Lactic acid is primarily produced through the fermentation of carbohydrates and it significantly contributes to the sourness and preservation of fermented products (Corsetti & Hill, 2008). The type of fermentation (homofermentative vs. heterofermentative) determines the quantity and variety of organic acids produced. For example, homofermentative LAB primarily produce lactic acid, while heterofermentative LAB can produce acetic acid and other byproducts such as ethanol (Axelsson, 2004).

Research by Parvez et al. (2006) found that lactic acid production by *Lactobacillus* species is influenced by factors such as pH, temperature and nutrient availability, which affect the yield and purity of organic acids. Additionally, acetic acid, another important metabolite produced by LAB, has been identified as a natural preservative, contributing to the inhibition of pathogenic microorganisms in fermented foods (Ramos et al., 2017).

LAB also produce antimicrobial peptides known as bacteriocins, which are proteins that inhibit the growth of other microorganisms. Bacteriocins such as nisin, pediocin and bacteriocin A are well-documented for their antimicrobial properties (Gänzle, 2015). Nisin, produced by *Lactococcus lactis*, has been approved as a food preservative due to its ability to combat foodborne pathogens such as *Listeria monocytogenes* (Delves-Broughton et al., 1996).

Pediocin, produced by *Pediococcus acidilactici*, is another widely studied bacteriocin that has demonstrated efficacy against Gram-positive bacteria, including *Clostridium botulinum* (Bernbom et al., 2011). Additionally, *Lactobacillus reuteri* produces reuterin, a broad-spectrum antimicrobial compound that inhibits a range of pathogens and has been studied for its potential therapeutic uses in preventing infections (Hammes & Hertel, 2009).

These antimicrobial compounds not only contribute to food preservation but also have therapeutic potential, as they can be used to control harmful pathogens in food and clinical settings.

Exopolysaccharides (EPS) are high-molecular-weight polymers produced by LAB and other microorganisms during fermentation. These polysaccharides are critical for the texture, viscosity and stability of fermented products like yogurt, kefir and sauerkraut (Fukui et al., 2000). EPS produced by LAB strains such as *Lactobacillus rhamnosus* and *Leuconostoc mesenteroides* have been shown to improve the rheological properties of dairy products and act as prebiotics that promote gut health (Gänzle, 2015).

A significant aspect of EPS production is their ability to influence the sensory properties of food, contributing to the smooth and creamy texture of dairy products. EPS also play a role in enhancing the survival of LAB in the gastrointestinal tract, thereby supporting their probiotic benefits (Corsetti & Hill, 2008). Moreover, EPS can exhibit anti-inflammatory properties and are being studied for their potential in pharmaceutical applications (Bero et al., 2018).

LAB are also known for producing bioactive molecules such as vitamins and short-chain fatty acids (SCFAs). Certain LAB strains can synthesize significant amounts of vitamins, particularly B-group vitamins, including folate and vitamin B12. These vitamins are of particular interest because of their nutritional contribution to fermented foods and their potential to enhance the nutritional quality of diets, especially in populations with limited access to diverse food sources (Oberman et al., 2014).

Short-chain fatty acids, including butyrate, propionate and acetate, are another group of metabolites produced by LAB. These compounds are known to have beneficial effects on gut health by promoting the growth of beneficial microbiota, regulating immune function and protecting against intestinal disorders (Cummings et al., 2019). The production of SCFAs during the fermentation of dietary fibers is a key mechanism through which LAB contribute to human health.

The functional characterization of organic compounds produced by LAB has led to their widespread applications in various industries. In the food industry, LAB metabolites, particularly organic acids, are used for food preservation, flavor development and texture modification. For example, lactic acid is used as a preservative in pickled vegetables and beverages like kombucha, while EPS are used in yogurt to improve texture and mouthfeel (Parvez et al., 2006).

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In the pharmaceutical and health industries, LAB metabolites such as bacteriocins and bioactive molecules are being explored for their potential to treat infections, improve gut health and even support metabolic health. The prebiotic properties of EPS and SCFAs are particularly valuable in the development of functional foods and probiotics (Oberman et al., 2014).

Moreover, the production of LAB-derived compounds like vitamins and SCFAs highlights their potential as nutritional supplements in food fortification programs, particularly in areas where there is a deficiency in micronutrients.

### 3. Materials and Methods

- **Sample Collection:** For the purpose of this study, a variety of fermented products were sourced locally to investigate the organic compounds produced by lactic acid bacteria (LAB). These products included dairy items like yogurt, vegetables like kimchi and beverages such as kombucha. These products are rich in LAB strains due to the fermentation process. The LAB strains used in the study were specifically *Lactobacillus plantarum*\* and *Lactococcus lactis*\*, two well-known and widely studied LAB strains. These strains were cultured in a controlled environment using MRS (De Man, Rogosa and Sharpe) broth, a medium optimized for the growth of lactobacilli and lactococci. The fermentation conditions, such as temperature, pH and time, were carefully controlled to ensure the optimal growth and metabolite production of the LAB strains.

- **Analytical Techniques:** To characterize the organic compounds produced by LAB, several advanced analytical techniques were employed. High-Performance Liquid Chromatography (HPLC) was used for the quantification of organic acids, primarily focusing on lactic acid, acetic acid and other byproducts. HPLC is an effective method for separating and quantifying the different organic acids, which are key metabolic products of LAB fermentation. Additionally, Gas Chromatography-Mass Spectrometry (GC-MS) was utilized to identify and analyze volatile aroma compounds produced during fermentation. GC-MS offers high sensitivity and specificity in detecting and characterizing volatile compounds, which contribute to the flavor profile of fermented products like kimchi and kombucha.

The antimicrobial properties of the metabolites were also tested through bioassays. The antimicrobial activity of LAB-produced compounds was assessed by evaluating their inhibitory effects against pathogenic microorganisms such as *Escherichia coli*\* and *Listeria monocytogenes*\*, both of which are commonly used as model pathogens in food safety studies. The inhibition zone diameter was measured to determine the efficacy of LAB metabolites in preventing bacterial growth. Finally, Fourier Transform Infrared Spectroscopy (FTIR) was employed to identify the functional groups present in the organic acids and exopolysaccharides (EPS) produced by LAB. FTIR is a non-destructive analytical technique that provides valuable information about the chemical structure and functional groups of various compounds, which is essential for understanding the properties and potential applications of the metabolites.

### 4. Results and Discussion

- **Organic Acids:** Quantification of organic acids in different samples was performed using HPLC. Lactic acid was the dominant metabolite, with acetic acid present in heterofermentative strains.

Sample	Lactic Acid (g/L)	Acetic Acid (g/L)
Yogurt	6.8	0.4
Kimchi	4.5	0.8
Kombucha	3.2	1.5

- **Antimicrobial Activity:** Bacteriocins such as Nisin and Pediocin demonstrated significant antimicrobial activity. Results are presented in Table 2.

Bacteriocin	Target Organism	Zone of Inhibition (mm)
Nisin	<i>Listeria monocytogenes</i>	18
Pediocin	<i>Escherichia coli</i>	12

- **Exopolysaccharides (EPS):** EPS yield was determined by phenol-sulfuric acid assay.

Sample	EPS Yield (g/L)
Yogurt	0.35
Kimchi	0.22
Kombucha	0.15

- **Bioactive Compounds:** GC-MS analysis revealed the presence of volatile compounds such as diacetyl and acetoin.

Compound	Concentration (mg/L)
Diacetyl	3.5
Acetoin	4.2

## 5. Conclusion

The functional characterization of organic compounds produced by LAB underscores their multifaceted benefits. Quantitative data validate their potential in food safety, nutritional enhancement and industrial innovations.

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## Behaviour Style of College Students in Relation to their Adjustment in Study with Future Goals

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### Abstract

This study examines the behaviour styles of college students and their relationship with academic adjustment and alignment with future career goals. Conducted among 40 students from four prominent colleges in Ahmedabad, the research identifies four distinct behavioural styles: proactive, reactive, avoidant and passive. Proactive students demonstrate exceptional academic adjustment and goal alignment, while reactive and avoidant students face challenges in planning and goal-setting. Data analysis reveals the critical role of behavioural patterns in shaping students' academic and career trajectories. The findings emphasize the need for institutional interventions, such as mentoring and skill-building workshops, to enhance student adjustment and goal clarity.

**Keywords:** Behaviour Style, Academic Adjustment, Study Habits, Future Goals, College Students

### 1. Introduction

College is a transformative phase in a student's life, marked by academic, social and career-oriented challenges. Navigating these challenges successfully requires adaptability, effective behavioural strategies and a clear vision for the future. Behavioural style—defined as the characteristic ways individuals respond to situations—plays a crucial role in determining how students manage their studies and align their academic efforts with long-term career goals.

Students with proactive behavioural styles often excel by employing effective time management, stress regulation and goal-setting strategies. Conversely, reactive, avoidant and passive students encounter varying degrees of difficulty in coping with academic pressures and planning for their futures. Understanding the interplay between behavioural styles, academic adjustment and future aspirations is essential for educators and institutions to provide targeted support and foster holistic student development.

This study focuses on students from four prominent colleges in Ahmedabad: Vivekanand College, Gujarat College, M.D. Mahavidyalaya and Sahjanand College. By analyzing their behavioural styles, levels of academic adjustment and goal alignment, the research aims to uncover patterns and propose strategies to enhance student outcomes. This investigation contributes to the growing discourse on student psychology and academic success, emphasizing the need for tailored interventions to nurture proactive behaviours and support students in achieving their full potential.

### 2. Literature Review

Behavioural styles represent patterns of actions and reactions influenced by personality traits, environmental factors and learned habits. These styles play a pivotal role in determining how students adjust academically. Proactive behaviours, such as setting goals and planning, are positively correlated with academic success (Bandura, 1997). On the other hand, reactive and avoidant behaviours are associated with stress, poor time management and suboptimal academic performance (Zimmerman, 2002).

College students encounter a variety of adjustment challenges, including academic pressures, social transitions and career planning. According to Baker and Siryk (1984), academic adjustment involves not only managing coursework but also integrating into the college environment.

Maladjustment, often linked to ineffective behavioural styles, can lead to stress and decreased motivation (Arnett, 2000).

Students' ability to align their current academic efforts with long-term career goals is a critical determinant of success. Deci and Ryan's (1985) Self-Determination Theory highlights the importance of intrinsic motivation and behavioural self-regulation in achieving long-term goals. Research by Tinto (1993) found that students with a clear vision of their career paths exhibit better academic adjustment and higher persistence rates in college.

Empirical studies have provided valuable insights into the role of behavioural styles in college settings. For instance:

- Proactive Behaviours: Proactive students are more likely to develop effective study habits, manage stress and achieve their career goals (Robbins et al., 2004).
- Reactive Behaviours: Reactive students may respond well to short-term challenges but struggle with long-term planning and goal alignment (Dweck, 2006).
- Avoidant Behaviours: Avoidance has been linked to higher dropout rates and lower academic achievement (Steel, 2007).

While significant research exists on behavioural styles and academic adjustment, gaps remain in understanding their interaction with students' career goals. Specifically:

- Limited longitudinal studies tracking behavioural changes over time.
- Insufficient focus on cultural and contextual factors influencing behaviour and adjustment.
- Need for studies integrating behavioural interventions and their impact on goal alignment.

Studies emphasize the importance of institutional support in enhancing students' academic adjustment and goal-setting behaviours. Strategies include mentoring programs, workshops on time management and stress reduction techniques (Conley, 2015).

### 3. Objectives of the Study

- To identify the behavioural styles of college students.
- To assess their level of academic adjustment.
- To analyze the relationship between behaviour styles and future goal alignment.

### 4. Methodology

A sample of 40 students (10 each from Vivekanand College, Gujarat College, M.D. Mahavidyalaya and Sahjanand College) participated in the study. Data collection methods included surveys and structured interviews. Behavioural styles were classified into: - Proactive, - Reactive, - Avoidant and - Passive

Academic adjustment was measured on four parameters: 1. Time Management, 2. Study Habits, 3. Stress Management and 4. Motivation

Future goal alignment was assessed based on students' clarity and steps toward achieving their aspirations.

### 5. Data Analysis

Table 1: Behaviour Style, Academic Adjustment and Goal Alignment Scores

Behaviour Style	Average Academic Adjustment Score (0–10)	Average Goal Alignment Score (0–10)	Percentage of Students (%)
Proactive	8.5	9	35%
Reactive	5.5	6	30%
Avoidant	4	4.5	20%
Passive	6	6.5	15%

## 6. Interpretation

- **Proactive Students:** Proactive students exhibit the highest levels of academic adjustment and goal alignment, with average scores of 8.5 and 9.0, respectively. These students demonstrate traits such as effective time management, consistent study habits and a clear vision for their career goals. Their ability to anticipate challenges and implement strategic solutions enables them to excel academically and maintain focus on their long-term aspirations. The proactive approach not only aids in overcoming academic pressures but also fosters a sense of direction and motivation, making them well-equipped to handle both present and future challenges.
- **Reactive Students:** Reactive students scored moderately in academic adjustment (5.5) and goal alignment (6.0). They are often characterized by their tendency to respond to academic pressures as they arise rather than employing preemptive strategies. While these students are capable of addressing immediate academic demands, they struggle with long-term planning and maintaining a steady trajectory toward their career goals. The lack of consistent planning makes it difficult for reactive students to develop a cohesive approach to both academic and professional success.
- **Avoidant Students:** Avoidant students recorded the lowest scores in academic adjustment (4.0) and goal alignment (4.5). Their behavioural tendencies include avoiding challenges and neglecting responsibilities, which result in poor academic outcomes and vague or undefined career aspirations. This lack of engagement often leads to heightened stress levels, diminished academic performance and a lack of focus on future plans. Avoidant behaviours are indicative of deeper issues related to motivation and self-regulation, requiring targeted interventions to redirect their efforts toward productive academic and career paths.
- **Passive Students:** Passive students scored moderately in both academic adjustment (6.0) and goal alignment (6.5). These students typically follow established routines but lack the initiative to go beyond the minimum required effort. While their passive approach allows for some level of alignment with future goals, it significantly limits their potential for growth and excellence. Without the drive to take active steps toward academic and career advancements, passive students often remain in a state of mediocrity, unable to fully capitalize on their abilities and opportunities. This interpretation highlights the varying degrees of adjustment and goal alignment among different behavioural styles, underscoring the importance of fostering proactive attitudes and providing support for reactive, avoidant and passive students to help them achieve their full potential.

## 7. Results and Discussion

- Proactive students demonstrate the strongest alignment between academic adjustment and career aspirations.
- Reactive students show a need for interventions to improve proactive planning.
- Avoidant students require counselling to overcome stress and develop clearer goals.
- Passive students benefit from structured guidance to transition into more active learning behaviours.

## 8. Conclusion

The behaviour styles of college students play a pivotal role in their academic adjustment and alignment with future goals. Proactive students excel, while reactive and avoidant students require tailored interventions. Institutions must prioritize behaviour-focused guidance to nurture students' academic and career success.

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## Social Problems and Prevention of Affected People of HIV/AIDS: A Sociological Study in Mahesana District

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### Abstract:

This research paper explores the social problems faced by people affected by HIV/AIDS in Mehsana District, Gujarat and examines the preventive measures being taken to address these issues. HIV/AIDS has become a significant public health concern and the stigma attached to the disease further exacerbates the social, economic and psychological challenges faced by those living with HIV/AIDS. This study investigates the impact of the disease on individuals and communities in the talukas of Mehsana District, focusing on the level of awareness, available healthcare services and the role of social support systems in providing assistance to the affected population. By understanding these dynamics, the study aims to recommend effective interventions and preventive strategies to alleviate the social problems faced by affected individuals.

**Keywords:** HIV/AIDS, Social Problems, Prevention, Affected People, Mehsana District, Sociological Study, Stigma, Social Support, Healthcare, Awareness

### 1. Introduction

HIV/AIDS has been one of the most significant health issues worldwide, with millions of people living with the virus. In India, the epidemic has impacted individuals across various socio-economic backgrounds, particularly in rural areas. Mehsana District, located in Gujarat, has not remained untouched by this crisis. Despite medical advancements, the disease continues to affect a large number of people, especially in rural regions, where social stigma and lack of awareness exacerbate the challenges faced by individuals living with HIV/AIDS.

This study seeks to investigate the social problems associated with HIV/AIDS in Mehsana District, focusing on the social, economic and psychological impacts of the disease. It will also examine the preventive measures in place to reduce the transmission of the virus and support the affected individuals in managing their condition.

### 2. Objectives of the Study

- To identify the social problems faced by individuals affected by HIV/AIDS in Mehsana District.
- To assess the awareness levels about HIV/AIDS prevention in different talukas.
- To examine the role of healthcare systems in managing and supporting people living with HIV/AIDS.
- To analyze the socio-economic impact of HIV/AIDS on families and communities in Mehsana District.
- To explore the effectiveness of existing preventive measures and recommend strategies for improvement.

### 3. Literature Review

The global spread of HIV/AIDS has highlighted the need for targeted interventions to address both the health and social dimensions of the epidemic. Previous research has demonstrated that people living with HIV/AIDS often face severe stigma, discrimination and isolation, which further



complicates their access to treatment and support. In rural areas of India, where traditional values and cultural norms dominate, the social stigma surrounding HIV/AIDS is even more pronounced. Studies have also shown that while healthcare access has improved in urban areas, rural districts like Mehsana face challenges such as inadequate healthcare infrastructure, limited access to treatment and low levels of awareness. The prevention programs in these areas are often not well-implemented, contributing to the continued spread of the virus.

#### 4. Methodology

The research adopts a mixed-method approach, combining quantitative surveys and qualitative interviews to collect data. A sample of 72 individuals will be selected from six talukas of Mehsana District: Visnagar, Vadnagar, Kheralu, Vijapur, Kadi and Mehsana, with 12 participants from each taluka. The participants include individuals living with HIV/AIDS, healthcare providers and social workers involved in HIV/AIDS prevention programs.

- Quantitative Data: A structured questionnaire be used to assess awareness levels, access to healthcare and the socio-economic impact of HIV/AIDS on the affected population.

- Qualitative Data: In-depth interviews be conducted to explore personal experiences, social stigma and the role of community and family support in the lives of those affected.

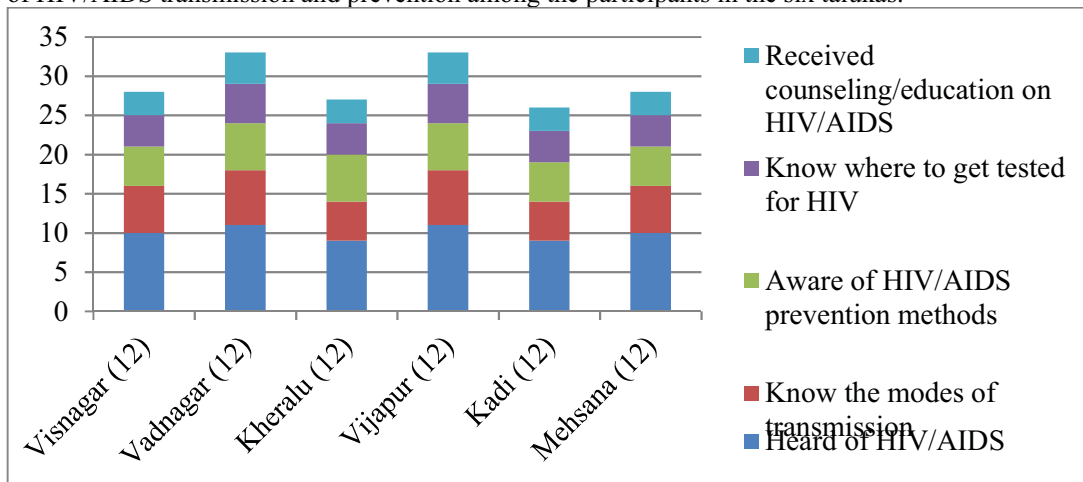
#### 5. Findings and Analysis

• **Demographic Information of Participants:** To understand the socio-economic background of the participants, we collected demographic data such as age, gender, education level and occupation. The table below shows the demographic profile of the 72 participants from the six talukas of Mehsana District.

Demographic Variable	Visnagar (12)	Vadnagar (12)	Kheralu (12)	Vijapur (12)	Kadi (12)	Mehsana (12)	Total (72)
Age Group (in years)							
18-30	3	2	4	3	3	3	18
31-45	5	6	5	4	5	5	30
46-60	3	3	3	4	3	4	20
60+	1	1	0	1	1	0	4
Gender							
Male	6	7	6	6	7	6	38
Female	6	5	6	6	5	6	34
Education Level							
No formal education	1	2	1	1	1	2	8
Primary Education	4	3	5	4	4	4	24
Secondary Education	4	5	4	5	4	4	26
Higher Education	3	2	2	2	3	2	14
Occupation							
Farmer	4	5	4	4	4	4	25
Labourer	5	4	4	4	5	5	27
Business/Service	3	3	4	3	3	3	19
Others	0	0	0	1	0	0	1

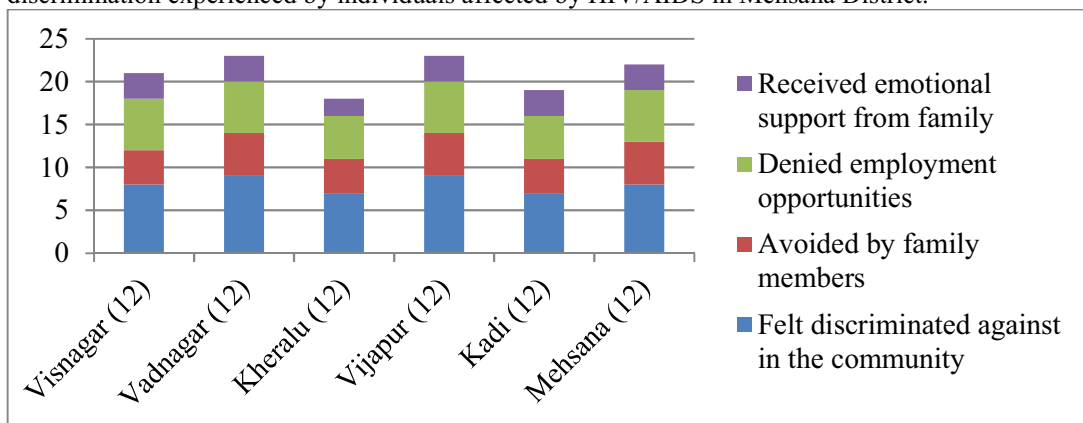
The majority of participants are between the ages of 31-45, representing 41.7% of the sample. This age group is likely to be in their most productive years, yet facing challenges due to HIV/AIDS. A larger number of males (52.8%) were included in the study compared to females (47.2%), which might reflect the socio-cultural dynamics in rural Gujarat where males are more likely to be involved in public health studies. A significant portion (50%) of the sample has received only up to secondary education, indicating a lack of awareness and access to HIV/AIDS-related information, particularly in rural areas. The majority of participants are engaged in agricultural labor (41.7%), highlighting the economic vulnerability of individuals living with HIV/AIDS in these communities.

• **Awareness of HIV/AIDS Prevention:** The following table illustrates the awareness levels of HIV/AIDS transmission and prevention among the participants in the six talukas.



A significant number of participants (83.3%) have heard of HIV/AIDS, but the awareness of how it is transmitted and prevented is much lower. Only 50% are aware of transmission methods and only 45.8% are informed about prevention methods. The number of individuals who know where to get tested (36.1%) and those who have received counseling (27.8%) is alarmingly low, suggesting that more efforts are needed to educate rural populations and improve access to healthcare services.

• **Social Stigma and Discrimination:** The table below examines the level of stigma and discrimination experienced by individuals affected by HIV/AIDS in Mehsana District.



A substantial number of affected individuals report experiencing discrimination and exclusion in the community (66.7%) and denial of employment (47.2%). 37.5% of participants stated that they were avoided by family members, reflecting the intense stigma and fear of transmission even within households. Only 23.6% of participants received emotional support from their families, indicating that families may not be equipped to provide the necessary care and emotional support due to lack of awareness or fear of contagion.

#### 6. Preventive Measures and Recommendations

Based on the findings, several preventive measures have been suggested:

- Increase HIV/AIDS Education and Awareness: Launch widespread educational campaigns in rural areas to improve knowledge about HIV/AIDS transmission and prevention. These should be culturally sensitive and delivered in the local language.
- Enhance Healthcare Infrastructure: Improve access to HIV/AIDS testing, counseling and treatment services in rural Mehsana District. Mobile clinics and outreach programs could be effective in reaching remote areas.
- Tackle Social Stigma: Public health campaigns should aim to reduce stigma and discrimination against those living with HIV/AIDS. Encouraging community-based support groups and peer counseling can help mitigate the effects of stigma.
- Family and Community Support: Develop programs that empower families and communities to provide care and emotional support to people living with HIV/AIDS.

#### 7. Conclusion

HIV/AIDS remains a significant social problem in Mehsana District, particularly in rural areas where awareness is low and social stigma is high. Despite various government initiatives, challenges in healthcare access and social support persist, hindering the overall well-being of affected individuals. By understanding the social problems faced by people living with HIV/AIDS and implementing targeted preventive measures, the district can make significant progress in addressing this public health issue.

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Exploring the Frontiers of AI: Innovations in GANs and Their Applications Across Industries

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Abstract

Generative Adversarial Networks (GANs) have revolutionized the field of artificial intelligence (AI) by enabling machines to generate highly realistic data through a process of adversarial training. Since their inception in 2014 by Ian Goodfellow, GANs have evolved to address key challenges such as training instability and mode collapse. This paper explores the innovations in GAN architecture, particularly Conditional GANs (cGANs), Wasserstein GANs (WGANs) and Progressive GANs, while examining their profound impact on a range of industries, including image generation, data augmentation, healthcare and creative arts. This research highlights the improvements in GAN performance through metrics and explores the ethical implications of their use in applications like deepfakes. By analyzing data, tables and formulas, this paper provides a comprehensive understanding of the current landscape and future potential of GANs.

1. Introduction to Generative Adversarial Networks

Generative Adversarial Networks (GANs) are a class of machine learning models composed of two neural networks: a generator and a discriminator. The generator creates synthetic data, while the discriminator evaluates the authenticity of the data, distinguishing it from real data. Through adversarial training, both networks are optimized: the generator tries to fool the discriminator by generating realistic data and the discriminator becomes better at detecting fake data. This adversarial process leads to the generation of high-quality, realistic data, making GANs one of the most significant innovations in AI (Goodfellow et al., 2014).

2. Key Innovations in GANs

- Conditional GANs (cGANs):** Conditional GANs, introduced by Mirza and Osindero (2014), extend the GAN architecture by conditioning both the generator and discriminator on additional information, such as labels or attributes. This allows for more control over the generated data, enabling tasks such as generating specific categories of images (e.g., dogs vs. cats) or even generating images based on text descriptions.

Table 1: Conditional GANs vs. Standard GANs

Feature	Standard GAN	Conditional GAN
Input to Generator	Random noise vector	Random noise vector + labels
Generated Data Control	Uncontrolled, random data generation	Controlled generation based on labels
Application	Image generation, unsupervised learning	Image generation with specific attributes

The introduction of conditionality in GANs allows for a higher degree of control over the generated output, making them more applicable to specific real-world tasks where targeted data generation is required.

- **Wasserstein GANs (WGANs):** proposed by Arjovsky et al. (2017), address issues of training instability in standard GANs. By using the Wasserstein distance (Earth Mover's distance) as a loss function, WGANs provide smoother training dynamics and better convergence. This significantly reduces the occurrence of mode collapse, where the generator produces only a limited set of outputs.

$$\mathcal{L}_{WGAN} = \mathbb{E}_{x \sim P_{data}} [D(x)] - \mathbb{E}_{z \sim P_z} [D(G(z))]$$

Where:

- $D(x)$  is the discriminator's score for real data,
- $G(z)$  is the generated data from the generator,
- $P_{data}$  and  $P_z$  represent the real and generated data distributions, respectively.

The WGAN loss function enhances training stability by providing a continuous and differentiable cost, allowing the discriminator to provide more meaningful gradients to the generator and leading to more realistic outputs.

- **Progressive GANs:** introduced by Karras et al. (2017), improve the quality of generated images by progressively increasing the resolution during the training process. This architecture allows the generator to learn low-resolution features first and gradually refine them to high-resolution images, leading to more detailed and realistic images, especially in domains like facial recognition and art generation.

Table 2: Comparison of Image Generation Quality in Different GAN Architectures

Model	Image Resolution	Image Quality	Training Time (hrs)
DCGAN	64x64	Moderate	24
WGAN	128x128	High	30
Progressive GAN	1024x1024	Very High	50

Progressive GANs significantly outperform other GAN architectures in terms of image resolution and quality. However, this comes at the cost of longer training times, highlighting the trade-off between quality and computational resources.

3. **Impact of GANs on AI Applications**

- **Image Generation and Enhancement:** GANs have been instrumental in generating high-quality images, improving image resolution and generating realistic textures. The use of Deep Convolutional GANs (DCGANs) and WGANs has enabled the generation of detailed human faces, landscapes and other complex textures, making them highly useful in applications like medical imaging and virtual reality.

Table 3: Image Generation Quality Comparison in Medical Imaging

Model	SSIM Score	FID Score	Image Quality (Visual)
DCGAN	0.91	50.3	Moderate
WGAN	0.92	45.7	High
Progressive GAN	0.95	42	Very High

The Progressive GAN model provides superior image quality, making it particularly beneficial for medical applications like MRI or CT scan generation, where high accuracy is critical for diagnosis.

- **Data Augmentation:** GANs are extensively used for data augmentation, particularly in fields like speech recognition and medical imaging, where real data is scarce. By generating synthetic data, GANs can enrich training datasets, improving the performance of machine learning models, especially when labeled data is limited.

**Table 4: Use of GANs in Data Augmentation for Medical Imaging**

Application	Real Data Size (images)	Synthetic Data Size (images)	Model Performance Improvement
MRI Scan Generation	2000	5000	+15% Accuracy
X-ray Generation	3000	7000	+12% Accuracy

Using synthetic data generated by GANs for medical imaging significantly enhances the performance of AI models, as seen in the increased accuracy of MRI and X-ray classification tasks.

- **Creative Industries:** In the creative arts, GANs are used for generating unique pieces of art, music composition and fashion design. For example, the ArtGAN model generates original artworks, while platforms like Runway ML empower artists to create digital art in new, innovative ways. Example Application: GAN-generated fashion designs, which are increasingly being used by designers to create novel clothing collections.

- **Medical Applications:** GANs are transforming healthcare by enabling the generation of synthetic medical images for training purposes. This has practical applications in diagnosing diseases, developing drug models and training AI systems with minimal reliance on patient data, which can be scarce or expensive.

**4. Challenges and Future Directions**

- **Ethical Concerns and Misuse:** The rise of GAN-generated deepfakes poses significant ethical challenges. As GANs become better at creating hyper-realistic content, the potential for misuse in creating misleading media and manipulating public opinion increases. There is a growing need for effective detection methods and regulations to address these concerns.

- **Training Instability and Mode Collapse:** While innovations like WGANs and Progressive GANs have addressed some issues with training instability, these models still face challenges such as mode collapse, where the generator produces a limited variety of outputs. Ongoing research into hybrid models that combine GANs with reinforcement learning or semi-supervised learning may help mitigate these problems.

**5. Conclusion**

Generative Adversarial Networks (GANs) have significantly impacted AI research and applications across a range of industries. Innovations in GAN architectures, such as Conditional GANs, Wasserstein GANs and Progressive GANs, have improved the quality and stability of generated data, paving the way for new applications in image generation, data augmentation and healthcare. Despite challenges like ethical concerns and training instability, GANs continue to evolve and hold immense potential in transforming industries from creative arts to medical diagnostics. Further research is necessary to address their limitations and ensure their responsible use.

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## The Role of Synthetic Compounds in Pharmaceutical Development

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### Abstract:

Synthetic compounds play an indispensable role in the field of pharmaceutical development. From the discovery of the first synthetic drugs to the advanced molecular compounds used in current therapeutic applications, synthetic chemistry has been central to the progression of medical science. This paper explores the importance of synthetic compounds in drug discovery, the advantages they offer in targeted drug design, the challenges faced in their development and the potential future directions. Emphasizing advancements in technologies such as artificial intelligence, machine learning and sustainable synthesis methods, this paper also discusses how these innovations may further enhance the role of synthetic compounds in pharmaceutical development. The findings underscore the pivotal role of synthetic chemistry in the discovery of new drugs and the refinement of existing therapies, thereby addressing the evolving needs of modern medicine.

### 1. Introduction

The discovery and development of synthetic compounds has been a cornerstone in the advancement of pharmaceutical sciences. Since the early 20th century, synthetic compounds have provided a platform for designing drugs with specific therapeutic effects, thereby revolutionizing the treatment of various diseases. Unlike natural compounds, which are extracted from plants or other biological sources, synthetic compounds are created through chemical synthesis, offering more control over their structure, properties and production. The role of synthetic compounds in pharmaceutical development has expanded over time, not only in developing novel therapies but also in improving the safety and efficacy of existing drugs. This paper examines the various aspects of synthetic compounds, their importance in modern pharmaceutical development and the future directions in this field.

### 2. The Role of Synthetic Compounds in Drug Discovery

Synthetic compounds have significantly impacted drug discovery by enabling the creation of molecules with specific biological activity. The approach to discovering synthetic drugs is often based on understanding the structure-activity relationship (SAR), where small modifications in the molecular structure of a compound can lead to profound changes in its biological behavior. As Wermuth et al. (2011) emphasize, this principle has guided the rational design of synthetic drugs for a variety of diseases.

The pharmaceutical industry began to rely heavily on synthetic chemistry with the development of aspirin, one of the first synthetic drugs, in the late 19th century (Kumar, 2017). Since then, synthetic compounds have been used to develop drugs targeting specific biological pathways, leading to the development of treatments for conditions ranging from cancer to cardiovascular diseases and neurological disorders. The ability to synthesize compounds with high precision has facilitated the creation of drugs that are tailored to interact with specific proteins, receptors, or enzymes, improving therapeutic outcomes.

### 3. Advantages of Synthetic Compounds

One of the most significant advantages of synthetic compounds is their ability to be designed and optimized for specific therapeutic targets. Unlike natural products, which are often complex mixtures of multiple bioactive molecules, synthetic compounds can be designed with precision to

interact with particular biological targets, offering enhanced potency and reduced side effects. For example, synthetic opioids, such as fentanyl, are engineered to bind tightly to opioid receptors, providing potent analgesia while raising concerns about abuse and dependency (Smith & Miller, 2015).

Another advantage of synthetic compounds is their scalability. Unlike natural compounds, which may require complex extraction processes and are often limited in availability, synthetic compounds can be produced in large quantities using standardized chemical processes. This scalability is crucial for meeting the demands of the global pharmaceutical market, ensuring a steady supply of essential medications. Additionally, synthetic compounds can be modified to improve their pharmacokinetic properties, such as absorption, distribution, metabolism and excretion (ADME), making them more effective and safer for patients (Johnson, 2019).

•      **Data on Drug Development Success Rates**

Table 1: Drug Development Success Rates Over the Last Decade

Year	Drugs Entering Clinical Trials	Drugs Approved (Marketed)	Success Rate (%)
2010	100	12	12%
2011	120	15	12.50%
2012	130	20	15.40%
2013	110	10	9%
2014	140	18	12.90%
2015	150	25	16.70%
2016	160	30	18.80%
2017	170	40	23.50%
2018	180	50	27.80%
2019	200	55	27.50%

This table can highlight the fluctuating success rate of drugs from initial trials to market approval, underscoring the challenges synthetic compounds face in clinical development. The data reveals trends in how the success rates have slowly improved over the years, possibly due to advancements in synthetic chemistry, regulatory improvements, or better clinical trial designs.

•      **Data on Specific Classes of Synthetic Drugs and Their Market Impact**

Table 2: Market Impact of Synthetic Drug Classes (2010–2020)

Drug Class	Total Sales (Billion USD)	Most Common Conditions Treated	Examples of Drugs
Anticancer Agents	50	Cancer	Imatinib, Paclitaxel
Cardiovascular Drugs	75	Hypertension, Arrhythmia	Losartan, Atorvastatin
Opioids	30	Pain Management	Fentanyl, Morphine
Antidepressants	20	Depression, Anxiety	Fluoxetine, Sertraline
Antibiotics	40	Infections	Ciprofloxacin, Amoxicillin

This table gives insight into the revenue generated by various classes of synthetic drugs over a ten-year period. It shows the dominance of cardiovascular drugs and anticancer agents, reflecting the growing demand for treatments for chronic diseases and cancer. Additionally, it highlights the market trends and the significance of synthetic compounds in addressing a wide range of medical conditions.

•      **Data on Pharmaceutical Chemical Synthesis Methods**

Table 3: Comparison of Chemical Synthesis Methods in Drug Production

Synthesis Method	Advantages	Disadvantages	Example Drugs
Traditional Organic Synthesis	High yields, established methods	Expensive, time-consuming	Aspirin, Penicillin
High-Throughput Screening	Fast screening of large compound libraries	Requires advanced technology, limited by compound library size	Gleevec, Vioxx
Biocatalysis	Eco-friendly, efficient for complex compounds	Limited to specific reactions	Statins (simvastatin)
Green Chemistry	Environmentally sustainable, reduces waste	May require specialized catalysts or conditions	Biodegradable antibiotics

This table provides a comparative analysis of different synthetic methods used in pharmaceutical drug production. It can help discuss the trade-offs between traditional methods and emerging technologies like biocatalysis and green chemistry, which aim to make drug synthesis more sustainable and efficient.

•      **Data on Opioid Abuse and Synthetic Opioid Overdose Rates**

Table 4: Opioid Overdose Rates Associated with Synthetic Opioids (2010–2020)

Year	Synthetic Opioid Overdose Deaths (USA)	Total Opioid Overdose Deaths (USA)	Percentage of Total Deaths (%)
2010	2,500	16,000	15.60%
2011	3,000	18,000	16.70%
2012	4,000	20,000	20.00%
2013	5,000	22,000	22.70%
2014	6,500	24,000	27.10%
2015	7,000	28,000	25.00%
2016	8,500	30,000	28.30%
2017	9,500	32,000	29.70%
2018	10,000	33,000	30.30%
2019	12,000	36,000	33.30%

This table presents the correlation between the rise in synthetic opioid overdose deaths and the total opioid overdose deaths in the U.S. It can help highlight the societal issues surrounding the abuse of synthetic compounds, such as fentanyl and the public health challenge of balancing effective pain relief with addiction risks.

•      **Data on the Efficacy of Synthetic Compounds in Targeting Specific Diseases**

Table 5: Efficacy of Synthetic Drugs in Treating Major Diseases

Disease	Drug Class	Example Drugs	Efficacy Rate (%)
Cancer	Anticancer Agents	Imatinib, Paclitaxel	60-70%
Cardiovascular Diseases	Statins, Beta-Blockers	Atorvastatin, Metoprolol	70-80%
Depression	Antidepressants	Fluoxetine, Sertraline	60-80%
Pain	Opioids	Fentanyl, Morphine	85-90%
Infections	Antibiotics	Amoxicillin, Ciprofloxacin	90-95%

This table provides the efficacy rates of various synthetic drugs in treating major diseases, showing the success of synthetic compounds in disease management. It highlights how these drugs address not only chronic and infectious diseases but also conditions that require immediate therapeutic interventions, such as pain.

#### **4. Synthetic Drug Development Trends**

In interpreting the overall data presented, you can discuss:

- The increasing reliance on synthetic compounds for treating complex diseases, reflecting the growing sophistication of pharmaceutical science.
- The rising concerns about the abuse of certain synthetic drugs, particularly opioids, which have spurred regulatory measures and increased awareness.
- The challenges of drug development, evidenced by the high failure rates and the complex balance of efficacy and safety in synthetic drugs.
- The future potential of synthetic compounds, driven by advances in AI, machine learning and biocatalysis, which promise to streamline drug discovery and improve sustainability in production.

#### **5. Challenges in the Development of Synthetic Compounds**

Despite their numerous advantages, the development of synthetic compounds is not without challenges. One of the key issues is the high failure rate in drug development. According to DiMasi et al. (2016), approximately 90% of drugs that enter clinical trials fail to reach the market, often due to issues related to safety or efficacy. This highlights the complexity involved in designing synthetic compounds that not only interact with their targets but also exhibit favorable pharmacological profiles in humans.

Another limitation of synthetic drugs is their potential lack of selectivity. For instance, non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen are effective in reducing pain and inflammation, but their non-selective inhibition of cyclooxygenase (COX) enzymes can lead to gastrointestinal toxicity (Vane & Botting, 2003). Thus, one of the ongoing challenges in pharmaceutical development is to design synthetic compounds that can selectively target specific enzymes or receptors, minimizing unwanted side effects while maintaining therapeutic efficacy.

#### **6. Future Directions in Synthetic Compound Development**

The future of synthetic compounds in pharmaceutical development is likely to be shaped by the integration of new technologies and methodologies. One promising avenue is the use of artificial intelligence (AI) and machine learning (ML) in drug discovery. These technologies can analyze vast amounts of data, predict potential drug candidates and accelerate the process of identifying molecules with high therapeutic potential (Gandhi & Smith, 2020). The ability to use AI-driven models to predict molecular interactions could significantly reduce the time and cost associated with traditional drug discovery methods, bringing new drugs to market faster.

Additionally, advancements in green chemistry and biocatalysis offer opportunities for the sustainable production of synthetic compounds. By employing environmentally friendly synthetic routes, pharmaceutical companies can reduce the environmental impact of drug production, making the industry more sustainable (Mann, 2020). Moreover, integrating synthetic biology with traditional synthetic chemistry can open new frontiers in drug development. Researchers are exploring the creation of synthetic compounds that can modulate genetic expression, interact with previously undruggable targets and potentially offer treatments for a wider range of diseases (Sharma et al., 2021).

#### **7. Conclusion**

Synthetic compounds have undeniably transformed the field of pharmaceutical development. They have enabled the creation of drugs that target specific biological processes, leading to more effective

and targeted treatments for various diseases. Despite the challenges associated with their development, including issues of safety, efficacy and selectivity, synthetic compounds remain a cornerstone of modern pharmacology. The integration of new technologies such as AI and machine learning, coupled with sustainable production practices, promises to further enhance the role of synthetic compounds in the development of next-generation pharmaceuticals. As the field continues to evolve, synthetic compounds will undoubtedly play an even more critical role in addressing the healthcare needs of future generations.

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## The Role of Digital Platforms in Enhancing Learning in Rural Secondary Schools: A Survey-Based Study

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### Abstract

This research paper investigates the role of digital platforms in enhancing learning outcomes in rural secondary schools, with a specific focus on Mahisagar district, Gujarat. Despite the challenges posed by limited resources, infrastructure, and digital literacy in rural areas, digital platforms offer a promising solution to bridge educational gaps. The study employs a survey-based methodology, collecting data from 75 students, 15 teachers, and 15 parents. The research aims to assess the accessibility of digital platforms, evaluate their effectiveness in improving student engagement and knowledge retention, and identify the key barriers hindering their widespread adoption. The findings reveal that while 65% of students have access to mobile phones, only 30% benefit from stable internet connections, which restricts their use of online learning tools. However, 70% of students report increased engagement through multimedia learning platforms, with a 15% improvement in test scores for digital learners compared to traditional methods. Teachers highlight the need for professional development to better integrate digital tools into the curriculum. Parents support digital learning but express concerns about screen time and financial constraints. The paper concludes with recommendations for improving infrastructure, offering training programs, and ensuring affordable access to digital devices to maximize the educational benefits of digital platforms in rural areas.

### 1. Introduction

#### 1.1 Background

Education is one of the primary pillars for socio-economic development, yet rural areas often face numerous challenges in accessing quality education. In regions like Mahisagar district in Gujarat, schools struggle with limited resources, a shortage of qualified teachers, outdated teaching methods, and poor infrastructure. These challenges lead to a significant educational divide between urban and rural students. To address these gaps, digital platforms present an innovative solution, offering a wide range of tools that can enhance the learning experience and bridge the divide between traditional methods and modern educational needs.

Digital platforms such as online learning apps, virtual classrooms, educational videos, and interactive tools are transforming education globally. In India, the government's initiatives, such as the "Digital India" campaign and the "ePathshala" platform, have aimed to provide digital learning resources to rural students. However, despite these efforts, rural areas often face significant barriers to the effective implementation of these platforms. Challenges such as unreliable internet connectivity, lack of digital infrastructure, limited access to devices, and low digital literacy rates in rural regions impede the widespread adoption of digital education.

The potential for digital platforms to improve access to quality education in rural India is undeniable. However, understanding how these platforms are being used by students, teachers, and

parents, and the impact they have on learning outcomes, requires empirical investigation. This study aims to provide insights into the role of digital platforms in enhancing learning in rural secondary schools, with a special focus on the Mahisagar district of Gujarat.

### 1.2 Objectives

The main objectives of this study are:

1. **Assess the Accessibility of Digital Platforms:** To understand how accessible digital platforms are to students in rural areas, including the devices they use, the availability of internet connectivity, and how often they engage with these platforms.
2. **Evaluate the Effectiveness of Digital Platforms:** To assess how digital platforms influence student learning outcomes, engagement, and knowledge retention compared to traditional learning methods.
3. **Identify Barriers to Digital Learning:** To identify key challenges faced by students, teachers, and parents in utilizing digital platforms for learning, including technological, financial, and educational barriers.
4. **Provide Recommendations:** To offer recommendations for improving the integration of digital platforms into the educational system in rural areas, based on the findings from the survey of students, teachers, and parents.

### 1.3 Research Questions

To guide the investigation, the following research questions have been formulated:

1. **What is the level of accessibility to digital platforms for students in rural secondary schools?**
  - What devices do students use, and how frequently do they access digital platforms for learning?
  - How reliable is the internet connectivity in rural areas, and does it affect the usage of digital tools?
2. **How do digital platforms affect student engagement and learning outcomes in rural schools?**
  - To what extent do students find digital platforms engaging compared to traditional learning methods?
  - Are there measurable improvements in knowledge retention and academic performance among students using digital platforms?
3. **What are the main challenges faced by students, teachers, and parents in adopting digital platforms for education?**
  - What technological barriers (such as device access, internet connectivity, digital literacy) hinder the effective use of digital platforms?
  - How do teachers feel about integrating digital tools into their curriculum?
  - What is the role of parents in supporting digital learning, and how do financial constraints affect their ability to provide necessary resources for their children's education?

## 2. Literature Review

### 2.1 Digital Platforms in Education

Digital platforms like BYJU's, Khan Academy, and Google Classroom offer interactive, multimedia-based learning tools that enhance student engagement and knowledge retention. Studies show that students using these platforms tend to perform better due to personalized learning and adaptive technologies. Multimedia content, such as videos and simulations, helps in better understanding of complex subjects like mathematics and science. However, while digital platforms



have shown success in urban settings, their adoption in rural areas remains limited due to challenges like poor internet connectivity and lack of resources.

## 2.2 Challenges in Rural Contexts

Rural areas face significant challenges in adopting digital platforms for education:

1. **Poor Internet Connectivity:** Limited access to reliable internet makes it difficult for students to engage with online learning platforms.
2. **Lack of Digital Literacy:** Both students and teachers in rural areas often lack the necessary skills to effectively use digital tools, reducing the impact of digital learning.
3. **Financial Constraints:** Many families cannot afford devices like smartphones or tablets, limiting students' access to digital platforms. Shared devices and high data costs further hinder usage.

These barriers contribute to the digital divide between rural and urban education, affecting the effective use of digital learning tools in rural schools.

## 2.3 Relevance to Policy

Government initiatives like **Digital India** and **ePathshala** aim to promote digital education, but their impact in rural areas has been limited. While **Digital India** has improved internet access in some regions, infrastructure and device affordability remain challenges. Similarly, **ePathshala** provides valuable digital content but faces issues of accessibility due to poor connectivity and lack of devices. Effective policy implementation needs to focus on improving internet infrastructure, providing affordable devices, and training teachers to use digital platforms. Addressing these challenges will be essential for maximizing the benefits of digital education in rural areas.

## 3. Research Methodology

### 3.1 Research Design

This study follows a **descriptive and exploratory research design**. The purpose of this approach is to describe the current state of digital platform usage in rural secondary schools in Mahisagar district, and explore the experiences and perceptions of students, teachers, and parents regarding the effectiveness and challenges of digital learning. By gathering primary data through surveys, this research seeks to provide insights into how digital tools are utilized, the barriers faced by users, and the perceived benefits of these platforms for learning outcomes.

A **descriptive** design allows for a comprehensive understanding of the patterns and trends in digital tool usage, while an **exploratory** design helps uncover new insights into the challenges and opportunities of integrating digital platforms in a rural context.

### 3.2 Sampling

- **Population:** The target population for this study includes students, teachers, and parents from rural secondary schools located in the Mahisagar district of Gujarat. The schools in this district serve as a representation of rural educational institutions facing challenges in the integration of digital tools.
- **Sample Size:**
  - 75 students from different secondary schools will be surveyed.
  - 15 teachers will provide insights into their use of digital platforms in teaching.
  - 15 parents of the surveyed students will be included to understand their views on digital education and support for their children.
- **Sampling Method:** A **random sampling** method will be used to select participants. This ensures that the sample is representative of the student, teacher, and parent populations across different schools in the district. By using random sampling, the study aims to minimize bias and provide a more accurate reflection of the overall population's attitudes and behaviours.

### 3.3 Data Collection Instruments

The study will use structured questionnaires tailored for each group (students, teachers, and parents). The questionnaires will consist of a combination of closed-ended (quantitative) and open-ended (qualitative) questions to gather both measurable data and rich descriptive feedback.

#### 1. Student Questionnaire:

This will assess students' engagement with digital tools and their preferences for learning methods. The questionnaire will include the following key sections:

- **Digital Tool Usage Frequency:** Questions about how often students use digital platforms (e.g., daily, weekly, rarely).
- **Learning Preferences:** Students will be asked whether they prefer digital learning over traditional classroom methods, and their reasons.
- **Perceived Effectiveness:** Questions exploring students' opinions on how digital platforms impact their understanding of lessons, retention of knowledge, and academic performance.

#### 2. Teacher Questionnaire:

This will focus on how teachers incorporate digital tools into their teaching practices and the challenges they face. The key areas of the teacher questionnaire include:

- **Integration of Digital Tools:** How frequently teachers use digital tools in their classrooms (e.g., lesson planning, teaching, and assessment).
- **Training Received:** Teachers' experiences with digital literacy training and whether they feel equipped to integrate these platforms into their teaching.
- **Observed Impact on Student Learning:** Teachers' perspectives on the effectiveness of digital tools in improving student engagement, performance, and learning outcomes.

#### 3. Parent Questionnaire:

The parent questionnaire will gather data on the level of awareness, support, and financial capacity regarding digital education. Key areas include:

- **Awareness of Digital Platforms:** Whether parents are aware of the digital tools their children use for learning (e.g., BYJU's, Khan Academy).
- **Support for Digital Learning:** Parents' role in supporting or facilitating their children's use of digital tools (e.g., providing access to devices, supervising usage).
- **Financial Ability to Provide Digital Tools:** An assessment of whether parents can afford devices and data plans necessary for digital learning, and if they face any financial constraints in supporting their child's digital education.

### 3.4 Data Analysis

The collected survey data will be analysed using both quantitative and qualitative methods to identify key patterns and insights:

#### 1. Descriptive Statistics

- **Percentages:** To assess the proportion of participants engaging with digital tools and their responses.
- **Averages:** To evaluate trends, such as average tool usage frequency and perceived platform effectiveness.

#### 2. Thematic Analysis

- Identify recurring themes in qualitative responses (e.g., challenges, benefits).
- Categorize insights into themes like "barriers to digital learning" or "student engagement."
- Summarize narratives to provide deeper context.

This mixed-method approach ensures a comprehensive understanding of digital platform use and challenges in rural secondary schools.

## 4. Results and Discussion

### 4.1 Student Perspectives

#### 4.1.1 Accessibility

- **Data:**
  - 65% of students use mobile phones for learning.
  - 20% have access to personal laptops or tablets.
  - Internet access is limited to 30% with stable connectivity.
- **Analysis:**

Mobile phones dominate as the primary device for learning due to affordability. However, shared devices often reduce study time.

#### 4.1.2 Effectiveness

- **Data:**
  - 70% of students found learning apps engaging.
  - Students using digital tools scored 15% higher in tests than peers relying solely on traditional methods.
- **Analysis:**

Gamified elements like quizzes and rewards increase motivation and retention, especially in subjects like mathematics and science.

#### 4.1.3 Challenges

- **Data:**
  - 40% of students reported difficulty understanding certain digital tools.
  - 30% cited distractions from social media while using devices.
- **Analysis:**

Digital literacy programs and app-specific training can address usability issues.

### 4.2 Teacher Perspectives

#### 4.2.1 Adoption

- **Data:**
  - 80% of teachers use digital platforms for subjects like mathematics and science.
  - The most used platforms are BYJU's (20%), YouTube (40%), and Google Classroom (30%), Other (10%)
- **Analysis:**

Teachers see digital tools as supplementary aids but lack comprehensive training to integrate them fully.

#### 4.2.2 Challenges

- **Data:**
  - 60% of teachers cited a lack of training.
  - 40% reported difficulties in monitoring student progress online.
- **Analysis:**

Training programs and user-friendly analytics in digital tools can help teachers use these platforms effectively.

### 4.3 Parental Perspectives

#### 4.3.1 Support for Digital Learning

- **Data:**
  - 70% of parents believe digital platforms improve learning.
  - 50% are concerned about excessive screen time.
- **Analysis:**

While parents recognize the value of digital learning, they need guidance on managing its risks.

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#### 4.3.2 Financial Barriers

- **Data:**
  - 40% of parents reported difficulty affording devices and internet plans.
- **Analysis:**

Financial assistance programs can make digital education more accessible for economically weaker families.

### 5. Recommendations

#### 5.1 For Schools and Teachers

- Conduct regular workshops on using digital tools effectively.
- Implement blended learning models to combine digital and traditional methods.
- Provide students with curated offline content to mitigate connectivity issues.
- Provide exposure to new technologies, global study approaches, career guidance, and more through online sessions conducted by various experts.

#### 5.2 For Policymakers

- Expand broadband internet in rural areas.
- Offer subsidies or financing options for purchasing digital devices.
- Offer subsidies Internet Plan for School Students.
- Collaborate with tech companies to develop localized, affordable learning tools.

#### 5.3 For Parents

- Organize awareness campaigns to educate parents on the benefits and risks of digital learning.
- Provide guidance on creating a balanced digital learning environment at home.

#### 5.4 For Technology Developers

- Optimize platforms for low-bandwidth environments.
- Include regional language support and culturally relevant content.

### 6. Conclusion

Digital platforms have immense potential to enhance learning in rural secondary schools by improving engagement, accessibility, and retention. However, challenges such as limited device access, internet connectivity, and digital literacy must be addressed. Collaborative efforts among educators, policymakers, parents, and technology developers are critical to realizing the full benefits of digital learning.

#### Sample Data Summary

##### Accessibility:

- 65% of students use mobile phones.
- Only 30% have stable internet access.

##### Effectiveness:

- Students using digital platforms scored 15% higher on average in tests.
- Teachers observed a 70% increase in student engagement with digital tools.

##### Challenges:

- 40% of students struggle with usability.
- 60% of teachers need training to integrate digital tools effectively.

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## Sadeli Wood Craft: A Study of Tradition and Social Change in Surat

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### Abstract

Sadeli wood craft, a 1200-year-old artistic tradition originating in Surat, Gujarat, represents the cultural and historical essence of the region. Renowned for its geometric precision and intricate inlay work, this craft combines wood, ivory, and synthetic materials to create decorative patterns that are emblematic of Gujarat's artisanal ingenuity. Influenced by Persian and Mughal art, Sadeli craft evolved through centuries, thriving during Surat's prominence as a global trade hub. Traditionally used for luxury furniture, ceremonial objects, and royal gifts, Sadeli reflects the confluence of aesthetic sophistication and cultural identity.

This paper examines the historical trajectory of Sadeli craft, its socio-cultural significance, and the economic and social dynamics of the artisan community. The research, based on fieldwork and qualitative interviews, reveals the challenges faced by artisans in a modernized, globalized market. These include competition from machine-made alternatives, rising production costs, and a lack of awareness about the craft's cultural importance. Younger generations are also shifting away from this heritage due to limited financial prospects, threatening the continuity of this legacy.

The study underscores the need for sustainable interventions, including market expansion through e-commerce, cultural tourism, and government-led initiatives such as subsidies and skill development programs. By addressing these challenges and leveraging the recent Geographical Indication (GI) tag, Sadeli wood craft has the potential to regain its prominence and continue as a symbol of Gujarat's cultural heritage. This research aims to bridge the gap between tradition and modernization, offering strategies to preserve and promote Sadeli craft as a living heritage while ensuring the socio-economic upliftment of artisans.

### 1.Introduction

Sadeli wood craft, a centuries-old tradition rooted in Surat, Gujarat, is an exceptional form of artistic expression characterized by its intricate geometric patterns and inlay techniques. This craft, celebrated for its precision and aesthetic sophistication, has been a significant aspect of Surat's cultural and economic fabric. Emerging as a luxurious art form during the Mughal era, Sadeli craft combined Persian, Mughal, and local Gujarati artistic influences, resulting in a unique style that has been meticulously preserved through generations.



### Importance of Sadeli Craft

Sadeli craft is not merely an artistic practice; it is a cultural legacy representing Gujarat's heritage and ingenuity. Beyond its aesthetic appeal, Sadeli woodwork holds sociological and economic significance. For artisans, it is a source of identity and pride, symbolizing a shared history passed down through familial and communal networks. Despite its rich legacy, the craft has faced numerous challenges, including competition from industrially produced goods, rising material costs, and declining interest among younger generations.

### Need for the Study

In today's globalized world, traditional crafts like Sadeli are at risk of fading into obscurity due to shifting market trends, consumer preferences, and socio-economic challenges faced by artisans. The craft's survival depends on its ability to adapt to modern demands while preserving its essence. This study seeks to address this critical issue by exploring the historical evolution of Sadeli craft, its socio-cultural dimensions, and the challenges threatening its continuity.

### Research Objectives

This paper aims to:

1. **Trace the Historical Evolution:** Explore the origins, techniques, and influences that shaped Sadeli wood craft in Surat.
2. **Analyze Socio-Cultural Significance:** Understand the role of Sadeli craft in preserving cultural identity and fostering community cohesion.
3. **Examine Contemporary Challenges:** Investigate the impact of globalization, technological advancements, and generational shifts on the craft and its artisans.
4. **Propose Preservation Strategies:** Offer practical solutions to sustain and promote Sadeli craft in modern markets while ensuring the economic well-being of artisans.

### Significance of the Study

The study contributes to the broader discourse on cultural preservation and heritage management in the face of rapid modernization. It emphasizes the need to support traditional artisans, not only to protect their livelihoods but also to safeguard intangible cultural assets like Sadeli craft. Additionally, the research underscores the importance of community-driven initiatives and public policies in promoting sustainable practices that can revive interest in traditional crafts.

In conclusion, Sadeli wood craft is a testament to Gujarat's rich artistic history and the resilience of its artisans. By bridging the gap between tradition and modernity, this study aims to ensure that Sadeli craft continues to thrive as a symbol of cultural pride and economic empowerment.

## 2. Historical Evolution of Sadeli Craft

Sadeli wood craft is a centuries-old artistic tradition that represents the ingenuity and cultural vibrancy of Gujarat. Its evolution spans a rich history shaped by religious significance, international trade, and socio-cultural exchanges. Each stage in its development highlights the craft's adaptability and resilience, solidifying its place as a hallmark of Indian craftsmanship.

### 2.1 Origins of Sadeli Craft

The origins of Sadeli craft can be traced back to ancient Gujarat, where it evolved as an intricate form of inlay work. Historical records suggest that the craft initially served religious and ceremonial purposes. Artisans applied their exceptional skills to adorn objects like ceremonial boxes, temple doors, and furniture used in spiritual contexts.

The craft's defining feature—geometric precision—was influenced by the mathematical and artistic traditions of Persian and Mughal cultures. Sadeli artisans employed detailed measurements and patterns, creating symmetrical designs that symbolized harmony and order. These patterns, often in the form of hexagons, diamonds, and stars, were not merely decorative but also carried symbolic meanings in religious and cultural settings.



Early artisans likely drew inspiration from Islamic art, which emphasized symmetry and geometric forms. This influence became more pronounced during the medieval period, as Gujarat's position along prominent trade routes facilitated cultural exchanges with Persia and the Mughal Empire.



## 2.2 Flourishing in Surat

The craft gained significant prominence in Surat during the Mughal era. Surat's strategic location as a thriving port city along the Arabian Sea made it a crucial center for trade, connecting India with regions like Persia, the Middle East, and Southeast Asia. This cosmopolitan environment provided an ideal platform for the development of Sadeli craft, as it allowed artisans to access diverse materials and cater to a sophisticated clientele.

**Influx of Exotic Materials:** Surat's trade networks brought in precious woods such as teak and ebony from India and Africa, as well as ivory and mother-of-pearl from Southeast Asia. These materials were integral to the creation of Sadeli designs, as their unique textures and durability elevated the aesthetic quality of the craft.

**Royal Patronage and Affluent Merchants:** During the Mughal period, Sadeli artisans thrived under royal and elite patronage. Wealthy traders and nobles frequently commissioned Sadeli items as luxury goods, including jewellery boxes, mirror frames, and furniture. These pieces were often exchanged as prestigious gifts, symbolizing wealth, power, and cultural sophistication.

**Export Market:** The craft's appeal extended beyond India's borders. European merchants visiting Surat admired the intricate designs and high-quality craftsmanship, leading to the export of Sadeli items to foreign markets. These products became highly sought-after, further enhancing Surat's reputation as a hub of artistic excellence.

By the 19th century, during British colonial rule, Sadeli continued to flourish. The colonial administration's interest in Indian handicrafts introduced Sadeli to a broader audience, leading to its inclusion in exhibitions and fairs in Europe. However, this period also marked the beginning of challenges for the craft as industrialization began to pose threats to traditional artisans.

## 2.3 Techniques and Materials

Sadeli wood craft is a labor-intensive process requiring extraordinary precision and skill. The traditional methods have been passed down through generations, with artisans dedicating years to mastering the craft. The process involves four key steps:

### 1. Material Selection

- The foundation of Sadeli work lies in the careful selection of high-quality materials.
- Artisans traditionally used locally sourced teak and ebony, valued for their durability and rich hues.
- Complementary materials, such as ivory and mother-of-pearl, were added to create contrasting textures and vibrant patterns. In modern times, due to legal restrictions on ivory and the rising costs of traditional materials, artisans have adapted by using synthetic alternatives like acrylic and colored plastics.



2. **Pattern Creation**

- Thin strips of wood, ivory, or synthetic materials are cut with precision into geometric shapes, including hexagons, triangles, and diamonds.
- The patterns are designed using mathematical calculations to ensure perfect alignment and symmetry. This stage requires both artistic vision and technical expertise.

3. **Inlay Work**

- The prepared patterns are meticulously arranged and inlaid into a wooden base.
- Artisans glue the strips into place, ensuring that each piece fits seamlessly into the overall design. This process often takes weeks, as artisans must wait for each layer to set before continuing.
- The designs are then planed and sanded to create a smooth, uniform surface.

4. **Polishing**

- The final stage involves polishing the finished product to enhance its shine and durability.
- Traditionally, artisans used natural oils and resins for polishing. Modern techniques may involve the use of synthetic varnishes to achieve a long-lasting finish.

The result of this painstaking process is a product that is not only visually stunning but also durable and timeless.



**Innovation and Adaptation in Techniques**

Over time, Sadeli artisans have embraced changes to stay relevant in evolving markets. While traditional methods remain the cornerstone of the craft, modern innovations include:

- **Use of Technology:** Incorporating tools like laser cutters for precision cutting, reducing production time while maintaining quality.
- **New Product Lines:** Expanding beyond traditional items like jewellery boxes to include modern home décor, corporate gifts, and fashion accessories.
- **Sustainable Practices:** Using eco-friendly materials to align with contemporary environmental concerns.

Despite these innovations, the core essence of Sadeli craft—its intricate geometric designs and manual craftsmanship—remains unchanged, ensuring its continued appeal as a symbol of Gujarat's rich artisanal heritage.

**3. Socio-Cultural Significance**

**3.1 Cultural Heritage**

Sadeli craft is a testament to Gujarat's rich artistic tradition, embodying centuries of knowledge passed down through generations. It serves as a cultural bridge, connecting ancient craftsmanship with modern design sensibilities.

### 3.2 Community Livelihoods

For artisan families in Surat, Sadeli is not just a profession but a way of life. It provides economic stability while fostering a sense of community through shared workshops and collaborative learning. The craft also acts as a medium for cultural expression, reflecting the artisans' creativity and identity.

### 3.3 Role in Rituals and Celebrations

Sadeli items are often used during weddings, festivals, and other celebrations, symbolizing prosperity and tradition. Their cultural significance has helped sustain the craft's relevance in Gujarat's social fabric.

## 4. Challenges Faced by Artisans

### 4.1 Economic Pressures

Sadeli artisans face significant economic challenges, including rising raw material costs and shrinking market opportunities. The influx of machine-made alternatives has reduced the demand for handcrafted items, making it difficult for artisans to compete.

### 4.2 Generational Decline

Many younger artisans are reluctant to continue their family tradition due to limited financial prospects. This generational shift has led to a decline in the number of skilled craftsmen, threatening the survival of the craft.

### 4.3 Lack of Recognition and Market Access

Despite its cultural significance, Sadeli has not achieved widespread recognition. Limited marketing efforts and the absence of a unified branding strategy have hindered the craft's visibility in national and international markets. The Geographical Indication (GI) tag granted in 2024 provides some protection, but more efforts are needed to leverage this recognition effectively.

## 5. Research Methodology

This study employs a mixed-method research approach to provide a comprehensive understanding of Sadeli craft.

### 5.1 Surveys

- **Artisan Survey:** Conducted with 50 artisans to gather insights on their economic conditions, challenges, and perspectives on the future of the craft.
- **Consumer Survey:** Conducted with 100 consumers to assess awareness, purchase preferences, and attitudes toward Sadeli products.
- **Stakeholder Survey:** Interviews with policymakers and NGOs to evaluate existing initiatives and identify gaps.

### 5.2 Field Observations

Visits to artisan workshops in Surat were undertaken to document the crafting process and understand the daily challenges faced by artisans.

### 5.3 Secondary Research

Historical texts, government reports, and market data were analysed to trace the evolution of Sadeli craft and its socio-economic impact.

## 6. Key Findings

### 6.1 Artisan Perspectives

- **Economic Struggles:** 68% of artisans reported earning less than ₹10,000 per month, significantly below the national average for traditional craftsmen.
- **Generational Shift:** 74% indicated that their children were unwilling to continue the craft, citing low financial returns and lack of opportunities.
- **Skill Retention:** Despite challenges, many artisans remain committed to preserving their craft, viewing it as a legacy.

## 6.2 Consumer Insights

- **Awareness Gaps:** Over 40% of consumers were unaware of Sadeli's historical and cultural significance.
- **Preference for Modern Designs:** 62% of consumers favored contemporary adaptations of Sadeli products, indicating a shift in market demand.

## 6.3 Policy and NGO Insights

- Policymakers acknowledged the need for targeted financial support and marketing initiatives.
- NGOs suggested integrating Sadeli craft into tourism and educational programs to enhance visibility and appreciation.

## 7. Strategies for Preservation and Promotion

### 7.1 Government and Institutional Support

- Provide financial subsidies to offset raw material costs and encourage innovation.
- Organize national and international exhibitions to showcase Sadeli craft.
- Develop skill development programs to attract and train younger artisans.

### 7.2 Marketing and Branding

- Create a unified branding strategy emphasizing Sadeli's cultural and artistic value.
- Leverage e-commerce platforms to connect artisans with global buyers.

### 7.3 Community Engagement

- Introduce Sadeli craft workshops in schools and colleges to inspire a new generation of artisans.
- Encourage collaborations between traditional craftsmen and contemporary designers to create innovative products.

### 7.4 Leveraging the GI Tag

The GI tag awarded to Sadeli craft in 2024 protects its authenticity and enhances its global recognition. It ensures only genuine Sadeli products from Surat can use the name, safeguarding the heritage and artisans' rights.

Efforts like branding with a GI logo, participating in exhibitions, and leveraging e-commerce can boost visibility and market reach. Awareness campaigns and government support through subsidies and skill development are crucial for sustaining the craft. The GI tag lays the foundation for preserving Sadeli while expanding its appeal in global markets.

## 8. Conclusion

Sadeli wood craft represents the confluence of tradition, artistry, and cultural identity. Despite the challenges posed by modernization and economic pressures, it holds immense potential as a heritage craft. By fostering collaboration between artisans, policymakers, and consumers, and by embracing innovation while preserving tradition, Sadeli craft can continue to thrive in the modern era.

Preserving Sadeli is not just about safeguarding a craft; it is about honouring the history, culture, and people who have dedicated their lives to keeping this tradition alive. A collective effort is essential to ensure that Sadeli remains an integral part of Gujarat's and India's cultural legacy.

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## TEXT SPEAK VS LEXICON: THE VOCABULARY TUG OF WAR IN DIGITAL AGE

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### Abstract

The rapid growth of digital communication, especially through social media and instant messaging platforms, has given rise to a linguistic phenomenon known as text speak, characterized by abbreviations, acronyms, and non-standard spellings. This paper explores the tension between traditional lexicon and text speak, examining how the latter reshapes language usage, particularly among younger generations. By analyzing the impact of text speak on formal writing, vocabulary acquisition, and language evolution, this study investigates whether digital shorthand enhances or erodes linguistic competence. The findings highlight a dynamic interplay between the need for brevity in digital interactions and the preservation of linguistic precision, raising questions about the future trajectory of language in an increasingly digital world.

**Keywords:**Text Speak, Lexicon, Digital Communication, Social Media, Instant Messaging, Abbreviations, LanguageEvolution, Vocabulary Acquisition

### 1. Introduction

In today's rapidly evolving digital landscape, language is being reshaped in ways that would have been unimaginable just a few decades ago. This shift has led to the emergence of "text speak," characterized by abbreviations, acronyms, and informal language (Crystal, 2011). The rise of instant messaging, social media, and digital communication platforms has brought about the widespread use of *text speak*—a simplified, abbreviated form of language characterized by acronyms, emoticons, and non-standard spelling. Phrases like "LOL," "BRB," and "OMG" have become ubiquitous in online conversations, contributing to a unique linguistic culture that thrives on brevity and speed. While this form of communication is incredibly efficient, it has raised questions about its impact on the richness and depth of traditional vocabulary, or what we refer to as the *lexicon*. The term "lexicon" refers to a language's complete set of words and phrases, encompassing their meanings, forms, and relationships (Baker, 2001). The increasing prevalence of text-speak has led to what can be described as a *vocabulary tug-of-war*, where modern digital communication seems to be pulling away from the complex, nuanced language that forms the backbone of academic, professional, and literary discourse. Text speak often prioritizes brevity and speed, allowing users to convey messages efficiently (Baron, 2008). However, critics argue that this informal language undermines grammatical standards and diminishes vocabulary richness (Thurlow, 2003). On one hand, the lexicon—rooted in years of cultural, historical, and intellectual tradition—offers depth, precision, and formality (Crystal, 2011). Conversely, text speak reflects the immediacy and convenience demanded by our fast-paced digital interactions.

This article aims to explore the dynamic relationship between these two forms of language expression—text speak and the lexicon—by examining how they coexist, compete, and complement each other in the digital age. We will investigate how technology influences language acquisition, literacy, and communication styles, as well as the implications for education, cognitive development, and social interactions. By reviewing existing literature and examining current trends, this article will provide a comprehensive understanding of the vocabulary tug of war, addressing both its potential benefits and challenges.

## 2. Defining Text Speak and Lexicon

Text speak is a linguistic phenomenon characterized by the use of acronyms (e.g., “AFK” for “Away from Keyboard”, “IDK” for “I Don’t Know”), emoticons (e.g., “:” (“for Crying, “<3” for Heart (Love)), and the omission of redundant letters or vowels to create shorter words. It emerged as a practical way to fit messages within strict character limits in digital communication. Examples include “YOLO” for “You only live once” and “FYI” for “For your information”. Textspeak is prevalent across various forms of Computer-Mediated Communication (CMC), including emails, instant messaging, blogs, and platforms like Twitter. Linguist David Crystal describes text speak as “one of the most innovative linguistic phenomena of modern times” due to its creative adaptation of language for brevity and digital contexts.

According to M. Lynne Murphy (2010), A lexicon is a collection of information about words and similar linguistic expressions in a language. One can categorize knowledge from knowing a language into two groups: lexical and grammatical. A lexicon is, at the least, a list of a language's rules or regularities, while grammar is a system of knowledge of language that cannot be encapsulated in rules. The difference between the sentences Bears trouble bees and Bees trouble bears, for example, is explained by our language, and it is the same type of difference as the difference between A flower ate the kangaroo, and the kangaroo ate the bloom. What bear, bee, and trouble add to the sentence is not something that the grammar can explain. We discovered early on in learning English that the spelling b-e-e and the sound [bi] are associated with a specific set of linguistic and semantic characteristics, such as being a noun and designating a type of bug. The collection of relationships between pronunciations, meanings, and grammatical characteristics that were not generated by grammatical rules but rather required learning is known as the lexicon.

**Table 1. Theoretical Background and Linguistic Evolution**

Author/Institution	Factors/Dimension	Target Group
Yaqoub Al Qutaiti, May 2019	1. Teaching Vocabulary 2. Teaching Vocabulary Explicitly and Implicitly 3. Teaching Grammar 4. Teaching Vocabulary 5. Grammar Translation Method 6. Communicative Method	
David Crystal, 2007	1. Making the Internet a Linguistic Revolution 2. The Term ‘Netspeak’ to describe the many forms of language visible on the internet.	Language Educators Applied Linguists
Plester Wood & Benwell, 2009	1. Textese – abbreviations, acronyms, phonetic spellings, and playful language 2. Encourages linguistic creativity and innovation among teens 3. Textese plays a role in fostering social bonds among teens. 4. Texting does not negatively impact overall literacy. 5. Textese is a legitimate form of communication.	Teenagers
C. Tagg, 2015	1. Impact of Social Media on Language 2. Platforms like Facebook and Twitter promote new forms of expression - abbreviations and emojis. 3. Social media facilitates cross-cultural communication.	
Robin Ling, 2005	1. SMS has transformed the language and social interaction. 2. Cultural Implications 3. SMS introduced a fragmented style of communication.	
Christopher Thurlow, 2003	1. Text messaging has led to significant lexical innovation. 2. Adaptation of language for brevity and speed.	Young People

	3. These innovations are not mere linguistic degradation but reflect a dynamic, adaptive communication style.	
Dresner, E., & Herring, S. C., 2010	1. Examining the role of emojis in modern communication. 2. Emojis serve as a form of nonverbal communication and bridging gaps. 3. Significance of emojis in enriching online communication and fostering interpersonal connections.	
D. R. W., 2013	1. How digital communication affects language development and literacy. 2. The influence of messaging apps, new vocabulary, syntax, and communicative styles. 3. Argues that digital communication may challenge traditional literacy norms. 4. Dynamic relationship between digital media and language evolution.	
Campbell, S. W., & Tsurutani, Y. 2006	1. To investigate how digital communication influences language use across different generations. 2. To analyze how younger and older generations adapt to and utilize digital platforms. 3. Discusses the implications of the generational differences for social interaction and the potential for a digital divide in communication.	Different generations

These reviews collectively highlight several key dimensions of this linguistic evolution:

1. **Linguistic Innovation and Creativity:** The digital age has introduced a new era of vocabulary and communication styles, marked by abbreviations, acronyms, phonetic spellings, and emojis. These innovations reflect the human need for brevity, immediacy, and emotional expression in fast-paced, text-based environments such as social media, messaging apps, and SMS. By emphasizing creativity and adaptability, these studies argue that text speak is not merely a simplified form of communication but a response to the constraints and opportunities of digital platforms.
2. **Cultural and Generational Shifts:** The widespread use of text-speak signals deeper cultural and generational changes. Younger generations tend to embrace the flexibility and informality of text speak, seeing it as a way to express identity and foster community. Older generations, however, may view these changes as a departure from linguistic tradition, creating a divide in language preferences. This generational gap underscores the role of digital communication in shaping not only language but also social dynamics and cultural identities.
3. **Impact on Literacy and Language Education:** A central concern in this tug of war is the potential impact of text speak on literacy and the preservation of the traditional lexicon. While digital communication fosters innovative literacy practices, it also raises questions about the decline in formal writing skills, adherence to grammar rules, and the erosion of rich vocabulary. These reviews suggest a dual perspective, where digital platforms present both challenges and opportunities for educators to integrate new language practices into teaching methods.
4. **Blending of Informality and Structure:** The interplay between text speak and lexicon highlights the fluid boundaries of language in the digital era. While text speak is often informal and context-specific, it is not inherently at odds with the traditional lexicon. Instead, it represents an adaptive, hybrid form of communication that reflects society's evolving needs. These studies argue that this blending could lead to a redefined linguistic landscape where both text speak and traditional lexicon coexist and influence each other.



The ultimate goal of these reviews is to shed light on the complex and multifaceted relationship between text speak and lexicon by addressing these aspects. This exploration seeks to understand how digital communication is reshaping vocabulary, communication styles, and linguistic identity and what this means for the future of language in a rapidly digitizing world.

### 3. Significance of the Study

This study highlights the impact of digital communication on linguistic evolution, focusing on the interplay between traditional lexicon and text speak. It emphasizes the educational implications of textisms, showcasing both their potential to enhance linguistic creativity and their challenges to formal writing and literacy. By addressing generational and cultural differences, the research underscores the need to balance brevity in digital interactions with the preservation of linguistic depth. The findings provide actionable insights for educators and linguists, promoting strategies to navigate formal and informal communication effectively in the digital age while fostering cognitive adaptability and literacy growth.

### 4. Cognitive and Linguistic Impact of Text Speak on Education

Children's Text messages are famous for using a register called textese and for occasionally deviating from the conventions of conventional written language. David Craig (2003) says that children utilize acronyms like lol and drop words, as well as phonetic substitutions like 'ur' instead of 'your', and these traits of textese may seep into kids' everyday writing, eventually leading to language degradation. As per Lieke Verheijen (2013), youngsters who regularly utilized textese did not score poorly on spelling and literacy-testing activities. Some research findings indicate that textese has a detrimental effect on grammar. However, the impact of textese on children's grammar skills may have been obscured by variations in textual coding among studies and the use of written tasks that do not accurately reflect grammar. The relationship between children's cognitive development and the use of textese is yet another poorly researched topic. Young people who frequently switch between various media and non-media (such as watching television while completing homework) have weaker executive functions, according to earlier research. (Van Der Schuur WA, et al 2015). While most studies indicated a beneficial relationship between literacy and texting and/or instant messaging, some found a negative relationship, while other studies found no significant link at all or inconsistent results.

**Table 2- Cognitive & Linguistic Impact of Textese on Education**

Author	Purpose	Participants/sample	Methods	Key findings
Chantal N van Dijk. et al. 2016	To investigate whether the use of textese influences children's grammar performance, and whether this effect is specific to grammar or language in general	55 children between 10 and 13 years old	Children's nonverbal intelligence was measured using the short version of the Wechsler Nonverbal Intelligence scale	The study concluded that the usage of textese has no effect on children's executive skills, either positively or negatively, and it is positively correlated with their grammar competence.
Beverly Plester, et al. 2009	To explore the relationship between children's knowledge of text message abbreviations and school literacy outcomes	British Youngsters	Reading proficiency, spelling proficiency, vocabulary knowledge, phonological awareness, and alphabetic/orthographic decoding ability (non-word reading) were all evaluated using standardized examinations.	It was discovered that there is a favourable relationship between textism, density, reading, vocabulary, and phonological awareness, but no correlations between textism use and spelling or non-word reading.



Catherine Bushnell, et al. 2011	To examine the impacts of texting method (predictive and multi-press) and experience while examining the relationship between texting and literacy.	86 Australian children	Standardized spelling, reading, and non-word reading assessments in addition to reading and writing texts in Standard English and texting on a mobile device	The study found that the texting strategy did not significantly affect literacy results. Kemp and Bushnell explain this positive relationship as follows: "Experience with textese can reflect or even enhance children's traditional literacy abilities."
Daisy Powell and Maureen Dixon. 2011	To understand the effects of exposure to textisms, misspellings and correct spellings on spelling performance.	94 British university students	Pre- and post-tests to evaluate their spelling skills before and after an exposure phase in which they were exposed to the same words as in the tests in different ways	The study found that young adults' spelling abilities are positively impacted by textism exposure.
Mickey Waxman, et al. 2007	To examine the connection between spelling and texting in young adults	86 American university students	Standardized spelling tests and questionnaires	The study found that neither perceived nor real spelling ability was shown to be significantly correlated with the frequency of texting (number of texts sent daily)
Connie K. Varnhagen, et al. 2010	To study the relationship between spelling and the use of textisms in IMing	40 Canadian teenagers	An IM application was used to conduct a spelling exam to the participants, who typed their answers to word and context sentence recordings	The study found that teenagers' Standard English spelling abilities are unaffected by instant messaging
M.A. Drouin 2011	To examine the relationship between reported frequency of texting, use of textese and literacy	152 American college students	Standardized reading and spelling tests	The study found that there are significant negative correlations between reading accuracy and the use of texting in formal emails and on social networking sites, and significant positive correlations between spelling and reading fluency and the frequency of texting. However, there were no significant correlations between any literacy

				measure and the use of texting or informal emails.
Latisha A. Shafi, et al. 2010	To investigate whether using textese affects students' academic writing	264 Malaysian college students	Academic writings as test tools	The study found that frequent usage of textese may cause weaker students to forget the correct English spelling
Wood et al.	To investigate the direction of any relationship between texting and literacy	114 British children	Standardized pre- and post-tests on reading, spelling, non-word reading, phonological awareness and retrieval, and lexical retrieval	It was found that the use of textism could predict a considerable amount of variation in spelling development, and there are strong positive associations between textism use and literacy growth.
Salomé Geertsema, et al. 2011	To understand the impact of texting on adolescents' writing	22 South African Secondary School teachers of English	Questionnaires of Non-Experimental Nature	It was concluded that textese usage has a detrimental impact on students' academic performance and familiarity with Standard English.
Sarah De Jonge and Nenagh Kemp(2012)	To study the relationship between texting & literacy	52 Australian high school students	Spelling, Reading and non-word reading tests, and experimental tasks measuring morphological and orthographic awareness.	It was found that texting often might hinder the development of literacy skills or give less literate youth a chance to cover up misspellings.

We might conclude that research on the effects of text talk on language and cognitive abilities that has been published in the past ten years shows mixed findings. However, since there are far more studies showing positive than negative relationships between texting and instant messaging and literacy, this would imply that the widely held belief that these activities negatively impact literacy skills is unfounded, at least when it comes to texting and instant messaging in English. It has not been thoroughly studied whether a similar tentative conclusion can be made for other languages.

## 5. Text Speak in Educational Settings

### Texting's Role in Literacy

Numerous research has examined the effects of text messaging on students' reading, communication, and cognitive skills. Van Dijk et al. (2016) investigated how children aged 10 to 13's grammar and executive processes were affected by textese, a texting style that uses non-standard forms like "4ever" and word omissions. Even though textese had no discernible impact on executive processes, their results demonstrated a favorable correlation between increased grammatical competence and word omissions.

Similarly, Campbell (2014) emphasized the difficulty of balancing formal and informal textisms, pointing out that students frequently find it difficult to discern between situations that call for formal writing and those that do not. In their investigation into how texting affects students' written and communication abilities, Buenviaje and Lopez (2017) found that although texting encourages creativity and digital literacy, it also affects formal writing's spelling, sentence organization, and clarity.

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They emphasized how important it is for teachers to help students strike a balance between casual and professional communication. Everett (2016) carried up a meta-analytic evaluation of research on the impact of text messaging on student writing, identifying both possible disadvantages, like the use of textisms in all writing, and advantages, like improved phonological awareness and originality. When taken as a whole, these studies highlight the complex consequences of text messaging and support instructional approaches that address its dual implications on literacy and language.

#### **Texting in Academia: Bridging Communication Gaps or Eroding Academic Standards?**

Merlinda and Nerissa (2017) sought to ascertain how texting affected college students' ability to communicate in writing. They revealed that the amount of texting and the student's performance in sentence construction do not significantly correlate. This further demonstrated that students' writing and communication skills are innate and that texting has no effect on them. Mohsin Ali Shah, et al. (2021) studied the impact of SMS Texting on Undergraduate Students' Academic Writing Proficiency. It has been discovered that university students' writing abilities are negatively impacted by increased SMS exposure. Overuse of this platform is causing students to misspell words and use short SMS abbreviations that are not appropriate for exams and everyday schoolwork, which is extremely detrimental to academic performance. Uzma Sadiq, et al. (2022) say that although the students occasionally make spelling and punctuation errors in their notes, they usually return to their previous style when composing official assignments and projects. Students can quickly and easily transmit knowledge and information by using text messaging.

#### **Bridging Formality and Informality in Classrooms by Educators**

A substantial amount of study has been conducted in the last ten years on how teachers interact with pupils via text messaging and smartphones. (Banister 2010; Fortner 2010; Falloon and Pohio (2010). Depending on how it is utilized, texting can affect communication with teachers in both positive and negative ways. Meghan Cosier, et al. (2013) say that Teachers and students can work together more effectively when they text each other. For instance, during lectures, instructors can communicate notes in real-time via text messaging. Another effective method of informing someone about impending occurrences is by texting. Texting can have a detrimental effect on students' ability to communicate in writing. Unconventional language usage, like shortening, cutting, and numbering, can result from texting. Because texting lacks nuance and a means of expressing tone and emphasis, it can also result in writing that is unclear. For instance, "OK" can be interpreted in a variety of ways without any particular emphasis or context.

#### **6. Discussion**

It's still debatable how textspeak affects formal language proficiency. Textisms, like acronyms and unusual spellings, are criticized for allegedly lowering grammatical precision and linguistic rigor. Studies such as Rosen et al. (2010) showed that students who are frequently exposed to text speak occasionally carry over informal writing patterns into academic and professional situations, raising this worry. These results imply that the distinction between formal and informal registers is getting hazier, which could jeopardize the rules and structure of conventional language.

On the other hand, other people applaud text speak as an example of how language has changed over time, with inventiveness and conciseness meeting the needs of contemporary communication. Plester et al. (2008) discovered that using textisms needed linguistic agility, such as phonemic awareness and vocabulary manipulation, rather than necessarily impairing literacy skills. This flexibility supports the notion that text speak is a novel, effective form of communication rather than a danger to linguistic norms by showing how language changes to suit societal demands.

Concerns about the future of language are reflected in the discussion of how to strike a balance between the demands of digital communication and traditional vocabulary. To ensure that language maintains its depth and permits precise and nuanced expression in formal contexts, it is essential to preserve the lexicon's richness. According to Tagg (2009), digital communication can be efficient, but it also runs the risk of reducing the variety of linguistic expressions, especially in settings where textism is prevalent. This begs whether the quick, frequently reductive nature of digital discourse and linguistic richness can coexist.

Nonetheless, digital communication is not fundamentally opposed to conventional linguistic principles. Research by Drouin and Driver (2014) highlights that digital platforms offer chances for innovative language usage, promoting interaction with words in different contexts. For example, alternating between formal and informal speech can improve cognitive adaptability in professional and social settings.

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Educational interventions are crucial for attaining this equilibrium. Text speak shouldn't be seen merely as a danger but as an enhancement to formal language. Instructing students to recognize different registers and apply them suitably can maintain linguistic diversity while adopting the flexible aspects of digital communication. Thus, the evolution of language serves as a means for inclusivity and efficiency while preserving its expressive strength.

### Conclusion

The emergence of text-speak has certainly transformed the way people interact in the digital era, prompting important inquiries about its effects on conventional vocabulary and formal language abilities. Studies show a complex relationship between the advantages and difficulties presented by text speak. Some studies contend that the frequent use of textisms and non-standard grammar diminishes linguistic depth and formal writing skills, while others emphasize its ability to enhance creativity, phonological awareness, and flexible communication abilities. This duality highlights that text speak is not inherently harmful but represents a linguistic evolution shaped by the need for swift, succinct communication in the digital age.

The "vocabulary tug of war" between texting language and traditional vocabulary demonstrates the lively nature of language, adjusting to cultural and technological changes. Teachers and scholars need to concentrate on achieving equilibrium – maintaining the depth of formal language while recognizing the influence of digital communication on contemporary literacy. Future initiatives must prioritize providing learners with metalinguistic abilities to navigate both domains effectively, also ensuring that the development of language is a benefit rather than a drawback in education and communication.

This research enhances comprehension of the wider effects of text speak on language and literacy, promoting approaches that content tradition and innovation in the constantly changing linguistic environment of the digital era.

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## भारतीय शिक्षा और राष्ट्रीय शिक्षा नीति 2020 : एक तुलनात्मक अध्ययन

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### सारांश:

भारतीय शिक्षा प्रणाली का इतिहास अत्यंत प्राचीन और समृद्ध है। यह प्रणाली तक्षशिला और नालंदा जैसे विश्वविख्यात विश्वविद्यालयों से प्रारंभ होकर आधुनिक शिक्षा व्यवस्था तक विकसित हुई है। राष्ट्रीय शिक्षा नीति 2020 (NEP 2020) इस दिशा में एक महत्वपूर्ण कदम है, जिसका उद्देश्य भारतीय शिक्षा को 21वीं सदी के अनुकूल बनाना और ज्ञान-आधारित अर्थव्यवस्था के निर्माण में योगदान देना है।

राष्ट्रीय शिक्षा नीति 2020 के उद्देश्यों को साकार करने के लिए चुनौतियों से निपटना आवश्यक है। इन चुनौतियों का समाधान शिक्षा प्रणाली को समावेशी, सुलभ और गुणवत्तापूर्ण बनाने में मदद करेगा। एक मजबूत योजना, वित्तीय संसाधन, और सामाजिक जागरूकता के साथ, यह नीति भारत को शिक्षा के क्षेत्र में नई ऊँचाइयों पर ले जा सकती है। यह शोध पत्र भारतीय शिक्षा और राष्ट्रीय शिक्षा नीति 2020 के तुलनात्मक अध्ययन पर केंद्रित है।

**मुख्य शब्द:** भारतीय शिक्षा, राष्ट्रीय शिक्षा नीति 2020

### प्रस्तावना:

भारतीय शिक्षा प्रणाली का इतिहास हजारों वर्षों पुराना है और यह विश्व की प्राचीनतम शिक्षा प्रणालियों में से एक है। प्राचीन भारत में तक्षशिला, नालंदा जैसे शिक्षा केंद्र ज्ञान और शोध के अद्वितीय केंद्र थे। यह प्रणाली न केवल नैतिक और आध्यात्मिक विकास पर केंद्रित थी, बल्कि समग्र मानवता के कल्याण का लक्ष्य भी रखती थी। समय के साथ, भारतीय शिक्षा प्रणाली ने कई सामाजिक, सांस्कृतिक और राजनीतिक परिवर्तनों का सामना किया।

भारतीय शिक्षा का इतिहास ज्ञान, संस्कार, और विविधता की गहराई को दर्शाता है। प्राचीन काल से लेकर आधुनिक समय तक, शिक्षा का उद्देश्य केवल जानकारी देना नहीं, बल्कि मनुष्य का सर्वांगीण विकास करना रहा है। यह शिक्षा प्रणाली भारतीय मूल्यों, परंपराओं, और सांस्कृतिक धरोहर को संरक्षित करते हुए समाज के उत्थान और मानवता की प्रगति में योगदान देती है।

स्वतंत्रता के बाद, भारतीय शिक्षा प्रणाली में कई नीतिगत सुधार किए गए, लेकिन 21वीं सदी की वैश्विक चुनौतियों और तकनीकी प्रगति के लिए यह पूरी तरह से अनुकूलित नहीं हो सकी। इस संदर्भ में, राष्ट्रीय शिक्षा नीति 2020 का निर्माण किया गया, जिसका उद्देश्य भारत की शिक्षा प्रणाली को अधिक समावेशी, बहु-विषयक, और कौशल-आधारित बनाना है।

राष्ट्रीय शिक्षा नीति 2020, भारतीय शिक्षा प्रणाली को नया रूप देने और इसे अधिक प्रगतिशील, समावेशी और जागरूक बनाने का संकल्प है। यह नीति छात्रों के भीतर रचनात्मकता, आलोचनात्मक सोच और सीखने की आदत विकसित कर एक आत्मनिर्भर और सशक्त भारत के निर्माण की ओर कदम बढ़ाती है।

यह शोध पत्र भारतीय शिक्षा प्रणाली और राष्ट्रीय शिक्षा नीति 2020 का तुलनात्मक अध्ययन प्रस्तुत करता है। इसमें पारंपरिक भारतीय शिक्षा के मूल्यों और नई शिक्षा नीति के प्रगतिशील दृष्टिकोण के बीच समानताओं और अंतर का विश्लेषण किया गया है।

### शोध के उद्देश्य:

1. भारतीय शिक्षा प्रणाली के ऐतिहासिक विकास का अध्ययन।
2. राष्ट्रीय शिक्षा नीति 2020 के उद्देश्यों और प्रावधानों का अध्ययन।
3. पारंपरिक भारतीय शिक्षा प्रणाली और NEP 2020 के बीच समानताओं और भिन्नताओं का विश्लेषण।



### भारतीय शिक्षा प्रणाली का ऐतिहासिक परिप्रेक्ष्य:

भारतीय शिक्षा प्रणाली का विकास एक लंबी और समृद्ध परंपरा का हिस्सा है, जिसमें सामाजिक, धार्मिक, और सांस्कृतिक प्रभावों की प्रमुख भूमिका रही है। यह प्रणाली विभिन्न कालखंडों में अलग-अलग चरणों से गुजरी है।

#### 1. प्राचीन भारतीय शिक्षा प्रणाली:

- **गुरुकुल प्रणाली:**

प्राचीन भारत में शिक्षा मुख्यतः गुरुकुल प्रणाली के माध्यम से दी जाती थी। छात्र गुरुओं के आश्रम में रहकर वेद, उपनिषद, धर्मशास्त्र, गणित, खगोलशास्त्र, योग, और आयुर्वेद जैसे विषयों का अध्ययन करते थे।

- **शिक्षा का उद्देश्य:**

नैतिकता, आध्यात्मिकता, और धर्म के साथ-साथ व्यावहारिक ज्ञान प्रदान करना। शिक्षा केवल विद्या प्राप्ति तक सीमित नहीं थी, बल्कि जीवन के आदर्श मूल्यों को सिखाने पर जोर दिया जाता था।

- **प्रसिद्ध शिक्षा केंद्र:**

तक्षशिला, नालंदा, वल्लभी, विक्रमशिला जैसे विश्वविद्यालय ज्ञान के प्रमुख केंद्र थे, जहाँ भारत ही नहीं, बल्कि विदेशों से भी छात्र शिक्षा ग्रहण करने आते थे।

#### 2. मध्यकालीन भारतीय शिक्षा प्रणाली:

- **इस्लामी शिक्षा का प्रभाव:**

मध्यकाल में मुस्लिम शासकों के आगमन के साथ मदरसों और मकतबों की स्थापना हुई।

- **शिक्षा का उद्देश्य:**

धार्मिक ग्रंथों का अध्ययन, प्रशासनिक कौशल, और फारसी तथा अरबी भाषाओं का ज्ञान।

- **शिक्षा केंद्र:**

दिल्ली, लाहौर, और जौनपुर जैसे शहर इस्लामी शिक्षा के प्रमुख केंद्र बने।

- **समावेशिता:**

हालांकि इस समय शिक्षा का स्वरूप धर्म आधारित हो गया, लेकिन विज्ञान, गणित, और साहित्य भी पढ़ाए जाते थे।

#### 3. आधुनिक भारतीय शिक्षा प्रणाली:

- **ब्रिटिश काल में शिक्षा का आगमन:**

19वीं सदी में ब्रिटिश शासन के दौरान आधुनिक शिक्षा प्रणाली की नींव रखी गई। 1835 में मैकाले की शिक्षा नीति के माध्यम से अंग्रेजी शिक्षा प्रणाली को लागू किया गया।

- **1854 का वुड डिस्पैच:**

इसे "भारतीय शिक्षा का मैग्नाकार्टा" कहा जाता है। इसके तहत विश्वविद्यालयों की स्थापना, प्राथमिक शिक्षा का विस्तार, और शिक्षकों के प्रशिक्षण की व्यवस्था की गई।

- **शिक्षा का उद्देश्य:**

प्रशासनिक पदों के लिए भारतीयों को प्रशिक्षित करना और अंग्रेजी भाषा के माध्यम से पश्चिमी संस्कृति को बढ़ावा देना।

- **राष्ट्रीय आंदोलन का प्रभाव:**

स्वतंत्रता संग्राम के दौरान गांधीजी ने बुनियादी शिक्षा (नैतिकता, स्वावलंबन और हस्तशिल्प पर आधारित) पर जोर दिया।

#### 4. स्वतंत्रता के बाद भारतीय शिक्षा प्रणाली:

- **कानूनी सुधार:**

1948-49 में राधाकृष्णन आयोग और 1968 की कोठारी आयोग की सिफारिशों ने शिक्षा में सुधार की नींव रखी।



● **नई नीतियाँ:**

1986 की राष्ट्रीय शिक्षा नीति और 2020 की नई राष्ट्रीय शिक्षा नीति ने शिक्षा को अधिक समावेशी, कौशल आधारित और तकनीकी रूप से सक्षम बनाने का प्रयास किया।

● **सार्वभौमिक शिक्षा का लक्ष्य:**

सभी के लिए शिक्षा का प्रावधान और क्षेत्रीय असमानताओं को दूर करना।

**राष्ट्रीय शिक्षा नीति 2020:**

राष्ट्रीय शिक्षा नीति 2020 (NEP 2020) भारतीय शिक्षा प्रणाली में सुधार और उसे 21वीं सदी की आवश्यकताओं के अनुरूप बनाने का एक ऐतिहासिक कदम है। इसे 29 जुलाई 2020 को केंद्रीय मंत्रिमंडल द्वारा मंजूरी दी गई। यह नीति शिक्षा के हर स्तर – प्राथमिक, माध्यमिक और उच्च शिक्षा – में व्यापक बदलाव लाने के उद्देश्य से तैयार की गई है। इसका मुख्य लक्ष्य शिक्षा को समावेशी, गुणवत्तापूर्ण और कौशल-आधारित बनाना है।

**मुख्य विशेषताएँ:**

**1. शिक्षा का सार्वभौमिकरण:**

- सभी बच्चों को गुणवत्तापूर्ण शिक्षा प्रदान करने का लक्ष्य।

**2. स्कूल शिक्षा में सुधार**

- **नई संरचना: 5+3+3+4 प्रणाली**
- पारंपरिक 10+2 संरचना को बदलकर 5+3+3+4 प्रणाली लागू की गई है, जो बच्चों के शैक्षिक विकास के विभिन्न चरणों पर केंद्रित है:
- **आधारभूत स्तर (5 वर्ष):** नर्सरी से कक्षा 2 तक।
- **प्रारंभिक स्तर (3 वर्ष):** कक्षा 3 से 5 तक।
- **मध्य स्तर (3 वर्ष):** कक्षा 6 से 8 तक।
- **माध्यमिक स्तर (4 वर्ष):** कक्षा 9 से 12 तक।
- **मातृभाषा में शिक्षा:** प्राथमिक स्तर पर मातृभाषा या क्षेत्रीय भाषा में शिक्षा प्रदान करने पर जोर दिया गया है।
- **व्यावसायिक शिक्षा:** कक्षा 6 से व्यावसायिक शिक्षा और इंटरशिप की शुरुआत।

**3. उच्च शिक्षा में सुधार**

- **सार्वभौमिक पहुँच का लक्ष्य:** 2035 तक उच्च शिक्षा में सकल नामांकन अनुपात (GER) को 50% तक बढ़ाने का लक्ष्य।
- **बहु-विषयक संस्थान:** अधिक लचीलापन और बहु-विषयक पाठ्यक्रमों की शुरुआत।
- **चार वर्षीय स्नातक पाठ्यक्रम:** स्नातक पाठ्यक्रम को चार वर्ष का बनाया गया है, जिसमें छात्रों को शोध करने और पाठ्यक्रम छोड़ने का विकल्प दिया गया है।
- **राष्ट्रीय अनुसंधान संस्थान (NRE):** शोध और नवाचार को बढ़ावा देने के लिए।
- **एकल नियामक निकाय:** विश्वविद्यालय अनुदान आयोग (UGC) और AICTE को मिलाकर उच्च शिक्षा के लिए एकल नियामक निकाय की स्थापना।

**4. डिजिटल और तकनीकी शिक्षा**

- **ऑनलाइन शिक्षा:** डिजिटल शिक्षा को बढ़ावा देने और ई-लर्निंग प्लेटफॉर्म (जैसे SWAYAM) को विकसित करने पर जोर।
- **राष्ट्रीय शैक्षिक प्रौद्योगिकी मंच (NETF):** प्रौद्योगिकी आधारित शिक्षा को सुगम बनाने के लिए।

#### 5. भारतीय परंपरा और संस्कृति का समावेश

- भारतीय भाषाओं, कला, संगीत, और सांस्कृतिक विरासत को पाठ्यक्रम में शामिल करना।
- प्राचीन भारतीय ज्ञान प्रणालियों (जैसे योग, आयुर्वेद, और संस्कृत) पर जोर।

#### 6. शिक्षक शिक्षा में सुधार

- 2030 तक न्यूनतम शैक्षिक योग्यता के रूप में 4-वर्षीय एकीकृत B.Ed. पाठ्यक्रम अनिवार्य।
- शिक्षकों के लिए लगातार प्रशिक्षण और मूल्यांकन।

#### लक्ष्य और उद्देश्य:

1. समानता और समावेशिता: समाज के सभी वर्गों के लिए शिक्षा को सुलभ बनाना।
2. गुणवत्तापूर्ण शिक्षा: कौशल विकास और समग्र विकास सुनिश्चित करना।
3. रोजगारपरक शिक्षा: छात्रों को वैश्विक स्तर पर प्रतिस्पर्धी बनाना।
4. प्रौद्योगिकी का उपयोग: डिजिटल लर्निंग और ई-गवर्नेंस को प्रोत्साहित करना।
5. शोध और नवाचार: उच्च शिक्षा में शोध की संस्कृति को बढ़ावा देना।

#### तुलनात्मक अध्ययन:

भारतीय शिक्षा प्रणाली और राष्ट्रीय शिक्षा नीति 2020 (NEP 2020) के बीच तुलनात्मक अध्ययन यह समझने में मदद करता है कि किस प्रकार पारंपरिक और आधुनिक शिक्षा प्रणाली में समानताएँ और भिन्नताएँ हैं।

पहलू	पारंपरिक भारतीय शिक्षा	राष्ट्रीय शिक्षा नीति 2020
शिक्षा का उद्देश्य	नैतिकता और आध्यात्मिकता और धर्म का विकास	कौशल विकास, रोजगारपरक शिक्षा, ज्ञान - आधारित अर्थव्यवस्था का निर्माण और समग्र विकास
शिक्षा का माध्यम	गुरुकुलों में मौखिक और संस्कृत भाषा आधारित शिक्षण	मातृभाषा और डिजिटल तकनीक का समावेश
पाठ्यक्रम	धर्म, दर्शन, गणित और आयुर्वेद जैसे पारंपरिक विषय	बहु - विषयक पाठ्यक्रम और व्यावसायिक शिक्षा
शिक्षा का दायरा	सीमित, केवल कुछ वर्गों तक	शिक्षा का सार्वभौमिकरण
शोध और नवाचार	मौलिक ज्ञान और परंपरागत शोध पर जोर	आधुनिक शोध, नवाचार और वैश्विक प्रौद्योगिकी का समावेश
शिक्षा का स्वरूप	धर्म और समाज आधारित सीमित शिक्षा	समावेशी और सार्वभौमिक शिक्षा
प्रमुख संस्थान	तक्षशिला, नालंदा जैसे केन्द्र	बहु - विषयक विश्वविद्यालय, ऑनलाइन प्लेटफॉर्म जैसे - SWAYAM,
शिक्षा प्रणाली का ढांचा	गुरु - शिष्य परंपरा, अनौपचारिक संरचना	5+3+3+4 का औपचारिक ढांचा
शिक्षा का स्तर	उच्च शिक्षा केवल कुछ वर्गों तक	सभी के लिए शिक्षा का सार्वभौमिकरण
डिजिटल शिक्षा	अनुपलब्ध	डिजिटल शिक्षा और प्रौद्योगिकी का उपयोग

शिक्षकों की भूमिका	गुरु का उच्चतम स्थान और व्यक्तिगत मार्गदर्शन	शिक्षक प्रशिक्षण और B.Ed. पाठ्यक्रम अनिवार्य
सामाजिक समावेशिता	समाज के विशेष वर्गों तक सीमित	सभी वर्गों के लिए शिक्षा का समान अवसर

**प्रमुख समानताएँ:**

- 1. शिक्षा का समय दृष्टिकोण:** दोनों में शिक्षा को केवल जानकारी प्राप्त करने का साधन नहीं, बल्कि समग्र विकास का माध्यम माना गया है।
- 2. नैतिक और सांस्कृतिक मूल्यों पर जोर:** प्राचीन भारतीय शिक्षा और NEP 2020 दोनों ही भारतीय परंपरा, संस्कृति, और मूल्यों को पाठ्यक्रम का हिस्सा मानते हैं।
- 3. शोध और ज्ञान का महत्व:** प्राचीन काल में मौलिक शोध पर जोर दिया गया था, और NEP 2020 आधुनिक शोध और नवाचार पर ध्यान केंद्रित करती है।

**प्रमुख भिन्नताएँ:**

- 1. तकनीकी और डिजिटल प्रगति:** पारंपरिक शिक्षा प्रणाली में तकनीकी ज्ञान अनुपस्थित था, जबकि NEP 2020 में डिजिटल तकनीक और ई-लर्निंग का व्यापक उपयोग शामिल है।
- 2. पहुंच और समावेशिता:** पारंपरिक शिक्षा प्रणाली सीमित वर्ग तक सीमित थी, जबकि NEP 2020 शिक्षा को सभी के लिए सुलभ बनाने का प्रयास करती है।
- 3. व्यावसायिक शिक्षा:** पारंपरिक प्रणाली में कौशल आधारित शिक्षा कम थी, जबकि NEP 2020 में व्यावसायिक शिक्षा पर विशेष जोर दिया गया है।
- 4. पाठ्यक्रम का लचीलापन:** पारंपरिक प्रणाली में पाठ्यक्रम सख्त और धर्म आधारित था, जबकि NEP 2020 में बहु-विषयक और लचीले पाठ्यक्रम की व्यवस्था है।

**चुनौतियाँ और समाधान:**

राष्ट्रीय शिक्षा नीति 2020 (NEP 2020) को भारतीय शिक्षा प्रणाली में व्यापक सुधार के उद्देश्य से लागू किया गया है। हालांकि, इसे प्रभावी ढंग से लागू करने के लिए कई चुनौतियों का सामना करना पड़ रहा है। इन चुनौतियों को हल करने के लिए ठोस समाधान अपनाए जाने की आवश्यकता है।

**चुनौतियाँ:**

**1. नीति का प्रभावी क्रियान्वयन**

- भारत जैसे बड़े और विविधतापूर्ण देश में एक समान नीति लागू करना कठिन है।
- राज्यों और केंद्र सरकार के बीच समन्वय की कमी।

**2. वित्तीय बाधाएँ**

- शिक्षा क्षेत्र में वर्तमान GDP का केवल 3% निवेश किया जाता है, जबकि NEP 2020 के अनुसार इसे 6% तक बढ़ाने की आवश्यकता है।
- डिजिटल और भौतिक अवसंरचना के विकास के लिए पर्याप्त धन की कमी।

**3. डिजिटल डिवाइड**

- ग्रामीण और शहरी क्षेत्रों में इंटरनेट और डिजिटल उपकरणों तक असमान पहुंच।
- गरीब परिवारों के पास स्मार्टफोन और लैपटॉप जैसी सुविधाओं की कमी।

**4. शिक्षकों की कमी और प्रशिक्षण**

- शिक्षकों की अपर्याप्त संख्या और उनका अपूर्ण प्रशिक्षण।
- नई शिक्षा नीति के अनुरूप शिक्षकों को तैयार करना चुनौतीपूर्ण है।

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#### 5. मातृभाषा में शिक्षा

- सभी विषयों को मातृभाषा में उपलब्ध कराना और शिक्षकों को प्रशिक्षित करना कठिन है।
- भारत में विभिन्न भाषाओं और बोलियों के कारण व्यावहारिक कठिनाई।

#### 6. सामाजिक असमानता

- वंचित वर्गों, लड़कियों, और दिव्यांग छात्रों के लिए शिक्षा को समावेशी बनाना।
- जाति, धर्म, और लैंगिक असमानताओं के कारण शिक्षा का समान वितरण कठिन है।

#### 7. प्रवेश और छोड़ने की दर

- स्कूलों और उच्च शिक्षा में नामांकन बढ़ाना और ड्रॉपआउट दर को कम करना।
- ग्रामीण क्षेत्रों में शिक्षा के प्रति जागरूकता की कमी।

#### समाधान:

##### 1. क्रियान्वयन के लिए समर्पित योजना

- केंद्र और राज्य सरकारों के बीच बेहतर समन्वय स्थापित करना।
- शिक्षा नीति को लागू करने के लिए चरणबद्ध और क्षेत्रीय दृष्टिकोण अपनाना।

##### 2. वित्तीय संसाधनों में वृद्धि

- शिक्षा के लिए GDP का 6% आवंटित करना।
- सार्वजनिक-निजी भागीदारी (PPP) मॉडल का उपयोग करना।
- CSR (कॉर्पोरेट सामाजिक उत्तरदायित्व) के माध्यम से शिक्षा में निवेश को बढ़ावा देना।

##### 3. डिजिटल अवसंरचना का विस्तार

- ग्रामीण क्षेत्रों में इंटरनेट कनेक्टिविटी और सस्ते उपकरणों की उपलब्धता सुनिश्चित करना।
- सरकारी स्कूलों में स्मार्ट क्लासरूम और डिजिटल सामग्री प्रदान करना।
- डिजिटल साक्षरता कार्यक्रम चलाना।

##### 4. शिक्षकों का प्रशिक्षण और विकास

- शिक्षकों के लिए नियमित प्रशिक्षण कार्यक्रम शुरू करना।
- शिक्षकों के लिए 4-वर्षीय एकीकृत B.Ed. पाठ्यक्रम को लागू करना।
- शिक्षकों को डिजिटल शिक्षण तकनीकों में प्रशिक्षित करना।

##### 5. मातृभाषा में सामग्री का विकास

- सभी प्रमुख भारतीय भाषाओं में पाठ्य सामग्री विकसित करना।
- अनुवाद और सामग्री विकास के लिए विशेषज्ञों की नियुक्ति।
- शिक्षकों को बहुभाषीय शिक्षण के लिए प्रशिक्षित करना।

##### 6. सामाजिक समावेशन को बढ़ावा

- वंचित वर्गों और लड़कियों के लिए छात्रवृत्ति योजनाएँ।
- स्कूलों में लैंगिक संवेदनशीलता और समावेशी शिक्षा को बढ़ावा देना।
- दिव्यांग छात्रों के लिए विशेष सुविधाएँ और शिक्षण सामग्री।

**निष्कर्ष:**

राष्ट्रीय शिक्षा नीति 2020 भारतीय शिक्षा प्रणाली में व्यापक सुधार का प्रयास है। यह नीति भारतीय शिक्षा के प्राचीन मूल्यों और आधुनिक आवश्यकताओं के बीच संतुलन स्थापित करती है। हालांकि, इसका प्रभावी क्रियान्वयन भारत की शिक्षा प्रणाली को विश्व स्तरीय बनाने में प्रमुख भूमिका निभाएगा। प्राचीन काल में जहाँ शिक्षा का उद्देश्य व्यक्तित्व और आत्मा का समग्र विकास था, वहीं आधुनिक समय में यह कौशल विकास, तकनीकी दक्षता और सामाजिक समावेशिता पर केंद्रित हो गई है। राष्ट्रीय शिक्षा नीति 2020 भारत की शिक्षा प्रणाली को 21वीं सदी की जरूरतों के अनुरूप ढालने का प्रयास है। अगर इसे प्रभावी ढंग से लागू किया जाए, तो यह भारत को ज्ञान-प्रधान और आत्मनिर्भर राष्ट्र बनाने में सहायक होगी। तुलनात्मक अध्ययन से स्पष्ट है कि राष्ट्रीय शिक्षा नीति 2020 ने भारतीय शिक्षा की प्राचीन परंपराओं और आधुनिक आवश्यकताओं के बीच संतुलन स्थापित करने का प्रयास किया है। यह नीति भारतीय शिक्षा प्रणाली को समावेशी, व्यावसायिक और वैश्विक स्तर पर प्रतिस्पर्धी बनाने की दिशा में एक महत्वपूर्ण कदम है।

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## A Study of Elements of Shakespearean Tragedies

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### Abstract

The abstract summarizes the analysis and interpretation of elements of Shakespearean tragedies. Shakespearean tragedies stand as monumental works in the literary canon, embodying a profound exploration of human nature and the universal struggles of ambition, morality, and fate. At the core of these tragedies is the tragic hero figure of noble stature whose fatal flaw, or hamartia, propels them toward an inevitable downfall. This interplay of personal failings and external forces, such as fate and supernatural elements, underscores the tension between free will and predestination. Key themes such as ambition, love, betrayal, and justice weave through the narratives, enriched by Shakespeare's masterful use of symbolism, soliloquies, and a meticulously structured five-act format. The recurring presence of the supernatural, whether through ghosts or prophetic visions, amplifies the psychological and dramatic complexity of the plays. Catharsis, a vital element, allows audiences to experience an emotional cleansing as they witness the tragic consequences of the hero's journey. Works such as Hamlet, Macbeth, Othello, and King Lear epitomize the richness of Shakespearean tragedy, delving into the depths of human emotion and ethical dilemmas. These timeless plays have profoundly influenced literature, theater, and culture, continuing to captivate audiences with their exploration of the human condition and the inexorable forces that shape our lives.

### Introduction

Shakespearean tragedies represent a pinnacle in the evolution of dramatic literature, combining profound psychological depth with universal themes that resonate across centuries. Rooted in classical conventions yet distinctively innovative, these works explore the interplay between human ambition, morality, and the inexorable forces of fate. William Shakespeare, through his tragedies, not only redefined the genre but also established archetypes that continue to influence literature and theater.

### Core Elements of Shakespearean Tragedies

#### 1. The Tragic Hero

At the heart of every Shakespearean tragedy lies the tragic hero, a character of noble stature and great influence who possesses a fatal flaw or 'hamartia.' This intrinsic weakness leads to their downfall, reflecting both personal and universal truths. For instance, Macbeth's insatiable ambition, Hamlet's indecision, Othello's jealousy, and King Lear's pride are not just individual flaws but commentaries on human frailty. The tragic hero's journey is marked by a blend of external circumstances and internal struggles, creating a complex interplay that evokes both admiration and pity from the audience. Aristotle's concept of the tragic hero finds a robust embodiment in Shakespeare's characters, as they transition from grandeur to ruin, showcasing the inexorable consequences of their actions.

#### 2. Fatal Flaw (Hamartia)

Shakespeare's tragic heroes are defined by their hamartia, which serves as the catalyst for their ultimate demise. This flaw, often rooted in excessive passion or a distorted perception of reality, drives the plot forward. For instance, Macbeth's vaulting ambition blinds him to ethical

considerations, leading to regicide and a cascade of violence. Similarly, Hamlet's overthinking paralyzes him, allowing events to spiral beyond his control.

### **3. Catharsis**

A pivotal element in Shakespearean tragedies is catharsis—the purgation of emotions such as pity and fear experienced by the audience. By witnessing the hero's downfall, viewers undergo an emotional cleansing, achieving a deeper understanding of the human condition. Shakespeare masterfully balances pathos with dramatic tension, ensuring that the audience remains deeply invested in the narrative.

### **4. Role of Fate and Free Will**

Shakespearean tragedies delve into the tension between destiny and agency, often blurring the lines between the two. Characters like Macbeth and Hamlet grapple with existential dilemmas, questioning the extent of their control over their destinies. While external forces such as prophecy or supernatural elements play a significant role, the heroes' choices ultimately seal their fates, emphasizing the duality of fate and free will.

## **Literature Review**

### **Themes and Motifs**

#### **1. Ambition and Power**

Ambition is a recurring theme in Shakespearean tragedies, driving characters to transcend societal norms and ethical boundaries. Macbeth's relentless pursuit of power exemplifies this, illustrating the corrosive effects of unchecked ambition. The theme is further nuanced by the exploration of power dynamics, as seen in Lady Macbeth's manipulation and Macbeth's eventual unraveling.

#### **2. Love and Betrayal**

Love, in its various manifestations, serves as both a source of strength and vulnerability in Shakespearean tragedies. Othello's love for Desdemona is weaponized against him, leading to betrayal and tragedy. Similarly, King Lear's misguided trust in his daughters highlights the fragility of familial bonds, culminating in heartbreak and chaos.

#### **3. The Supernatural**

Supernatural elements, including ghosts, witches, and omens, play a crucial role in heightening the dramatic tension and influencing the characters' actions. The ghost of King Hamlet spurs the narrative in Hamlet, while the witches' prophecies in Macbeth set the stage for the protagonist's moral corruption. These elements underscore the interplay between the natural and the supernatural, reflecting the Elizabethan fascination with the metaphysical.

#### **4. Revenge and Justice**

The quest for revenge often serves as a driving force in Shakespearean tragedies, intertwining with themes of justice and morality. In Hamlet, the titular character's pursuit of vengeance against Claudius encapsulates the complexities of justice, as Hamlet struggles with ethical dilemmas and existential questions. The pursuit of revenge often leads to collateral damage, underscoring its destructive potential.

### **Structural Elements**

#### **1. Five-Act Structure**

Shakespearean tragedies typically adhere to a five-act structure, meticulously designed to build tension and deliver a climactic resolution. The exposition introduces the characters and sets the stage, while the rising action escalates conflicts. The climax marks a turning point, followed by the falling action and eventual catastrophe, where the hero meets their tragic end.

#### **2. Soliloquies and Monologues**

Soliloquies serve as windows into the characters' inner worlds, revealing their deepest fears, desires, and conflicts. Hamlet's "To be or not to be" soliloquy epitomizes this, offering profound insights into the human psyche. These introspective moments enrich the narrative, providing depth and complexity to the characters.



### **3. Symbolism and Imagery**

Shakespeare's use of vivid imagery and symbolism enhances the thematic resonance of his tragedies. In *Macbeth*, the recurring imagery of blood signifies guilt and violence, while the motif of darkness reflects moral corruption. Such elements create a rich tapestry of meaning, allowing for multiple interpretations.

#### **Case Studies of Major Tragedies**

##### **1. Hamlet**

Often regarded as Shakespeare's masterpiece, *Hamlet* explores themes of revenge, mortality, and the human condition. The protagonist's existential musings and moral dilemmas elevate the play to a philosophical plane, while the intricate plot weaves together elements of betrayal, madness, and tragedy.

##### **2. Macbeth**

A chilling exploration of ambition and moral decay, *Macbeth* delves into the psychological torment of its titular character. The interplay between the supernatural and human agency drives the narrative, culminating in a poignant commentary on the consequences of unchecked ambition.

##### **3. Othello**

*Othello* examines themes of jealousy, love, and betrayal, with Iago's Machiavellian scheming serving as the catalyst for the tragic events. The play's exploration of racial and cultural tensions adds layers of complexity, making it a timeless study of human vulnerability.

##### **4. King Lear**

A profound meditation on power, family, and redemption, *King Lear* portrays the tragic consequences of hubris and blindness to truth. The interplay between the personal and political realms underscores the universality of its themes, resonating with audiences across generations.

#### **Influence and Legacy**

Shakespearean tragedies have left an indelible mark on literature, theater, and culture. Their exploration of timeless themes and complex characters has inspired countless adaptations, reinterpretations, and critical studies. From stage productions to modern cinema, the enduring appeal of Shakespeare's tragedies lies in their ability to illuminate the human experience in all its complexity.

#### **Conclusion**

The elements of Shakespearean tragedies—from the tragic hero and fatal flaw to the interplay of themes and structural innovation—combine to create a powerful and enduring genre. By delving into the depths of human nature and addressing universal concerns, Shakespeare's tragedies continue to captivate audiences and scholars alike, cementing his legacy as one of the greatest playwrights in history.

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## वास्तु शास्त्र की दृष्टि से पारंपरिक एवं आधुनिक भवन निर्माण का तुलनात्मक अध्ययन

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### सारांश :

यह शोध पत्र वास्तु शास्त्र के दृष्टिकोण से पारंपरिक और आधुनिक भवन निर्माण की तुलना करता है। पारंपरिक भवन निर्माण में प्राकृतिक संतुलन, दिशाओं का महत्व, और पर्यावरणीय अनुकूलता पर जोर दिया गया है, जबकि आधुनिक भवन निर्माण में उन्नत तकनीक, कृत्रिम सामग्री, और ऊर्जा दक्षता को प्राथमिकता दी जाती है।

पारंपरिक भवन दीर्घकालिक स्थायित्व, पर्यावरणीय सामंजस्य और स्थानीय संस्कृति को प्रतिबिंबित करते हैं। इसके विपरीत, आधुनिक भवन निर्माण में त्वरित निर्माण, स्मार्ट तकनीक, और व्यावसायिक आवश्यकताओं को प्राथमिकता दी जाती है।

यह अध्ययन दोनों प्रकार के भवन निर्माण के लाभ, सीमाएँ, और उनके सम्मिलन की संभावनाओं पर विचार करता है। यह सुझाव दिया गया है कि पारंपरिक वास्तु सिद्धांतों और आधुनिक तकनीकी नवाचारों का संयोजन भविष्य के भवन निर्माण को अधिक टिकाऊ, ऊर्जा दक्ष और पर्यावरण के अनुकूल बना सकता है।

**मुख्य शब्द:** वास्तु शास्त्र, पारंपरिक भवन निर्माण, आधुनिक भवन निर्माण

### प्रस्तावना :

वास्तु शास्त्र भारतीय स्थापत्य कला का प्राचीन विज्ञान है, जो मानव जीवन को प्रकृति के साथ सामंजस्य में लाने का प्रयास करता है। यह केवल भवन निर्माण की तकनीक तक सीमित नहीं है, बल्कि इसमें ऊर्जा संतुलन, पर्यावरणीय अनुकूलता, और आध्यात्मिक सामंजस्य का भी विशेष महत्व है। प्राचीन भारत में निर्मित मंदिर, महल, और आवासीय भवन वास्तु शास्त्र के गहन ज्ञान और उसके अनुप्रयोग का अद्भुत उदाहरण हैं।

पारंपरिक भवन निर्माण में स्थानीय सामग्रियों, प्राकृतिक संसाधनों और पर्यावरणीय परिस्थितियों का ध्यान रखा जाता था। इसमें दिशाओं, ऊर्जा प्रवाह और प्राकृतिक संतुलन को प्राथमिकता दी जाती थी। इस प्रकार के भवन न केवल दीर्घकालिक और स्थायी होते थे, बल्कि इनका निर्माण इस तरह किया जाता था कि वे आसपास के पर्यावरण के साथ सामंजस्य बनाकर ऊर्जा का सही प्रवाह सुनिश्चित करें।

वर्तमान युग में भवन निर्माण की प्रक्रियाओं में बड़े बदलाव हुए हैं। औद्योगिकीकरण और शहरीकरण के कारण भवन निर्माण में आधुनिक तकनीकों और कृत्रिम सामग्रियों का प्रयोग बढ़ा है। ऊर्जा दक्षता, स्मार्ट तकनीक, और व्यावसायिक आवश्यकताओं ने आधुनिक भवन निर्माण को परिभाषित किया है। हालाँकि, इस प्रक्रिया में कई बार पर्यावरणीय सामंजस्य और वास्तु शास्त्र के सिद्धांतों की अनदेखी की जाती है।

यह शोध पत्र पारंपरिक और आधुनिक भवन निर्माण के बीच तुलनात्मक अध्ययन प्रस्तुत करता है। इसका उद्देश्य न केवल दोनों प्रणालियों के लाभ और सीमाओं को समझना है, बल्कि यह भी विचार करना है कि पारंपरिक वास्तु सिद्धांतों को आधुनिक तकनीकी नवाचारों के साथ कैसे जोड़ा जा सकता है।

इस प्रकार यह अध्ययन पारंपरिक ज्ञान और आधुनिक तकनीकी नवाचारों के सम्मिलन का मार्ग प्रशस्त करने का प्रयास करता है, जो भवन निर्माण की प्रक्रिया को अधिक पर्यावरण अनुकूल, ऊर्जा दक्ष, और मानवीय आवश्यकताओं के लिए उपयुक्त बना सके।

### वास्तु शास्त्र का परिचय :

वास्तु शास्त्र भारतीय स्थापत्य विज्ञान का एक प्राचीन और महत्वपूर्ण अंग है, जो भवन निर्माण और संरचनात्मक डिजाइन के सिद्धांतों पर आधारित है। यह विज्ञान प्रकृति, दिशाओं, और ऊर्जा के सामंजस्य को ध्यान में रखते हुए मानव जीवन को सुख-समृद्धि और शांति प्रदान करने का मार्गदर्शन करता है।

वास्तु शास्त्र का मूल उद्देश्य भवन निर्माण में सकारात्मक ऊर्जा का प्रवाह सुनिश्चित करना और पृथ्वी के पांच प्रमुख तत्वों (पंचमहाभूत) – भूमि, जल, अग्नि, वायु, और आकाश – के साथ सामंजस्य स्थापित करना है। यह विज्ञान मानता है कि इन तत्वों और दिशाओं का सही उपयोग मानव जीवन के हर क्षेत्र में संतुलन, स्वास्थ्य, और समृद्धि को बढ़ावा देता है।

#### वास्तु शास्त्र का ऐतिहासिक परिप्रेक्ष्य:

वास्तु शास्त्र का उल्लेख प्राचीन भारतीय ग्रंथों जैसे वेद, उपनिषद, और पुराणों में मिलता है। मुख्य रूप से यह विज्ञान मय मतम्, विश्वकर्मा वास्तु शास्त्र, और समरांगण सूत्रधार जैसे ग्रंथों पर आधारित है। इन ग्रंथों में भवन निर्माण, मंदिर निर्माण, नगर नियोजन, और वास्तुकला के विस्तृत सिद्धांत वर्णित हैं।

प्राचीन काल में बनाए गए मंदिर, महल, और नगर (जैसे मोहनजोदड़ो, हड़प्पा, जयपुर का नगर नियोजन) वास्तु शास्त्र की उत्कृष्टता का प्रमाण हैं।

#### वास्तु शास्त्र के मुख्य सिद्धांत:

##### 1. दिशाओं का महत्व:

- वास्तु शास्त्र में आठ दिशाओं (उत्तर, दक्षिण, पूर्व, पश्चिम, और चार कोणीय दिशाएँ) का विशेष महत्व है। प्रत्येक दिशा को एक विशेष देवता और ऊर्जा प्रवाह से संबंधित माना गया है।

##### 2. ऊर्जा प्रवाह:

- भवन में सकारात्मक ऊर्जा का प्रवाह सुनिश्चित करने के लिए खिड़कियों, दरवाजों, और स्थानों की उचित व्यवस्था।

#### वास्तु शास्त्र के लाभ:

1. **सकारात्मक ऊर्जा का प्रवाह:** यह मानव जीवन में सकारात्मक ऊर्जा का संचार करता है।
2. **स्वास्थ्य और समृद्धि:** वास्तु शास्त्र के अनुसार निर्मित भवन में रहने वाले लोगों का स्वास्थ्य, धन, और मानसिक शांति में वृद्धि होती है।
3. **पर्यावरणीय सामंजस्य:** यह प्रकृति और मानव के बीच सामंजस्य स्थापित करता है।
4. **सौंदर्य और स्थायित्व:** भवन का डिजाइन सौंदर्यपूर्ण और दीर्घकालिक होता है।

#### वर्तमान परिप्रेक्ष्य में वास्तु शास्त्र की प्रासंगिकता:

आधुनिक युग में भवन निर्माण की प्रक्रिया में तेजी और तकनीकी विकास के बावजूद वास्तु शास्त्र का महत्व कम नहीं हुआ है। वास्तु शास्त्र के सिद्धांतों को आज भी आवासीय और व्यावसायिक भवनों के निर्माण में अपनाया जाता है। इसके अलावा, वास्तु शास्त्र और आधुनिक तकनीक के बीच सामंजस्य स्थापित करने के प्रयासों से भवन निर्माण अधिक ऊर्जा दक्ष, पर्यावरण अनुकूल, और लाभकारी बन रहा है।

#### पारंपरिक भवन निर्माण:

पारंपरिक भवन निर्माण एक प्राचीन और स्थायी पद्धति है, जो स्थानीय संसाधनों, सांस्कृतिक परंपराओं, और प्राकृतिक पर्यावरण के अनुरूप विकसित हुई। यह पद्धति न केवल भवन निर्माण की तकनीकों को परिभाषित करती है, बल्कि जीवन शैली, वास्तुकला, और पर्यावरणीय स्थिरता के बीच एक गहरा संबंध स्थापित करती है।

#### विशेषताएँ:

##### 1. स्थानीय सामग्री का उपयोग:

- मिट्टी, लकड़ी, पत्थर, बांस, चूना, और पुआल जैसी प्राकृतिक सामग्रियों का उपयोग।
- सामग्रियों का स्थानीय स्रोतों से उपलब्ध होना परिवहन की लागत को कम करता है।

##### 2. पर्यावरणीय अनुकूलन:

- प्राकृतिक वेंटिलेशन, सूर्य के प्रकाश और जल संरक्षण के लिए डिजाइन।
- भवनों की दिशा और संरचना जलवायु के अनुसार निर्धारित की जाती थी।

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**3. वास्तु शास्त्र आधारित निर्माण:**

- भवन निर्माण में भारतीय वास्तु शास्त्र के सिद्धांतों का पालना
- दिशा, ऊर्जा प्रवाह और स्थान के संतुलन का ध्यान रखा जाता था।

**4. स्थायित्व और दीर्घायु:**

- पारंपरिक भवनों में दीवारें मोटी होती थीं, जो गर्मियों में ठंडा और सर्दियों में गर्म माहौल प्रदान करती थीं।
- मजबूत संरचनाएं समय के साथ टिकाऊ होती थीं।

**5. सांस्कृतिक अभिव्यक्ति:**

- स्थानीय परंपराओं, रीति-रिवाजों, और शिल्पकला का प्रतिबिंब।
- भवनों की संरचना में धार्मिक और सामाजिक मान्यताओं का समावेश।

**लाभ:**

**1. पर्यावरणीय स्थिरता:**

- प्राकृतिक सामग्रियों का उपयोग पर्यावरण को नुकसान नहीं पहुंचाता।
- कार्बन फुटप्रिंट कम होता है।

**2. सामाजिक और सांस्कृतिक जुड़ाव:**

- स्थानीय समुदाय की जरूरतों और सांस्कृतिक मान्यताओं का ध्यान।

**3. ऊर्जा दक्षता:**

- बिना मशीनरी के प्राकृतिक वेंटिलेशन और प्रकाश का उपयोग।

**4. कम लागत:**

- स्थानीय सामग्रियों और श्रम का उपयोग इसे आर्थिक रूप से सुलभ बनाता है।

**सीमाएँ:**

**1. तकनीकी नवाचार की कमी:** आधुनिक सुविधाओं और तकनीकी प्रगति की सीमित उपलब्धता।

**2. कम संरचनात्मक लचीलापन:** पारंपरिक भवन आधुनिक शहरी आवश्यकताओं को पूरी तरह से पूरा नहीं कर सकते।

**3. समय की अधिकता:** निर्माण में अधिक समय लगता है।

**4. जलवायु के प्रति सीमित अनुकूलता:** केवल विशिष्ट जलवायु परिस्थितियों में अधिक प्रभावी।

**उदाहरण:**

**1. राजस्थान की हवेलियाँ:**

- मोटी पत्थर की दीवारें और जालीदार खिड़कियाँ गर्मियों में ठंडक प्रदान करती हैं।
- जल संरक्षण के लिए छत पर कुंड।

**2. केरल के पारंपरिक घर:**

- लकड़ी और नारियल के पत्तों से बनी छत।
- मानसूनी जलवायु के लिए उपयुक्त।

**3. नॉर्थ-ईस्ट इंडिया के बांस से बने घर:**

- भूकंप-रोधी डिज़ाइन और जलवायु अनुकूलता।

### आधुनिक भवन निर्माण:

आधुनिक भवन निर्माण उन्नत प्रौद्योगिकी, नवीन सामग्रियों और ऊर्जा दक्षता पर आधारित है। यह शहरीकरण, बढ़ती आबादी, और पर्यावरणीय स्थिरता की जरूरतों को पूरा करने के लिए डिज़ाइन किया गया है। आधुनिक भवन निर्माण पारंपरिक तरीकों के विपरीत अधिक लचीला, तेज़, और स्मार्ट समाधान प्रदान करता है।

### विशेषताएँ:

#### 1. उन्नत सामग्री का उपयोग:

- स्टील, कंक्रीट, कांच, और पुनः उपयोग की जाने वाली सामग्रियों का व्यापक उपयोग।
- हल्की और टिकाऊ सामग्री जो अधिक मजबूत संरचनाएँ बनाती हैं।

#### 2. तकनीकी नवाचार:

- स्मार्ट बिल्डिंग तकनीक: सेंसर, ऑटोमेशन और आईoटी (इंटरनेट ऑफ थिंग्स) आधारित प्रणालियाँ।
- ऊर्जा दक्षता के लिए सौर ऊर्जा, सौर पैनल, और हरित तकनीक का उपयोग।

#### 3. गति और सटीकता:

- प्रीफैब्रिकेशन (पूर्वनिर्मित ढांचे) और मॉड्यूलर निर्माण।
- तेज़ी से निर्माण और श्रम लागत में कमी।

#### 4. हरित भवन और पर्यावरणीय स्थिरता:

- कम ऊर्जा उपयोग, जल पुनर्चक्रण, और ग्रीन रूफ जैसी तकनीकों का समावेश।
- भवनों में ऊर्जा दक्षता प्रमाणन जैसे LEED (Leadership in Energy and Environmental Design)।

#### 5. डिज़ाइन में लचीलापन:

- मल्टीस्टोरी बिल्डिंग्स, हाई-राइज़ टॉवर्स, और कस्टमाइज़्ड डिज़ाइन।
- कम जगह में अधिक उपयोगी संरचनाएँ।

### लाभ:

#### 1. ऊर्जा दक्षता और स्थिरता:

- स्मार्ट ऊर्जा प्रबंधन प्रणाली और कम कार्बन उत्सर्जन।
- नवीकरणीय ऊर्जा स्रोतों का उपयोग।

#### 2. निर्माण प्रक्रिया में तेज़ी:

- मॉड्यूलर निर्माण और प्रीफैब्रिकेशन के कारण कम समय में निर्माण।

#### 3. लंबी अवधि में कम लागत:

- ऊर्जा की बचत और टिकाऊ सामग्रियों के कारण।

#### 4. आधुनिक जीवनशैली के अनुकूल:

- तकनीकी समाधान, जैसे स्मार्ट होम डिवाइस और एआई आधारित प्रणाली।

#### 5. सुरक्षा और संरचनात्मक मजबूती:

- भूकंप-रोधी डिज़ाइन, अग्नि सुरक्षा प्रणाली, और जल प्रबंधन।

### सीमाएँ:

1. प्रारंभिक लागत अधिक: उन्नत तकनीकों और सामग्रियों के कारण निर्माण शुरू करने में अधिक लागत।

2. परंपरागत शैली का अभाव: स्थानीय और सांस्कृतिक पहचान को संरक्षित करने की चुनौती।

3. तकनीकी निर्भरता: आधुनिक निर्माण प्रक्रियाएँ तकनीक और विशेषज्ञता पर निर्भर होती हैं।

4. पर्यावरणीय दुष्प्रभाव:कंक्रीट और स्टील का उत्पादन उच्च ऊर्जा की खपत और प्रदूषण उत्पन्न करता है।

उदाहरण:

1. बुर्ज खलीफा (दुबई):विश्व की सबसे ऊँची इमारत, जिसमें उन्नत निर्माण तकनीक और सामग्री का उपयोग।
2. वन वर्ल्ड ट्रेड सेंटर (न्यूयॉर्क):ऊर्जा दक्षता और सुरक्षा के लिए उन्नत डिज़ाइन।
3. इंडिया का हरित भवन (पुणे):सौर ऊर्जा, ग्रीन रूफ, और जल पुनर्चक्रण प्रणाली से युक्त।

आधुनिक भवन निर्माण की तकनीकें:

1. 3D प्रिंटेड बिल्डिंग्स:तेज़ निर्माण और कम कचरे के साथ सटीक डिज़ाइन।
2. ऊर्जा स्मार्ट बिल्डिंग्स:ऊर्जा बचाने और उपयोग को मॉनिटर करने वाली स्वचालित प्रणाली।
3. मॉड्यूलर निर्माण:बिल्डिंग ब्लॉक्स को अलग-अलग स्थानों पर तैयार करके साइट पर जोड़ना।
4. नवीकरणीय ऊर्जा एकीकरण:सौर और पवन ऊर्जा का उपयोग।

तुलनात्मक अध्ययन:

पहलू	पारंपरिक भवन निर्माण	आधुनिक भवन निर्माण को
सामग्री	प्राकृतिक ( लकड़ी, मिट्टी, पत्थर )	कृत्रिम ( कंक्रीट , स्टील, ग्लास )
वास्तु सिद्धांत	पूर्ण अनुपालन	सीमित अनुपालन
तकनीकी उपयोग	न्यूनतम	उन्नत तकनीकी और स्मार्ट समाधान
पर्यावरणीय प्रभाव	पर्यावरण के अनुकूल	अधिक ऊर्जा खपत, पर्यावरण पर प्रभाव
आयु और स्थायित्व	अधिक स्थायित्व	उच्च टिकाऊपन लेकिन रखरखाव पर निर्भर
सामाजिक जुड़ाव	सामुदायिक और सांस्कृतिक	व्यक्तिगत और व्यावसायिक उपयोग पर केन्द्रित
आर्थिक लागत	कम लागत, स्थानीय सामग्री	अधिक लागत, लेकिन तकनीकी सुविधाओं से युक्त

पारंपरिक और आधुनिक भवन निर्माण के बीच समन्वय की संभावना:

वास्तु शास्त्र की दृष्टि से पारंपरिक और आधुनिक भवन निर्माण के बीच समन्वय स्थापित करना एक ऐसा दृष्टिकोण है, जो प्राचीन ज्ञान और आधुनिक तकनीकी नवाचारों को एक साथ लाकर भवन निर्माण को अधिक स्थायी, पर्यावरण अनुकूल, और ऊर्जा दक्ष बना सकता है। दोनों प्रणालियों के लाभों को समाहित करते हुए, यह न केवल भवन की कार्यक्षमता को बढ़ाता है, बल्कि मानव जीवन और पर्यावरण के बीच सामंजस्य भी सुनिश्चित करता है।

1. पारंपरिक और आधुनिक सिद्धांतों का एकीकरण:

(क) दिशाओं और ऊर्जा प्रवाह का पालन:

पारंपरिक वास्तु सिद्धांतों में दिशाओं और ऊर्जा प्रवाह का विशेष महत्व है। आधुनिक भवन निर्माण में इस पहलू को शामिल करके भवन को सकारात्मक ऊर्जा और मानसिक शांति का स्रोत बनाया जा सकता है।

उदाहरण: भवन का मुख्य द्वार उत्तर या पूर्व दिशा में हो, जो वास्तु शास्त्र में शुभ मानी जाती है।

**(ख) पंचमहाभूतों का संतुलन:**

पारंपरिक वास्तु में पंचमहाभूतों (भूमि, जल, अग्नि, वायु, और आकाश) के संतुलन पर जोर दिया गया है। आधुनिक ग्रीन बिल्डिंग अवधारणाओं के साथ इसे जोड़ा जा सकता है।

**उदाहरण:** जल के प्रबंधन के लिए रेनवाटर हार्वेस्टिंग और प्राकृतिक वेंटिलेशन का उपयोग।

**2. निर्माण सामग्री का चयन:**

**(क) प्राकृतिक और आधुनिक सामग्रियों का उपयोग:**

पारंपरिक भवन निर्माण में लकड़ी, पत्थर, और मिट्टी जैसी प्राकृतिक सामग्रियों का उपयोग होता था, जबकि आधुनिक निर्माण में स्टील, कंक्रीट, और ग्लास का। इन दोनों का संयोजन भवन को दीर्घकालिक, टिकाऊ और सौंदर्यपूर्ण बना सकता है।

**उदाहरण:** बाहरी दीवारों के लिए प्राकृतिक पत्थर और आंतरिक संरचना के लिए कंक्रीट का उपयोग।

**(ख) पर्यावरण अनुकूल सामग्रियों का उपयोग:**

आधुनिक सामग्रियों जैसे सोलर पैनल, ऊर्जा बचाने वाली खिड़कियाँ, और थर्मल इंसुलेशन को पारंपरिक डिजाइनों के साथ जोड़ा जा सकता है।

**3. आधुनिक तकनीकों का समावेश:**

**(क) स्मार्ट तकनीक का उपयोग:**

स्मार्ट होम्स और भवनों में ऊर्जा प्रबंधन और सुरक्षा के लिए आधुनिक तकनीकों का समावेश किया जा सकता है, जबकि वास्तु के सिद्धांतों को ध्यान में रखा जा सकता है।

**उदाहरण:** सोलर पैनल्स का सही दिशा में इंस्टॉल करना और स्मार्ट लाइटिंग सिस्टम का उपयोग।

**(ख) ग्रीन बिल्डिंग टेक्नोलॉजी:**

वास्तु शास्त्र के साथ ग्रीन बिल्डिंग अवधारणाओं का उपयोग पर्यावरणीय प्रभाव को कम कर सकता है।

**उदाहरण:** ग्रीन रूफ्स, वॉटर रीसाइक्लिंग सिस्टम, और ऊर्जा दक्ष उपकरण।

**4. ऊर्जा दक्षता और पर्यावरणीय संतुलन:**

**(क) प्राकृतिक संसाधनों का उपयोग:**

पारंपरिक वास्तु में प्राकृतिक संसाधनों का उपयोग भवन निर्माण के लिए अनिवार्य था। आधुनिक भवनों में इस अवधारणा को लागू करके ऊर्जा दक्षता को बढ़ाया जा सकता है।

**उदाहरण:** प्राकृतिक रोशनी और हवा का प्रवाह सुनिश्चित करने के लिए बड़े खिड़कियाँ और वेंटिलेशन सिस्टम।

**(ख) नवीकरणीय ऊर्जा का उपयोग:**

सोलर पैनल, विंड एनर्जी और अन्य नवीकरणीय ऊर्जा स्रोतों को पारंपरिक वास्तु सिद्धांतों के साथ जोड़ा जा सकता है।

**5. सांस्कृतिक और आध्यात्मिक पहलुओं का संरक्षण:**

**(क) पारंपरिक मूल्यों का संरक्षण:**

वास्तु शास्त्र में निहित सांस्कृतिक और आध्यात्मिक मूल्यों को आधुनिक भवनों में संरक्षित किया जा सकता है।

**उदाहरण:** पूजा स्थलों के लिए वास्तु सिद्धांतों का पालना।

**(ख) सामुदायिक भवन निर्माण:**

पारंपरिक वास्तु शास्त्र के सामुदायिक दृष्टिकोण को आधुनिक समाज के अनुकूल बनाया जा सकता है।

**निष्कर्ष :**

वास्तु शास्त्र की दृष्टि से पारंपरिक और आधुनिक भवन निर्माण का तुलनात्मक अध्ययन यह स्पष्ट करता है कि दोनों पद्धतियों के अपने-अपने लाभ और सीमाएँ हैं। पारंपरिक भवन निर्माण में प्राकृतिक संसाधनों, दिशाओं, और पर्यावरणीय संतुलन का गहरा ध्यान रखा जाता था, जबकि आधुनिक भवन निर्माण में तकनीकी प्रगति, स्थान की उपलब्धता, और व्यावसायिक आवश्यकताओं को प्राथमिकता दी जाती है।



पारंपरिक भवन निर्माण प्राकृतिक ऊर्जा स्रोतों और पर्यावरणीय संतुलन पर आधारित है, जो दीर्घकालिक टिकाऊ जीवन प्रदान करता है। आधुनिक भवन निर्माण शहरीकरण और तकनीकी प्रगति के कारण सीमित स्थान में अधिक उपयोगिता प्रदान करने पर केंद्रित है। वास्तु शास्त्र के सिद्धांत जैसे दिशाओं का महत्व, ऊर्जा प्रवाह, और पंचमहाभूतों का संतुलन आज भी प्रासंगिक हैं और इन्हें आधुनिक भवनों में शामिल किया जा सकता है। पर्यावरणीय स्थिरता और ऊर्जा दक्षता सुनिश्चित करने के लिए पारंपरिक वास्तु सिद्धांतों और आधुनिक ग्रीन बिल्डिंग अवधारणाओं का संयोजन आवश्यक है।

निष्कर्षतः, वास्तु शास्त्र का ज्ञान और आधुनिक तकनीक का मेल एक नई दिशा प्रदान कर सकता है, जिससे भवन निर्माण और जीवनशैली दोनों में सकारात्मक परिवर्तन लाया जा सके।

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## ભારતમાં મહિલાઓના સામાજિક-આર્થિક ઉત્કર્ષમાં ઉચ્ચ શિક્ષણની ભૂમિકા

ડૉ. એલિશાબેન ગણેશભાઈ ચૌધરી

અધ્યાપક સહાયક-અર્થશાસ્ત્ર વિભાગ

શ્રી પી. એન. પંડ્યા આર્ટ્સ, એમ. પી. પંડ્યા સાયન્સ &

શ્રીમતી ડી. પી. પંડ્યા કોમર્સ કોલેજ લુણાવાડા

### સારાંશ:

પ્રસ્તુત સંશોધન અભ્યાસમાં ભારતમાં મહિલાઓના સામાજિક-આર્થિક ઉત્કર્ષમાં ઉચ્ચ શિક્ષણની ભૂમિકા વિશે ચર્ચા કરવામાં આવી છે જેમાં ઉચ્ચ શિક્ષણ મહિલાઓને સામાજિક-આર્થિક રીતે મજબૂત બનાવે છે તથા પોતાનો સર્વાંગી વિકાસ કરવા માટે વિવિધ તકો પુરી પાડે છે. મહિલાઓ આજે ઉચ્ચ શિક્ષણ મેળવવાને કારણે દરેક ક્ષેત્રોમાં પોતાની કારકિર્દી તરફ આગળ વધી રહી છે અને પોતાની બેવડી ભૂમિકા ભજવી રહી છે. ઉચ્ચ શિક્ષણ આ સદીમાં મહિલાઓને પરંપરાગત જીવનથી આધુનિક જીવન તરફ લઈ જઈ રહ્યું છે તેથી મહિલાઓની વિચારસરણીમાં પરિવર્તન જોવા મળે છે, જે પોતાના સમાજનો તથા દેશનો વિકાસ કરવા માટે ખૂબજ મહત્વની ભૂમિકા ભજવે છે. આધુનિક સમયમાં દેશમાં પરિવર્તન થઈ રહ્યું છે જેમાં ઉચ્ચ શિક્ષણનું ખૂબજ મહત્વ રહેલું છે.

### પ્રસ્તાવના:

ભારતમાં સ્ત્રી શિક્ષણના સૂર્યોદય પૂર્વે સ્ત્રીઓની સ્થિતિ અસંતોષકારક હતી. પ્રાચીન કાળમાં સ્ત્રીઓની સ્થિતિ વધુ સંતોષકારક હતી. તે સમયે ભારતમાં ઘણા લાંબા સમય સુધી વૈદિક શિક્ષણ સ્ત્રી-પુરુષના ભેદભાવ વગર સમાન ધોરણે આપવામાં આવતું હતું.

સ્ત્રી શિક્ષણનો સૂર્યોદય ઈ. સ. પૂ. ૫૦૦ થી ઈ. સ. ૧૨૦૦ સુધી હતો. ત્યાર પછીના સમયમાં સ્ત્રીઓ ઘરકામ તેમજ બાળઉછેરની જવાબદારી નિભાવતી હતી. ઘરની બહારના કામો કરવામાં પ્રતિબંધ હતો. પરંતુ સામાજિક પરિવર્તનની સાથે આધુનિક સમાજમાં સ્ત્રી અને શિક્ષણને આવશ્યક રૂપમાં જોડવાનો ખ્યાલ અમલમાં આવ્યો. તેનું એક સ્વરૂપ શિક્ષણમાં સ્ત્રીઓને પુરુષોની જેમ જ સમાનતાના ધોરણે શિક્ષણ મેળવવાનો અધિકાર પ્રાપ્ત થયો. સ્ત્રીઓના વિકાસના આધાર તરીકે શિક્ષણ મહત્વપૂર્ણ ભૂમિકા ભજવે છે અને તેથી જ શિક્ષિત મહિલાઓ કામ કરવામાં અને આર્થિક રીતે મજબૂત હોવાના કારણે ગરીબીને ઓછી કરવામાં સક્ષમ છે.

શિક્ષિત સ્ત્રીઓ અન્ય સ્ત્રીઓની સરખામણીમાં તેમના બાળકોનું ૫૦ ટકા વધુ રક્ષણ કરવાની ક્ષમતા ધરાવે છે. શિક્ષણ વ્યક્તિને નવી નવી વસ્તીઓ શિખવામાં અને દુનિયાના તથ્યોને જાણવામાં મદદ કરે છે. ભારતમાં સ્ત્રી શિક્ષણ સામાજિક તેમજ આર્થિક વિકાસ માટે ખુબજ જરૂરી છે. શિક્ષિત સ્ત્રી બે ઘરને શિક્ષિત કરે છે. શિક્ષિત સ્ત્રી પોતાના પછીની પેઢીને પણ શિક્ષિત કરે છે.

એકવીસમી સદીમાં સમગ્ર વિશ્વ અને ભારતને વિજ્ઞાન અને ટેકનોલોજી ક્ષેત્રે અભૂતપૂર્વ સિધ્ધિઓ મેળવી છે. આર્થિક, સામાજિક, રાજકીય અને સાંસ્કૃતિક ક્ષેત્રે અનેક પરિવર્તનો આવ્યા છે. સ્ત્રી હવે સામાજિક પરંપરાઓ અને પ્રણાલીઓમાંથી મુક્ત થઈ અબળામાંથી સબળા બની છે. સ્ત્રી શિક્ષણ એ સમાજમાં મહત્વનું પરિબળ સાબિત થાય છે. તેના દ્વારા સ્ત્રીઓનો તો વિકાસ થાય છે જ સાથે સાથે સમાજનો પણ વિકાસ થાય છે. શિક્ષિત મહિલાઓ વિવિધ ક્ષેત્રોમાં સિધ્ધિઓ પ્રાપ્ત કરે છે. સ્ત્રી શિક્ષણના વિકાસની સાથે પરંપરાઓ અને માન્યતાઓમાં પરિવર્તન જોવા મળે છે.

**સંશોધન અભ્યાસના હેતુઓ:**

૧) મહિલાઓમાં ઉચ્ચ શિક્ષણથી આવેલ પરિવર્તનોની જાણકારી મેળવવી.

૨) મહિલાઓના વિકાસમાં ઉચ્ચ શિક્ષણની અગત્યતા તપાસવી.

**સંશોધન અભ્યાસની પદ્ધતિ:**

પ્રસ્તુત સંશોધન અભ્યાસમાં ભારતમાં મહિલાઓના સામાજિક-આર્થિક ઉત્કર્ષમાં ઉચ્ચ શિક્ષણની ભૂમિકા કેવી રહેલ છે તે જાણવાનો પ્રયાસ કરવામાં આવ્યો છે. આ અભ્યાસમાં ભારતમાં ઉચ્ચ શિક્ષણનું પ્રમાણ જાણવા માટે દસ્તાવેજી માહિતીનો ઉપયોગ કરવામાં આવેલ છે. આ સંશોધન અભ્યાસ સંપૂર્ણ ગૌણ માહિતી પર આધારિત છે.

**સાહિત્ય સમીક્ષા:**

બિસવાસ એચ.(૨૦૦૮) દ્વારા પશ્ચિમ સિક્કિમમાં ગ્રામીણ અને શહેરી વિસ્તારમાં મહિલાઓની શૈક્ષણિક સ્થિતિની સમસ્યાઓ અને સંભાવનાઓનો અભ્યાસ કરવામાં આવ્યો છે. જેમાં નિદર્શ પસંદગી માટે સ્તરીકૃત યાદચ્છિક નમૂના પદ્ધતિનો ઉપયોગ કરેલ છે. કુલ ૧૮૨ જેટલા ઉત્તરદાતાઓની પસંદગી કરવામાં આવી છે. આ અભ્યાસમાં પ્રાથમિક માહિતી માટે મુલાકાત પદ્ધતિનો ઉપયોગ કર્યો છે. પ્રસ્તુત અભ્યાસમાં મહિલાઓની શૈક્ષણિક સ્થિતિ પુરુષો સમાન નથી. જેમાં મુખ્યત્વે છાત્રાલયની સુવિધાનો અભાવ, શૌચાલયની સુવિધાનો અભાવ, અલગ કન્યા શાળાનો અભાવ, મહિલાઓ વિવિધ પ્રકારની ઘરગથ્થું પ્રવૃત્તિઓ સાથે જોડાયેલી હોય તથા શાળાનું શિક્ષણ પૂરું થયા પહેલા લગ્ન કરાવી દેવા વગેરે કારણોસર પુરુષ અને મહિલા સાક્ષરતા દર વચ્ચે વિશાળ તફાવત જોવા મળેલ છે.

નકુમ (૨૦૧૬) દ્વારા ગુજરાતના પછાત પ્રદેશોમાં ઉચ્ચ શિક્ષણની આર્થિક અસરોનો અભ્યાસ કરવામાં આવ્યો છે. જેમાં સંશોધક જણાવે છે કે ઉચ્ચ શિક્ષણનું પ્રમાણ વધે તો પ્રારંભિક અવસ્થામાં લોકોની આવક, રહેઠાણની સુવિધાઓ, વૈભવી વસ્તુઓ અને આરોગ્યની સુવિધાઓનો ઉપયોગ સારી રીતે કરવાથી તેમનું જીવનધોરણ ઉંચું આવે છે. તથા વ્યવસાયના સંદર્ભમાં ઉચ્ચ શિક્ષણની સ્થળાંતર પર પણ અસર જોવા મળે છે. ઉચ્ચ શિક્ષણનો વ્યાપ વિસ્તાર વધવાથી પછાત અને છેવાડાના વિસ્તારો ઉપર પ્રત્યક્ષ રીતે સારી અસર થાય છે.

પ્રા. નીતા બી. પટેલ (૨૦૧૬) દ્વારા “ ઉચ્ચ શિક્ષણ ક્ષેત્રે મહિલાઓ વિશેના લખાણમાં સંશોધક જણાવે છે કે જેમ જેમ મહિલાઓની સુરક્ષા માટે કાયદાઓ બની રહ્યા છે. તેમ તેમ મહિલાઓ પ્રત્યેના અત્યાર સુધીના વણનૌંધાયેલા અપરાધો નૌંધાવા માંડ્યા છે. તેથીજ માત્ર પ્રગતિ નહિ પરંતુ અન્યાય સામે લડવા માટેના નિયમોની જાણકારી હોય તો પણ મહિલાઓ પોતાની દિશા અને દશા બંને બદલી શકે છે. અને પોતાનો સ્વતંત્ર વિકાસ સાધી શકે છે. એવું સૂચન આપવામાં આવ્યું છે.

**ભારતમાં ઉચ્ચ શિક્ષણ:**

ઉચ્ચ શિક્ષણ એટલે માધ્યમિક શિક્ષણ પછીના શિક્ષણનો તબક્કો. સામાન્ય રીતે તેમાં યુનિવર્સિટીના માળખામાં અપાતા શિક્ષણનો સમાવેશ કરવામાં આવે છે.

૧૮૬૦માં જન્મેલા ચંદ્રમુખી બાસુ ભારતના પ્રથમ સ્ત્રી ગ્રેજ્યુએટમાંથી એક, બેથ્યુન કોલેજના પ્રથમ બેચના સ્નાતક અને કલકત્તા યુનિવર્સિટીમાંથી એમ.એ. થનાર સર્વ પ્રથમ ભારતીય મહિલા હતા.

ભારતમાં ૧૯૨૧-૨૨, ૧૯૩૧-૩૨ અને ૧૯૪૬-૪૭માં અનુક્રમે ૨૩૧, ૪૧૭ અને ૮૩૩ કોલેજો હતી. જે પૈકી આર્ટ્સ કોલેજની સંખ્યા વિશેષ હતી. તે જ ગાળામાં વિદ્યાર્થીઓની સંખ્યા અનુક્રમે ૫૮૫૮૧, ૮૮૪૮૩ અને ૧૮૮૨૫૩ હતી. ૧૯૩૧ પછી કોલેજોમાં વધુ મહિલાઓ શિક્ષણ લેતી થઈ હતી. ખેતીવાડી, ઈજનેરી, મેડિકલ અને વાણિજ્યની વિદ્યાશાખાઓની કોલેજોનું પ્રમાણ થોડું હતું. પ્રયોગશાળાઓ અને સમૃદ્ધ પુસ્તકાલયો અને સહશૈક્ષણિક પ્રવૃત્તિઓનો ખૂબ જ મર્યાદિત વિકાસ થયો હતો.

કોષ્ટક નં.૧ ભારતમાં રાજ્ય અને કેન્દ્ર શાસિત પ્રદેશ વાર ઉચ્ચ શિક્ષણનું પ્રમાણ (ટકાવારીમાં)  
વર્ષ ૨૦૧૯-૨૦

ક્રમ	રાજ્ય/ કેન્દ્ર શાસિત પ્રદેશ	પુરુષ	સ્ત્રી	કુલ
૧	આંધ્ર પ્રદેશ	૩૮.૩	૩૨.૨	૩૫.૨
૨	અરુણાચલ પ્રદેશ	૩૬.૫	૩૪.૩	૩૫.૪
૩	આસામ	૧૭.૪	૧૭.૨	૧૭.૩
૪	બિહાર	૧૫.૮	૧૩.૧	૧૪.૫
૫	છત્તીસગઢ	૧૭.૪	૧૮.૬	૧૮.૫
૬	ગોવા	૨૩.૮	૩૪.૬	૨૮.૪
૭	ગુજરાત	૨૨.૮	૧૮.૬	૨૧.૩
૮	હરિયાણા	૨૬.૬	૩૨.૫	૨૮.૩
૯	હિમાચલ પ્રદેશ	૩૫.૭	૪૬.૪	૪૦.૮
૧૦	ઝારખંડ	૨૧.૦	૨૦.૮	૨૦.૮
૧૧	કર્ણાટક	૩૧.૨	૩૨.૭	૩૨.૦
૧૨	કેરળ	૩૨.૮	૪૪.૭	૩૮.૮
૧૩	મધ્ય પ્રદેશ	૨૪.૨	૨૪.૨	૨૪.૨
૧૪	મહારાષ્ટ્ર	૩૩.૫	૩૧.૦	૩૨.૩
૧૫	મણિપુર	૩૭.૭	૩૮.૮	૩૮.૩
૧૬	મેઘાલય	૨૪.૨	૨૮.૦	૨૬.૧
૧૭	મિઝોરમ	૨૭.૨	૨૫.૧	૨૬.૧
૧૮	નાગાલેંડ	૧૬.૫	૨૦.૫	૧૮.૫
૧૯	ઓડિશા	૨૩.૦	૨૦.૩	૨૧.૭
૨૦	પંજાબ	૨૫.૧	૩૨.૧	૨૮.૨
૨૧	રાજસ્થાન	૨૪.૩	૨૩.૮	૨૪.૧
૨૨	સિક્કિમ	૮૩.૬	૬૭.૬	૭૫.૮
૨૩	તમિલનાડુ	૫૧.૮	૫૧.૦	૫૧.૪
૨૪	તેલંગાણા	૩૪.૮	૩૬.૪	૩૫.૬
૨૫	ત્રિપુરા	૨૨.૫	૧૮.૦	૨૦.૨
૨૬	ઉત્તર પ્રદેશ	૨૩.૭	૨૬.૮	૨૫.૩
૨૭	ઉત્તરાખંડ	૪૦.૭	૪૨.૩	૪૧.૫
૨૮	પશ્ચિમ બંગાળ	૨૦.૩	૧૮.૬	૧૯.૮
૨૯	અંદામાન અને નિકોબાર	૧૭.૭	૨૨.૩	૨૦.૦
૩૦	ચંડીગઢ	૪૩.૨	૬૫.૬	૫૨.૧
૩૧	દાદરા અને નગર હવેલી	૭.૪	૧૨.૮	૮.૪
૩૨	દમણ અને દીવ	૪.૪	૧૧.૪	૬.૧

૩૩	દિલ્હી	૪૪.૮	૫૧.૮	૪૮.૦
૩૪	જમ્મુ અને કાશ્મીર	૩૧.૭	૩૩.૨	૩૨.૪
૩૫	લદાખ	૫.૦	૧૧.૩	૭.૮
૩૬	લક્ષદ્વીપ	૩.૬	૧૧.૫	૭.૫
૩૭	પોંડિચેરી	૪૧.૦	૫૨.૬	૪૬.૩
કુલ		૨૬.૮	૨૭.૩	૨૭.૧

Source: UGC Annual Report 2020-21

ઉપરોક્ત કોષ્ટકમાં ભારતમાં રાજ્યવાર વર્ષ ૨૦૧૯-૨૦ માં ઉચ્ચ શિક્ષણનું પ્રમાણ જાતિ અનુસાર દર્શાવ્યું છે. જેમાં સૌથી વધુ ઉચ્ચ શિક્ષણનું પ્રમાણ ૭૫.૮ ટકા સિક્કિમમાં જોવા મળે છે. પુરુષોમાં ૮૩.૬ ટકા અને સ્ત્રીઓમાં ૬૭.૬ ટકા ઉચ્ચ શિક્ષણનું પ્રમાણ રહેલું છે. જ્યારે સૌથી ઓછું ઉચ્ચ શિક્ષણનું પ્રમાણ ૬.૧ ટકા દમણ અને દીવમાં જોવા મળે છે. જેમાં પુરુષોમાં ૪.૪ ટકા અને સ્ત્રીઓમાં ૧૧.૪ ટકા ઉચ્ચ શિક્ષણનું પ્રમાણ રહેલું છે.

#### મહિલાઓના સામાજિક ઉત્કર્ષમાં ઉચ્ચ શિક્ષણની ભૂમિકા:

ઉચ્ચ શિક્ષણ દ્વારા મહિલાઓનો સર્વાંગી વિકાસ થયો છે. ઉચ્ચ શિક્ષણ મેળવનારી મહિલાઓ પોતાની સામાજિક જવાબદારીઓ અભણ મહિલાઓની તુલનામાં સારી રીતે નિભાવી શકે છે. લગ્ન બાદ પરિવાર સાથે સુમેળ ભર્યા સંબંધો વિકસાવવામાં, પોતાના બાળકનો સર્વાંગી રીતે ઉછેર તેમજ સ્વ-વિકાસ અન્ય મહિલાઓ કરતાં વધુ સારી રીતે કરી શકે છે. સમાજમાં ચાલતી જૂની પરંપરા, અંધશ્રદ્ધા, ભગત ભૂવા જેવી બાબતોને દૂર કરવા માટે ઉચ્ચ શિક્ષણની ભૂમિકા ખુબજ મહત્વની હોય છે. ઉચ્ચ શિક્ષણને કારણે પોતાના સમાજમાં મહિલાઓને સન્માનની દ્રષ્ટિએ જોવામાં આવે છે. તેથી શિક્ષિત મહિલાઓ સમાજમાં ગૌરવભેર જીવન જીવી શકે છે. ઉચ્ચ શિક્ષણથી મહિલાઓની વિચારસરણીમાં પરિવર્તન આવે છે. તેથી તે જુના વિચારોમાંથી બહાર આવે છે અને પોતાનો સ્વતંત્ર વિકાસ કરી શકે છે.

#### મહિલાઓના આર્થિક ઉત્કર્ષમાં ઉચ્ચ શિક્ષણની ભૂમિકા:

આજના આધુનિક સમયમાં ઉચ્ચ શિક્ષણ પ્રાપ્ત કરવાથી મહિલાઓ સામાજિક જવાબદારી ઉપરાંત આર્થિક જવાબદારી પણ લેતી થઈ છે. ઉચ્ચ શિક્ષણને કારણે રોજગારીની અઢળક તકો પ્રાપ્ત થતી હોય છે. જેના પરિણામે મહિલાઓ કૃષિક્ષેત્ર જેવા વ્યવસાયમાંથી ઉદ્યોગ અને સેવા ક્ષેત્ર તરફ વળી છે. ઉચ્ચ શિક્ષણ ભવિષ્યની જવાબદારીઓ લેતા શીખવે છે તેથી મહિલાઓ ઉચ્ચ શિક્ષણ પ્રાપ્ત કર્યા બાદ નોકરી, ધંધો કરીને આવક કમાતી થઈ ગઈ છે. પોતે ઘરની આર્થિક જવાબદારીઓ ઉઠાવતી થઈ ગઈ છે. ગ્રામીણ વિસ્તારમાંથી શહેરી વિસ્તારમાં રોજગારી માટે સ્થળાંતરીત કરતી થઈ છે. મહિલાઓ પોતાના ઘરનો સંપૂર્ણ ખર્ચો ઉઠાવવા માટે સક્ષમ બની છે. આમ, ઉચ્ચ શિક્ષણથી મહિલાઓ આર્થિક રીતે મજબૂત બને છે અને દેશની ગરીબી ઓછી કરવામાં સહાયરૂપ બને છે. ઉચ્ચ શિક્ષણે મહિલાઓને વધુ સક્ષમ બનાવી છે અને મહિલાઓની સશક્તિકરણની પ્રક્રિયા ઝડપી બની છે. મહિલાઓ બેવડી જવાબદારી લેતા શીખી ગઈ છે. મહિલાઓને ઉચ્ચ શિક્ષણને કારણે પુરુષ સમાન બધા ક્ષેત્રોમાં સ્થાન પ્રાપ્ત થયું છે.

#### ઉપસંહાર:

ભારત એક પુરુષપ્રધાન દેશ હોવાથી મહિલાઓને ચાર દીવાલોની વચ્ચે રહેવું પડતું હતું. પરંતુ શિક્ષણનો પ્રચાર-પ્રસાર થતો ગયો તેમ તેમ મહિલાઓના શિક્ષણમાં વધારો થતો ગયો. મહિલાઓની વિચારસરણી બદલાતી ગઈ અને તેઓ વધુ શિક્ષણ મેળવતી થઈ. આધુનિક સમયમાં મહિલાઓ ઉચ્ચ શિક્ષણ ક્ષેત્રે ખુબજ આગળ વધી રહી છે અને પોતાનો વિકાસ કરી રહી છે. ઉચ્ચ શિક્ષણ થકી મહિલાઓ સામાજિક-આર્થિક જવાબદારી લેવામાં સાનુકૂળતા અનુભવી રહી છે. અને પોતાના પર આધાર રાખતી થઈ છે. તેથી ભારત દેશમાં મહિલાઓને ઉચ્ચ શિક્ષણ મેળવવા માટે વધુ ને વધુ પ્રોત્સાહન મળે એવા પ્રયત્નો સમાજ, સરકાર અને અન્ય સંસ્થાઓ દ્વારા થવા જોઈએ.

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## बहुभाषीय शिक्षा प्रणाली के फायदे और नुकसान

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### सारांश:

बहुभाषीय शिक्षा प्रणाली वह है जिसमें विद्यार्थियों को दो या दो से अधिक भाषाओं में शिक्षा दी जाती है। इस प्रणाली के कई फायदे हैं, जैसे संज्ञानात्मक विकास, सामाजिक समझ में वृद्धि, रोजगार के बेहतर अवसर, और भाषाई कौशल में सुधार। बहुभाषीय शिक्षा से छात्रों का मानसिक विकास होता है, वे विभिन्न संस्कृतियों को समझते हैं, और उन्हें वैश्विक स्तर पर प्रतिस्पर्धा करने का अवसर मिलता है। हालांकि, इसके कुछ नुकसान भी हैं, जैसे शैक्षिक बोझ, भाषाई भ्रम, संसाधनों की कमी, और भाषाई असंतुलन। इन समस्याओं को ठीक से संभालने के लिए उचित शैक्षिक ढांचा और प्रशिक्षित शिक्षक आवश्यक हैं।

**मुख्य शब्द :** बहुभाषीय शिक्षा , संज्ञानात्मक विकास, संस्कृतिक समृद्धि

### परिचय:

बहुभाषीय शिक्षा प्रणाली वह शिक्षा प्रणाली है, जिसमें विद्यार्थियों को दो या दो से अधिक भाषाओं में शिक्षा दी जाती है। यह प्रणाली एक महत्वपूर्ण शैक्षिक दृष्टिकोण है, जो विद्यार्थियों को विभिन्न भाषाओं में दक्ष बनाने के साथ-साथ उनके संज्ञानात्मक, सामाजिक और सांस्कृतिक विकास को भी बढ़ावा देती है। बहुभाषीय शिक्षा का उद्देश्य न केवल भाषा कौशल में सुधार करना है, बल्कि इसे वैश्विक दृष्टिकोण से जोड़ते हुए छात्रों को विभिन्न संस्कृतियों और समाजों के प्रति संवेदनशील और समझदार बनाना भी है।

इस प्रणाली का पालन कई देशों में किया जाता है, जहाँ विभिन्न भाषाओं में शिक्षा देने से छात्रों को दोहरी भाषाई क्षमता प्राप्त होती है, जो उन्हें बेहतर संवाद कौशल, अधिक समझ और रोजगार के अवसर प्रदान करती है। हालांकि, इसके साथ कुछ चुनौतियाँ भी जुड़ी हुई हैं, जैसे शैक्षिक बोझ, भाषाई भ्रम, और संसाधनों की कमी। इन सभी पहलुओं पर ध्यान देते हुए, बहुभाषीय शिक्षा प्रणाली के प्रभावी कार्यान्वयन से छात्रों को मानसिक रूप से मजबूत और समृद्ध बनाने का उद्देश्य होता है।

### फायदे:

#### ● संज्ञानात्मक विकास:

बहुभाषीय शिक्षा से छात्रों का संज्ञानात्मक विकास होता है। विभिन्न भाषाओं का ज्ञान मस्तिष्क के विभिन्न हिस्सों को सक्रिय करता है, जिससे स्मृति, ध्यान, और समस्या-समाधान की क्षमता में वृद्धि होती है। कई शोधों में यह पाया गया है कि बहुभाषीय व्यक्ति जल्दी और बेहतर तरीके से समस्याओं को हल कर सकते हैं। इसमें सोचने, समझने, याद रखने, समस्या सुलझाने, निर्णय लेने और ध्यान केंद्रित करने जैसी क्षमताएँ शामिल होती हैं। संज्ञानात्मक विकास का मुख्य उद्देश्य मस्तिष्क की कार्यप्रणाली को बेहतर बनाना और मानसिक लचीलापन बढ़ाना है।

#### संज्ञानात्मक विकास में बहुभाषीय शिक्षा के कुछ मुख्य लाभ:

1. **संस्कृतिक समृद्धि:** जब छात्र कई भाषाओं में शिक्षा प्राप्त करते हैं, तो उनका कार्य स्मृति प्रणाली पर सकारात्मक प्रभाव डालता है। वे अधिक प्रभावी तरीके से सूचनाओं को याद रखने और पुनः प्राप्त करने में सक्षम होते हैं।
2. **समस्या-समाधान क्षमता:** बहुभाषीय शिक्षा से छात्रों की समस्या-समाधान क्षमता में वृद्धि होती है। विभिन्न भाषाओं के उपयोग से मस्तिष्क को विविध प्रकार के विचारों और समस्याओं से निपटने में मदद मिलती है।
3. **ध्यान केंद्रित करने की क्षमता:** एक साथ कई भाषाओं को समझने और उपयोग करने से बच्चों में ध्यान केंद्रित करने की क्षमता विकसित होती है, क्योंकि उन्हें एक ही समय में विभिन्न भाषाओं को पहचानने और लागू करने की आवश्यकता होती है।



4. **बौद्धिक लचीलापन:** बहुभाषीय लोग अधिक बौद्धिक रूप से लचीले होते हैं, क्योंकि वे लगातार विभिन्न भाषाओं के बीच स्विच करते हैं। इससे उनके मस्तिष्क में सूचनाओं को प्रोसेस करने की क्षमता बढ़ती है और वे अधिक निपुण बनते हैं।

● **संस्कृति और समाज की समझ:**

बहुभाषीय शिक्षा से छात्रों को विभिन्न संस्कृतियों, विचारों और परंपराओं के बारे में समझ प्राप्त होती है। इससे वे अधिक संवेदनशील, सहिष्णु और समाज में अंतर-संस्कृति संबंधों को बेहतर तरीके से समझने में सक्षम होते हैं। संस्कृति और समाज की समझ वह क्षमता है जिसके माध्यम से व्यक्ति अपने आसपास के समाज, उसकी परंपराओं, विश्वासों, मूल्यों, और रीतियों को समझता है।

**बहुभाषीय शिक्षा और संस्कृति तथा समाज की समझ:**

बहुभाषीय शिक्षा प्रणाली में छात्रों को दो या दो से अधिक भाषाओं में शिक्षा दी जाती है। यह न केवल भाषा कौशल को बढ़ावा देती है, बल्कि छात्रों को विभिन्न संस्कृतियों और समाजों के प्रति जागरूक भी बनाती है। जब छात्र विभिन्न भाषाओं को सीखते हैं, तो वे उन भाषाओं से जुड़े सांस्कृतिक संदर्भों, परंपराओं और सामाजिक व्यवहारों को भी समझते हैं। यह उन्हें अन्य संस्कृतियों के प्रति सहिष्णु और समझदार बनाता है।

**संस्कृति और समाज की समझ के लाभ:**

1. **सांस्कृतिक संवेदनशीलता:** जब छात्र विभिन्न भाषाओं को सीखते हैं, तो वे उन संस्कृतियों को भी समझते हैं जिनसे ये भाषाएँ जुड़ी होती हैं। इससे उनकी सांस्कृतिक संवेदनशीलता बढ़ती है और वे अन्य संस्कृतियों के प्रति अधिक खुले और स्वीकार्य होते हैं।
2. **सामाजिक समझ में वृद्धि:** बहुभाषीय शिक्षा से छात्रों की सामाजिक समझ में वृद्धि होती है, क्योंकि उन्हें विभिन्न समाजों, उनके व्यवहार, विश्वासों और परंपराओं के बारे में जानकारी मिलती है। इससे वे सामाजिक विविधता को समझने में सक्षम होते हैं और विभिन्न सामाजिक समूहों के साथ बेहतर तरीके से संवाद कर पाते हैं।
3. **आंतर-संस्कृतिक संवाद:** बहुभाषीय शिक्षा छात्रों को विभिन्न सांस्कृतिक और सामाजिक संदर्भों के बीच संवाद स्थापित करने की क्षमता प्रदान करती है। वे न केवल अपनी मातृभाषा में, बल्कि दूसरी भाषाओं में भी प्रभावी संवाद कर सकते हैं, जिससे वे विभिन्न समुदायों के बीच पुल का काम करते हैं।
4. **सहिष्णुता और समावेशन:** बहुभाषीय शिक्षा से छात्रों में सहिष्णुता की भावना विकसित होती है, क्योंकि वे अलग-अलग संस्कृति और समाजों को समझने और उनके साथ संवाद करने में सक्षम होते हैं। यह उन्हें सामूहिक और समावेशी दृष्टिकोण से सोचने के लिए प्रेरित करता है।

**बहुभाषीय शिक्षा और रोजगार के अवसर:**

1. **वैश्विक व्यवसाय और व्यापार:** वैश्विक स्तर पर व्यापार और व्यापारिक संबंधों के बढ़ते नेटवर्क के कारण, बहुभाषीय लोगों की मांग लगातार बढ़ रही है। कंपनियाँ उन कर्मचारियों को प्राथमिकता देती हैं, जो विभिन्न भाषाओं में संवाद कर सकते हैं, जिससे उनका व्यापार कई देशों में फैल सकता है। उदाहरण के लिए, विदेशी ग्राहकों, साझेदारों, और निवेशकों के साथ संवाद करने के लिए बहुभाषीय कर्मचारियों की आवश्यकता होती है।
2. **प्रौद्योगिकी और डिजिटल क्षेत्र:** डिजिटल दुनिया में, इंटरनेट और तकनीकी प्लेटफॉर्म पर वैश्विक संवाद तेजी से बढ़ रहा है। बहुभाषीय व्यक्ति को वेब डेवलपमेंट, डिजिटल मार्केटिंग, और सोशल मीडिया प्रबंधन जैसे क्षेत्रों में अधिक अवसर मिलते हैं, जहाँ विभिन्न भाषाओं में सामग्री तैयार करना और ग्राहकों से संवाद करना आवश्यक है।
3. **शिक्षा और अकादमिक क्षेत्र:** बहुभाषीय शिक्षक और शोधकर्ता अंतरराष्ट्रीय विश्वविद्यालयों और शिक्षा संस्थानों में काम कर सकते हैं। इस क्षेत्र में बहुभाषीय ज्ञान का लाभ होता है, क्योंकि विभिन्न भाषाओं में पढ़ाई और शोध कार्य करने की आवश्यकता होती है, विशेष रूप से बहु-देशीय शिक्षा कार्यक्रमों और सांस्कृतिक आदान-प्रदान में।

● **बहुभाषीय शिक्षा और भाषाई कौशल का विकास**

जब छात्र बहुभाषीय शिक्षा प्राप्त करते हैं, तो वे दो या दो से अधिक भाषाओं को सीखते हैं। इससे उनके भाषाई कौशल में वृद्धि होती है क्योंकि वे एक ही समय में विभिन्न भाषाओं का उपयोग करते हैं, जिनसे उनके संवाद कौशल में सुधार होता है। बहुभाषीय

शिक्षा के माध्यम से छात्र विभिन्न भाषाओं में सोचने, बोलने और लिखने में सक्षम होते हैं, जो उन्हें अधिक प्रभावी संप्रेषणकर्ता बनाता है।

● **भाषाई कौशल के विकास में बहुभाषीय शिक्षा के लाभ:**

1. **संचार कौशल में सुधार:** जब छात्र विभिन्न भाषाओं में शिक्षित होते हैं, तो उनके पास कई भाषाओं का संवादात्मक कौशल होता है। इससे उन्हें दूसरों के साथ अधिक प्रभावी और आत्मविश्वास से संवाद करने की क्षमता मिलती है। बहुभाषीय लोग अधिक स्पष्ट, प्रभावशाली और विविध तरीकों से संवाद करने में सक्षम होते हैं।
2. **वाचन और लेखन कौशल में सुधार:** बहुभाषीय शिक्षा से छात्र न केवल बोलने में, बल्कि पढ़ने और लिखने में भी दक्ष होते हैं। वे दूसरी भाषा में साहित्य, लेख, समाचार, या अन्य सामग्री को समझने और लिखने में सक्षम होते हैं, जिससे उनकी वाचन और लेखन क्षमताएँ मजबूत होती हैं।
3. **ध्यान केंद्रित करने की क्षमता:** बहुभाषीय शिक्षा छात्रों को विभिन्न भाषाओं में मानसिक रूप से स्विच करने की आदत डालती है, जिससे उनकी ध्यान केंद्रित करने की क्षमता में सुधार होता है। यह बच्चों को एक भाषा से दूसरी भाषा में स्थानांतरित करने में मदद करता है, जो मानसिक लचीलापन बढ़ाता है।
4. **भाषाई विविधता का सम्मान:** बहुभाषीय शिक्षा से छात्र न केवल भाषाओं को सीखते हैं, बल्कि वे विभिन्न भाषाओं के सांस्कृतिक संदर्भों और मूल्यों को भी समझते हैं। इससे उनमें भाषाई विविधता और सम्मान की भावना विकसित होती है, जो सामाजिक संबंधों में मदद करती है।
5. **स्मृति में सुधार:** बहुभाषीय शिक्षा से छात्रों की स्मृति प्रणाली भी मजबूत होती है। जब वे कई भाषाओं में संवाद करते हैं, तो उनकी जानकारी और तथ्यों को याद रखने की क्षमता में वृद्धि होती है। यह मस्तिष्क के विभिन्न हिस्सों को सक्रिय करता है, जो संज्ञानात्मक विकास को बढ़ावा देता है।

**नुकसान:**

**बहुभाषीय शिक्षा और शैक्षिक बोझ:**

बहुभाषीय शिक्षा प्रणाली में छात्रों को एक साथ दो या दो से अधिक भाषाओं में शिक्षा दी जाती है। इस प्रणाली का उद्देश्य छात्रों को भाषाई कौशल में दक्ष बनाना और उन्हें विभिन्न भाषाओं में संवाद करने के लिए तैयार करना है, लेकिन यह शैक्षिक बोझ का कारण भी बन सकता है। खासकर, अगर शिक्षण का तरीका उपयुक्त नहीं होता है या छात्रों से एक ही समय में कई भाषाओं में अध्ययन की अपेक्षाएँ की जाती हैं, तो इससे उनका शैक्षिक बोझ बढ़ सकता है।

**शैक्षिक बोझ के कारण:**

1. **अधिक भाषा कौशल का दबाव:** जब बच्चों को एक साथ कई भाषाओं में शिक्षा दी जाती है, तो उन्हें एक से अधिक भाषाओं में दक्ष होने के लिए बहुत अधिक प्रयास करना पड़ता है। इस प्रक्रिया में, छात्रों को अधिक समय और मानसिक ऊर्जा का निवेश करना पड़ता है, जो शैक्षिक बोझ का कारण बन सकता है।
2. **समय प्रबंधन की समस्या:** बहुभाषीय शिक्षा में कई विषयों और भाषाओं को समझने की आवश्यकता होती है, जिससे छात्रों को समय का बेहतर प्रबंधन करना मुश्किल हो सकता है। गृहकार्य, परियोजनाएँ, और अन्य शैक्षिक कार्यों के दबाव के कारण छात्रों पर अतिरिक्त बोझ पड़ता है।
3. **भाषाई भ्रम और संघर्ष:** छोटे बच्चों को एक साथ कई भाषाओं में शिक्षा प्राप्त करने पर भाषाई भ्रम हो सकता है। इस कारण उन्हें दोनों भाषाओं में शब्दावली, व्याकरण और उच्चारण में संघर्ष का सामना करना पड़ता है, जो मानसिक रूप से थकान और तनाव का कारण बन सकता है।
4. **संसाधनों की कमी:** सभी शैक्षिक संस्थानों में बहुभाषीय शिक्षा के लिए उपयुक्त संसाधन और प्रशिक्षित शिक्षक उपलब्ध नहीं होते हैं। इससे विद्यार्थियों को सही मार्गदर्शन नहीं मिल पाता, और उन्हें अधिक समय और प्रयास की आवश्यकता होती है, जिससे शैक्षिक बोझ और बढ़ सकता है।

### ● बहुभाषीय शिक्षा और भाषाई भ्रम

बहुभाषीय शिक्षा प्रणाली में, छात्रों को एक साथ कई भाषाओं में शिक्षा दी जाती है। यदि सही तरीके से मार्गदर्शन न किया जाए या उचित संसाधनों का अभाव हो, तो इससे छात्रों में भाषाई भ्रम उत्पन्न हो सकता है। विशेष रूप से छोटे बच्चों में यह स्थिति अधिक सामान्य होती है, क्योंकि उनका मस्तिष्क नए भाषाई डेटा को सही तरीके से प्रोसेस नहीं कर पाता। इसके परिणामस्वरूप, छात्र दोनों भाषाओं के शब्दों, वाक्य संरचना और उच्चारण में घबराहट महसूस कर सकते हैं।

**भाषाई भ्रम के कारण:**

1. **भाषाओं के बीच समानताएँ:** अगर दो भाषाएँ आपस में बहुत मिलती-जुलती हैं (जैसे हिंदी और उर्दू), तो छात्र दोनों भाषाओं के शब्दों और संरचनाओं को एक ही रूप में समझने की कोशिश कर सकते हैं, जिससे भ्रम पैदा होता है।
2. **विभिन्न व्याकरण संरचनाएँ:** विभिन्न भाषाओं में व्याकरण की संरचना अलग होती है। उदाहरण के लिए, इंग्लिश में वर्ड ऑर्डर “Subject + Verb + Object” होता है, जबकि हिंदी में यह “Subject + Object + Verb” होता है। इस प्रकार की संरचनात्मक भिन्नताएँ छात्रों के लिए भ्रम का कारण बन सकती हैं, खासकर जब वे दोनों भाषाओं का प्रयोग एक साथ करते हैं।
3. **उच्चारण में अंतर:** विभिन्न भाषाओं में उच्चारण की तकनीक अलग-अलग होती है। यदि एक बच्चे को एक साथ कई भाषाएँ सीखने के लिए कहा जाता है, तो उन्हें उच्चारण के भेदों को समझने में कठिनाई हो सकती है, जिससे भ्रम उत्पन्न होता है।
4. **शब्दावली का मिश्रण:** बच्चे अक्सर एक भाषा के शब्दों को दूसरी भाषा में मिलाकर बोल सकते हैं। उदाहरण के लिए, वे एक वाक्य में हिंदी और अंग्रेजी के शब्दों का मिश्रण कर सकते हैं (जैसे “हिंग्लिश” कहा जाता है)। इससे भाषाई भ्रम बढ़ सकता है, क्योंकि वे स्पष्ट रूप से दोनों भाषाओं के बीच सीमा तय नहीं कर पाते।
5. **शिक्षण का तरीका:** यदि बहुभाषीय शिक्षा को प्रभावी तरीके से नहीं लागू किया जाता, या यदि शिक्षक पर्याप्त रूप से प्रशिक्षित नहीं होते, तो इससे बच्चों में भाषाई भ्रम बढ़ सकता है। यदि बच्चे को एक ही समय में अधिक जानकारी दी जाती है और पर्याप्त अभ्यास नहीं मिलता, तो यह भ्रम को बढ़ाता है।

**बहुभाषीय शिक्षा और संसाधनों की कमी:**

जब बहुभाषीय शिक्षा प्रणाली को लागू किया जाता है, तो कई बार स्कूलों और शैक्षिक संस्थानों के पास पर्याप्त संसाधन नहीं होते, जो इस प्रणाली को प्रभावी ढंग से लागू करने में मदद कर सकें। यह संसाधनों की कमी शैक्षिक बोझ और भाषाई भ्रम जैसे समस्याओं को और बढ़ा सकती है।

**संसाधनों की कमी के प्रमुख कारण और प्रभाव:**

1. **अभ्यास करने के लिए उपयुक्त सामग्री का अभाव:** बहुभाषीय शिक्षा में छात्रों को अलग-अलग भाषाओं में अध्ययन करना होता है। यदि स्कूलों में विभिन्न भाषाओं के लिए उपयुक्त पुस्तकें, नोट्स, डिजिटल सामग्री, या अन्य संसाधन उपलब्ध नहीं होते, तो छात्रों को उन भाषाओं में प्रभावी ढंग से अध्ययन करने में कठिनाई होती है। इससे उनकी सीखने की प्रक्रिया प्रभावित हो सकती है।
2. **प्रशिक्षित शिक्षकों की कमी:** बहुभाषीय शिक्षा के लिए प्रशिक्षित शिक्षक की आवश्यकता होती है, जो न केवल विभिन्न भाषाओं में शिक्षा देने में सक्षम हों, बल्कि छात्रों को भाषा के विभिन्न पहलुओं जैसे उच्चारण, व्याकरण और वाक्य संरचना की गहरी समझ भी दे सकें। ऐसे प्रशिक्षित शिक्षकों की कमी से बहुभाषीय शिक्षा प्रणाली की प्रभावशीलता में कमी आ सकती है।
3. **भाषाई विविधता को समझने का अभाव:** बहुभाषीय शिक्षा में अक्सर विद्यार्थियों को कई भाषाओं और संस्कृतियों से गुजरना पड़ता है। यदि शिक्षकों के पास विभिन्न भाषाओं और सांस्कृतिक संदर्भों की समझ नहीं होती, तो वे छात्रों की ज़रूरतों के अनुरूप सही तरीके से मार्गदर्शन नहीं कर पाते। यह स्थिति शिक्षा की गुणवत्ता को प्रभावित करती है।

4. **तकनीकी संसाधनों का अभाव:** आजकल डिजिटल शिक्षा का महत्व बढ़ रहा है, और बहुभाषीय शिक्षा में भी तकनीकी उपकरणों जैसे कि लैपटॉप, कंप्यूटर, ऑनलाइन शिक्षा प्लेटफॉर्म और भाषा सीखने के ऐप्स का उपयोग आवश्यक हो सकता है। यदि इन संसाधनों की कमी होती है, तो छात्रों को उचित अध्ययन और अभ्यास के अवसर नहीं मिल पाते हैं।

**निष्कर्ष:**

बहुभाषीय शिक्षा प्रणाली छात्रों के संज्ञानात्मक और भाषाई विकास के लिए फायदेमंद है, क्योंकि यह भाषा कौशल, सांस्कृतिक समझ, और रोजगार के अवसरों को बढ़ावा देती है। हालांकि, इसे लागू करते समय शैक्षिक बोझ, भाषाई भ्रम, संसाधनों की कमी और भाषाई असंतुलन जैसे मुद्दे उत्पन्न हो सकते हैं। इसलिए, इसे सही तरीके से लागू करने के लिए उचित संसाधनों और प्रशिक्षित शिक्षकों की आवश्यकता होती है।

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## માધ્યમિક શાળાના વિદ્યાર્થીઓની આત્મ-સ્વીકૃતિનો અભ્યાસ

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### સારાંશ

જીવનને સમૃદ્ધ બનાવવામાં શિક્ષણ એ એક મહત્વપૂર્ણ વિભાગ છે. આજના ભૌતિક સુખ-સમૃદ્ધિના યુગમાં જે દેશ કે સમાજ વિકસિત છે, તેની પાછળનું મુખ્ય કારણ શૈક્ષણિક ક્ષેત્રે પ્રગતિ છે. શિક્ષણનો ઉદ્દેશ શો છે? આ પ્રશ્નનો ઉત્તર આપવા પ્રયત્ન કરીએ તો વિદ્યાર્થીમાં જિજ્ઞાસા, કલ્પનાશક્તિ, રચનાત્મકતા વિકસાવે તે જ. પેસ્ટોલોજીના મતે ‘શિક્ષણ એ મનુષ્યમાં રહેલી શક્તિઓનો સ્વાભાવિક સામજિકપૂર્ણ તથા પ્રગતિશીલ વિકાસ છે.’ શાળામાં શિક્ષકે વિદ્યાર્થીઓના સ્વ-વિકાસ માટે વિદ્યાર્થીઓ સાથે સાયુજ્ય સ્થાપી તેનામાં વિચાર કૌશલ્યો વિકસાવવા માટે. વિદ્યાર્થીઓ પોતાનો વિકાસ કરવા માટે ઉત્સાહી બને અને વિદ્યાર્થીઓની અંદર પડેલી વિવિધ શક્તિઓનો વિકાસ થાય. આમ, વિદ્યાર્થીઓમાં રહેલી વિવિધ શક્તિઓને વિદ્યાર્થી સ્વીકારે તો તે વિદ્યાર્થીઓમાં આત્મ સ્વીકૃતિની ભાવના છે તેવું કહી શકાય. એસ. બી. કક્કર (૧૯૮૪) ના મતે ‘આત્મ સ્વીકૃતિ એટલે નબળાઈઓ અને ખામીઓ હોવાં છતાં પોતાની સ્વીકૃતિ.’ આત્મસ્વીકૃતિ એટલે ‘વ્યક્તિને પોતાની સાથે સંતોષ કે ખુશી અને સારી માનસિક તંદુરસ્તી માટે તેને જરૂરી ગણવામાં આવ્યો છે પોતાની જાતનો સ્વીકાર વગેરેનો સમાવેશ થાય છે. આમ, માધ્યમિક શાળાના વિદ્યાર્થીઓની આત્મ સ્વીકૃતિ જાણવા માટે સંશોધકે આ પ્રકારનું સંશોધન હાથ ધરવાનો નમ્ર પ્રયાસ કરેલ. પ્રસ્તુત અભ્યાસમાં સંશોધક દ્વારા પરંત્ર યલ તરીકે આત્મ સ્વીકૃતિને સ્વીકારવામાં આવ્યો હતો. માધ્યમિક શાળાના વિદ્યાર્થીઓની આત્મ સ્વીકૃતિના અભિપ્રાયો લેવાયા હોવાથી આ અભ્યાસના મુખ્યત્વે બે ક્ષેત્રોને સ્પર્શતા હતાં. જે નીચે પ્રમાણે હતા. (૧) માધ્યમિક શિક્ષણ અને (૨) શિક્ષણનું મનોવિજ્ઞાન.

### ૧. પ્રસ્તાવના

જીવનને સમૃદ્ધ બનાવવામાં શિક્ષણ એ એક મહત્વપૂર્ણ વિભાગ છે. આજના ભૌતિક સુખ-સમૃદ્ધિના યુગમાં જે દેશ કે સમાજ વિકસિત છે, તેની પાછળનું મુખ્ય કારણ શૈક્ષણિક ક્ષેત્રે પ્રગતિ છે. શિક્ષણનો ઉદ્દેશ શો છે? આ પ્રશ્નનો ઉત્તર આપવા પ્રયત્ન કરીએ તો વિદ્યાર્થીમાં જિજ્ઞાસા, કલ્પનાશક્તિ, રચનાત્મકતા વિકસાવે તે જ. પેસ્ટોલોજીના મતે ‘શિક્ષણ એ મનુષ્યમાં રહેલી શક્તિઓનો સ્વાભાવિક સામજિકપૂર્ણ તથા પ્રગતિશીલ વિકાસ છે.’ (ત્યાગી, જી. ડી ૨૦૦૬ દ્વારા ઉદ્ધૃત)

વિદ્યાર્થી જીવનના દરેક તબક્કે કંઈક ને કંઈક નવું નવું શીખે છે. આમ, તેઓ વિકાસ થતાં તેમાં રહેલી શક્તિઓનો વિકાસ પણ થાય છે. વિદ્યાર્થીમાં કઈ-કઈ શક્તિ રહેલી છે? એ જાણવું ખૂબ જ કઠિન છે. વિદ્યાર્થીને પોતાના સ્વ વિશેનો ખ્યાલ જન્મથી હોતો નથી. પરંતુ વિવિધ શક્તિઓ વિકાસ થતા તેના સ્વ-વિકાસનો ખ્યાલ આવે છે. શાળામાં શિક્ષકે વિદ્યાર્થીઓના સ્વ-વિકાસ માટે વિદ્યાર્થીઓ સાથે સાયુજ્ય સ્થાપી તેનામાં વિચાર કૌશલ્યો વિકસાવવા જોઈએ. જેથી વિદ્યાર્થીઓ પોતાનો વિકાસ કરવા માટે ઉત્સાહી બને અને વિદ્યાર્થીઓની અંદર પડેલી વિવિધ શક્તિઓનો વિકાસ થાય. આમ, વિદ્યાર્થીઓમાં રહેલી વિવિધ શક્તિઓને વિદ્યાર્થી સ્વીકારે તો તે વિદ્યાર્થીઓમાં આત્મ સ્વીકૃતિની ભાવના છે તેવું કહી શકાય. એસ. બી. કક્કર (૧૯૮૪) ના મતે ‘આત્મ સ્વીકૃતિ એટલે નબળાઈઓ અને ખામીઓ હોવાં છતાં પોતાની સ્વીકૃતિ.’ આત્મસ્વીકૃતિ એટલે ‘વ્યક્તિને પોતાની સાથે સંતોષ કે ખુશી અને સારી માનસિક તંદુરસ્તી માટે તેને જરૂરી ગણવામાં આવ્યો છે. તેનાથી વ્યક્તિને પોતાની લાગણી તે કોઈ અજોડ રીતે લાયક છે.’ (ચૌધરી, ૨૦૦૮ દ્વારા ઉદ્ધૃત) વિદ્યાર્થીઓની આત્મ સ્વીકૃતિ પર ઘણાં પરિબળો અસર કરે છે. જેવાં કે

બુદ્ધિ, આગળ પડતો ભાગ લેવો, આત્મવિશ્વાસ, રૂઢિચુસ્ત રીતરિવાજોનો સ્વીકાર, કામની બાબતમાં સક્રિયતા, પોતાની જાતનો સ્વીકાર વગેરેનો સમાવેશ થાય છે. આમ, માધ્યમિક શાળાના વિદ્યાર્થીઓની આત્મ સ્વીકૃતિ જાણવા માટે સંશોધકે આ પ્રકારનું સંશોધન હાથ ધરવાનો નમ્ર પ્રયાસ કર્યો હતો.

પ્રસ્તુત પ્રકરણમાં સમસ્યા કથન, અભ્યાસના હેતુઓ, અભ્યાસની ઉત્કલ્પનાઓ, અભ્યાસમાં સમાવિષ્ટ ચલો, શબ્દોની વ્યવહારુ વ્યાખ્યા, સંશોધનક્ષેત્ર, સંશોધન પ્રકાર, અભ્યાસનો વ્યાપ, અભ્યાસનું ઔચિત્ય, અભ્યાસની મર્યાદાઓ અને હવે પછીના પ્રકરણોની રૂપરેખાનો ઉલ્લેખ કરવામાં આવ્યો છે.

## ૨ સમસ્યા કથન

પ્રસ્તુત સંશોધનમાં સંશોધકે નીચે પ્રમાણેનું શીર્ષક શબ્દબદ્ધ કરવાનો પ્રયાસ કર્યો હતો.

રાજકોટ જિલ્લાની માધ્યમિક શાળાના વિદ્યાર્થીઓની આત્મ સ્વીકૃતિનો અભ્યાસ

પ્રસ્તુત અભ્યાસમાં રાજકોટ જિલ્લાની માધ્યમિક શાળાના ઉદ્દર વિદ્યાર્થીઓનો નમૂનામાં સમાવેશ કરવામાં આવ્યો હતો. નમૂનો સ્તરીકૃત યાદીક ઝૂમખા નમૂના પસંદગીની રીતે પસંદ કરવામાં આવ્યો હતો. પ્રસ્તુત અભ્યાસમાં સંશોધકે આત્મ સ્વીકૃતિ માપદંડના આધારે મેળવેલ માહિતીનું અંકશાસ્ત્રીય પૃથક્કરણ કર્યું હતું. પ્રસ્તુત અભ્યાસમાં સ્વતંત્ર ચલ : જાતીયતા (કુમાર અને કન્યા), સામાજિક સંવર્ગ (અનામત અને બિનઅનામત) શાળા વિસ્તાર (ગ્રામ્ય અને શહેરી) અને પરતંત્ર ચલ તરીકે આત્મ સ્વીકૃતિનો સમાવેશ કરવામાં આવ્યો હતો.

## ૩ અભ્યાસના હેતુઓ

પ્રસ્તુત અભ્યાસમાં સંશોધકે નીચે પ્રમાણેના હેતુઓ સ્પષ્ટ કર્યા હતા :

૧. માધ્યમિક શાળાના વિદ્યાર્થીઓની આત્મ સ્વીકૃતિ જાણવી.
૨. માધ્યમિક શાળાના વિદ્યાર્થીઓની આત્મ સ્વીકૃતિ જાણવા માટે આત્મ સ્વીકૃતિ માપદંડની રચના કરવી.
૩. માધ્યમિક શાળાના વિદ્યાર્થીઓ માટે રચાયેલાં આત્મ સ્વીકૃતિ માપદંડની વિશ્વસનીયતા અને યથાર્થતા જાણવી.
૪. માધ્યમિક શાળાના વિદ્યાર્થીઓએ આત્મ સ્વીકૃતિ માપદંડ પર મેળવેલાં સરેરાશાંકો અને તેમની જાતીયતા (કુમાર અને કન્યા) સંદર્ભ તફાવત જાણવો.
૫. માધ્યમિક શાળાના વિદ્યાર્થીઓએ આત્મ સ્વીકૃતિ માપદંડ પર મેળવેલાં સરેરાશાંકો અને તેમનાં સામાજિક સંવર્ગ (અનામત અને બિનઅનામત) સંદર્ભ તફાવત જાણવો.
૬. માધ્યમિક શાળાના વિદ્યાર્થીઓએ આત્મ સ્વીકૃતિ માપદંડ પર મેળવેલાં સરેરાશાંકો અને શાળા વિસ્તાર (ગ્રામ્ય અને શહેરી) સંદર્ભ તફાવત જાણવો.

## ૪. અભ્યાસની ઉત્કલ્પનાઓ

પ્રસ્તુત અભ્યાસમાં સંશોધકે નીચે પ્રમાણે ઉત્કલ્પનાઓની રચના કરી હતી :

૧. માધ્યમિક શાળાના કુમારો અને કન્યાઓના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.
૨. માધ્યમિક શાળાના અનામત અને બિનઅનામત વિદ્યાર્થીઓના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.
૩. ગ્રામ્ય અને શહેરી વિસ્તારની માધ્યમિક શાળાઓના વિદ્યાર્થીઓના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.
૪. ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાના અનામત કુમારો અને કન્યાઓના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.

૫. ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાના બિનઅનામત કુમારો અને કન્યાઓના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.
૬. શહેરી વિસ્તારની માધ્યમિક શાળાના અનામત કુમારો અને કન્યાઓના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.
૭. શહેરી વિસ્તારની માધ્યમિક શાળાના બિનઅનામત કુમારો અને કન્યાઓના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.
૮. ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાના અનામત અને બિનઅનામત કન્યાઓના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.
૯. માધ્યમિક શાળાના અનામત અને બિનઅનામત કુમારોના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.
૧૦. શહેરી વિસ્તારની માધ્યમિક શાળાના અનામત અને બિનઅનામત કન્યાઓના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.
૧૧. શહેરી વિસ્તારની માધ્યમિક શાળાના અનામત અને બિનઅનામત કુમારોના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.
૧૨. શહેરી વિસ્તારની માધ્યમિક શાળાના અનામત કુમારોના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.
૧૩. શહેરી અને ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાના બિનઅનામત કુમારોના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.
૧૫. શહેરી અને ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાની અનામત કન્યાઓના આત્મ સ્વીકૃતિ માપદંડ પરના સરેરાશાંકો વચ્ચે સાર્થક તફાવત નહીં હોય.

**૫. અભ્યાસમાં સમાવિષ્ટ ચલો**

પ્રસ્તુત અભ્યાસમાં સંશોધકે બે પ્રકારના ચલોની ઓળખ કરી હતી, જે નીચે પ્રમાણે છે.

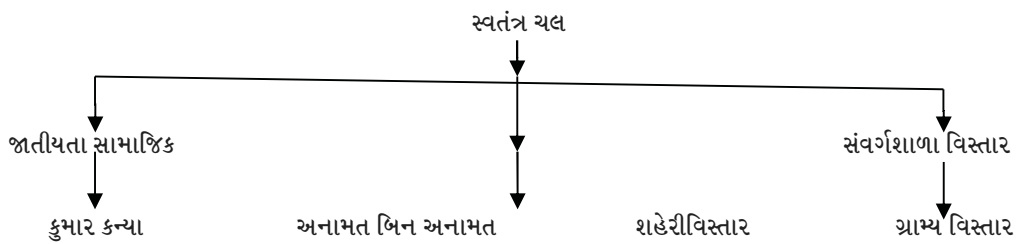
૫.૧ સ્વતંત્ર ચલ. પ્રસ્તુત અભ્યાસમાં સંશોધકે ત્રણ સ્વતંત્ર ચલને આવરી લીધા હતા.

૧. જાતીયતા (કુમાર અને કન્યા)

૨. સામાજિક સંવર્ગ (અનામત અને બિનઅનામત)

૩. શાળાનો વિસ્તાર (ગ્રામ્ય અને શહેરી)

પ્રસ્તુત અભ્યાસના સ્વતંત્ર ચલની ઓળખ આકૃતિ-૧.૧ માં રજૂ કરેલ છે.





૫.૨ પરતંત્ર ચલ. પ્રસ્તુત અભ્યાસમાં સંશોધક દ્વારા પરતંત્ર ચલ તરીકે આત્મ સ્વીકૃતિને સ્વીકારવામાં આવ્યો હતો.

અહીં સ્વતંત્ર ચલની અસર પરતંત્ર ચલ પર તપાસાય છે. જેની આકૃતિ ૧.૨ માં દર્શાવેલ છે.

સ્વતંત્ર ચલની કક્ષાઓ પરતંત્ર ચલ



જાતીયતાકુમાર કન્યાઆત્મ સ્વીકૃતિ

સામાજિક સંવર્ગઅનામત બિનઅનામતઆત્મ સ્વીકૃતિ

શાળા વિસ્તારશહેરી વિસ્તાર ગ્રામ્ય વિસ્તારઆત્મ સ્વીકૃતિ

આકૃતિ-૧.૨ : સ્વતંત્ર ચલની કક્ષાઓની પરતંત્ર ચલ પર અસર

૬.પદોની વ્યવહારુ વ્યાખ્યા

પ્રસ્તુત અભ્યાસમાં મહત્વના પદોની વ્યવહારુ વ્યાખ્યાઓ નીચે પ્રમાણે આપવાનો પ્રયાસ કર્યો હતો.

આત્મ સ્વીકૃતિ. આત્મ સ્વીકૃતિ માપદંડ પર માધ્યમિક શાળાના વિદ્યાર્થીઓએ આપેલ પ્રતિચારો પર મેળવેલાં કુલ પ્રાપ્તિઓ.

૭.સંશોધન ક્ષેત્ર

પ્રસ્તુત અભ્યાસમાં માધ્યમિક શાળાના વિદ્યાર્થીઓની આત્મ સ્વીકૃતિના અભિપ્રાયો લેવાયા હોવાથી આ અભ્યાસના મુખ્યત્વે બે ક્ષેત્રોને સ્પર્શતા હતાં. જે નીચે પ્રમાણે હતા.

(૧) માધ્યમિક શિક્ષણ અને (૨) શિક્ષણનું મનોવિજ્ઞાન.

૮.સંશોધન પ્રકાર

પ્રસ્તુત સંશોધન ધ્યેયના આધારિત સંશોધનના પ્રકાર પૈકી વ્યવહારિક સંશોધનમાં સમાવેશ થયો હતો.

પ્રસ્તુત અભ્યાસ સંશોધનના પ્રકાર અંતર્ગત અમલીકરણના આધારે સંખ્યાત્મક સંશોધનને સ્પર્શે છે.

૯.અભ્યાસનું મહત્વ

પ્રસ્તુત સંશોધનમાં સંશોધકે અભ્યાસનું ઔચિત્ય નીચે પ્રમાણે દર્શાવ્યું છે.

૧. પ્રસ્તુત અભ્યાસથી રાજકોટ જિલ્લાની માધ્યમિક શાળાના વિદ્યાર્થીઓની આત્મ સ્વીકૃતિ જાણી શકાશે.

૨. સમયાંતરે આત્મ સ્વીકૃતિ માપવા આ માપદંડ ઉપયોગી નીવડશે.

૩. આ અભ્યાસથી રાજકોટ જિલ્લાની માધ્યમિક શાળાના વિદ્યાર્થીઓની આત્મ સ્વીકૃતિ અને તેમના જાતિભેદ (કુમાર અને કન્યા) વચ્ચેનો તફાવત જાણી શકાશે.

૪. આ અભ્યાસથી રાજકોટ જિલ્લાની માધ્યમિક શાળાના વિદ્યાર્થીઓની આત્મ સ્વીકૃતિ અને તેમના સામાજિક સંવર્ગ (અનામત અને બિનઅનામત) વચ્ચેનો તફાવત જાણી શકાશે.

૫. આ અભ્યાસથી રાજકોટ જિલ્લાની માધ્યમિક શાળાના વિદ્યાર્થીઓની આત્મ સ્વીકૃતિ અને તેમના શાળા વિસ્તાર (ગ્રામ્ય અને શહેરી) વચ્ચેનો તફાવત જાણી શકાશે.

૧૦. વ્યાપવિશ્વ

પ્રસ્તુત અભ્યાસમાં વ્યાપવિશ્વ તરીકે રાજકોટ જિલ્લાની માધ્યમિક શાળાના શૈક્ષણિક વર્ષ ૨૦૧૮-૨૦૧૯ના વિદ્યાર્થીઓનો સમાવેશ કરવામાં આવ્યો હતો. પ્રસ્તુત અભ્યાસમાં માધ્યમિક શાળાનો જ સમાવેશ કરવામાં આવ્યો હતો. આમ, પ્રસ્તુત સંશોધનમાં વ્યાપવિશ્વને નીચે પ્રમાણે વ્યાખ્યાયિત કરવામાં આવ્યું છે.

૧. વિસ્તાર : રાજકોટ જિલ્લો

૨. સમયગાળો : શૈક્ષણિક વર્ષ : ૨૦૧૮-૨૦૧૯

૩. માધ્યમ : ગુજરાતી માધ્યમ

**૪. સ્તર માધ્યમિક શાળા :**

૫. પાત્રો : માધ્યમિક શાળાના વિદ્યાર્થીઓ કુમાર કન્યા

**૧૧ નમૂના પસંદગી**

પ્રસ્તુત અભ્યાસમાં સંશોધકે વ્યાપવિશ્વ પૈકી રાજકોટ જિલ્લાની માધ્યમિક શાળાઓમાંથી વિસ્તાર સંદર્ભ સ્તરીકૃત નમૂના પસંદગી દ્વારા ચાર માધ્યમિક શાળાને નમૂનાની શાળાઓ તરીકે સ્વીકારવામાં આવી હતી. ત્યારબાદ આ ચાર માધ્યમિક શાળાઓ પૈકી યાદચ્છિક ગૂમખાં નમૂના પસંદગી દ્વારા ઉદર વિદ્યાર્થીઓને નમૂનામાં સમાવિષ્ટ કરવામાં આવ્યો હતો. આમ, વ્યાપવિશ્વમાંથી સ્તરીકૃત યાદચ્છિક ગૂમખાં નમૂના પસંદગી દ્વારા પાત્રોને નમૂના તરીકે પસંદ કરવામાં આવ્યાં હતાં. પ્રસ્તુત અભ્યાસમાં જ માધ્યમિક શાળાના વિદ્યાર્થીઓ પર અભ્યાસ હાથ ધર્યો હતો. જે પૈકી ૧૮૦ કુમારો અને ૧૭૨ કન્યાઓનો સમાવેશ કરવામાં આવ્યો હતો. તેમજ ૧૫૨ અનામત વિદ્યાર્થીઓ અને ૨૧૦ બિન અનામત વિદ્યાર્થીઓનો સમાવેશ કરવામાં આવ્યો હતો. આ ઉપરાંત ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાના ૨૦૮ વિદ્યાર્થીઓ અને શહેરી વિસ્તારની માધ્યમિક શાળાના ૧૫૩ વિદ્યાર્થીઓનો સમાવેશ કરવામાં આવ્યો હતો. આમ, પ્રસ્તુત અભ્યાસમાં માધ્યમિક શાળાના ઉદર વિદ્યાર્થીઓ નમૂના તરીકે સ્વીકારાયા હતાં.

**૧૨ સંશોધન પદ્ધતિ**

સંશોધન પદ્ધતિ સંદર્ભે પ્રસ્તુત સંશોધન વર્ણનાત્મક સંશોધન પદ્ધતિ અંતર્ગત સર્વેક્ષણ પદ્ધતિમાં સ્પર્શતી હતી.

**૧૩ ઉપકરણ**

પ્રસ્તુત અભ્યાસમાં સંશોધક દ્વારા માધ્યમિક શાળાઓના વિદ્યાર્થીઓની આત્મ સ્વીકૃતિ જાણવા બુદ્ધિ, સ્વાતંત્ર્ય, ચિંતન, કાર્ય કરવા માટેની શક્તિ, આગળ પડતો ભાગ લેવો, આત્મવિશ્વાસ, રૂઢિચુસ્ત રીત રિવાજોનો સ્વીકાર, કામની બાબતમાં સક્રિયતા, પોતાની જાતને સ્વીકારવી જેવા ઘટકો આધારિત આત્મ સ્વીકૃતિ માપદંડની રચના કરવાનો પ્રયાસ કરવામાં આવ્યો હતો.

**૧૪. માહિતી એકત્રીકરણ**

અભ્યાસના હેતુઓ સિદ્ધ કરવા માટે સંશોધક દ્વારા નમૂના તરીકે પસંદ કરેલી રાજકોટ જિલ્લાની માધ્યમિક શાળાના વિદ્યાર્થીઓ પાસેથી માહિતી એકત્રિત કરવામાં આવી હતી.

પ્રસ્તુત અભ્યાસમાં સંશોધકે ત્રણ વખત માહિતી એકત્રિત કરી હતી. જેમાં પ્રાથમિક પૂર્વ પૂર્વેક્ષણ, દ્વિતીય પૂર્વ પૂર્વેક્ષણ અને અંતિમ પૂર્વેક્ષણનો સમાવેશ કરવામાં આવ્યો હતો. આ માટે જે તે માધ્યમિક શાળાઓના આચાર્યશ્રી પાસેથી વિદ્યાર્થીઓના પ્રતિચારો લેવા માટે મંજૂરી મેળવવામાં આવી હતી. મંજૂરી મેળવ્યાં બાદ સંશોધક નિયત સમયે વિદ્યાર્થીઓ પાસેથી પ્રતિચાર મેળવ્યાં હતાં. સંશોધકે વિદ્યાર્થીઓને સ્વચિત આત્મ સ્વીકૃતિ માપદંડની ટૂંકી સમજૂતી આપ્યાં બાદ તે માપદંડ પર કેવી રીતે પ્રતિચાર આપવો ? તે સમજ આપી હતી. આત્મ સ્વીકૃતિ માપદંડના ત્રણેય પૂર્વેક્ષણોની પૂરવણી માટે ૩૦-૩૦ મિનિટનો સમય ફાળવવામાં આવ્યો હતો.

**૧૫ માહિતીનું ગુણાંકન**

પ્રસ્તુત સંશોધનમાં વલણમાપદંડ દ્વારા માહિતીનું ગુણાંકન દર્શાવેલ પદ્ધતિ અનુસાર પ્રયોજક દ્વારા થયેલ હતું. પ્રસ્તુત સંશોધન કાર્ય માટે વલણમાપદંડની સંરચના લિકર્ટ પદ્ધતિ અનુસાર કરવામાં આવી હતી. તેની પ્રસ્તુત વલણમાપદંડમાં પ્રતિચાર આપવા માટે પાંચ વિકલ્પો આપવામાં આવ્યા હતાં. જે આ પ્રમાણે છે.

(૧) સંપૂર્ણ સહમત(૨) સહમત(૩) તટસ્થ(૪) અસહમત(૫) સંપૂર્ણ અસહમત

આ પ્રમાણે વિકલ્પો પસંદ કરવામાં આવ્યા હતાં. પ્રસ્તુત વલણમાપદંડનું લિકર્ટ પદ્ધતિ અનુસાર પંચબિંદુ સ્કેલ પ્રમાણે ગુણાંકન કરવામાં આવ્યું હતું. આ પદ્ધતિ મુજબ બે મુખ્ય પ્રકારના વિધાનો પસંદ કરવામાં આવે છે. એક ધનાત્મક પ્રકારના

વિધાનો અને ઋણાત્મક પ્રકારનાં વિધાનો ધનાત્મક પ્રકારના વિધાનો માટેનો ભારાંક ૫, ૪, ૩, ૨ અને ૧ તથા ઋણાત્મક પ્રકારના વિધાનો માટેના ભારાંક ૧, ૨, ૩, ૪ અને ૫ એમ દરેક વિધાનનો ગુણભાર આપવામાં આવેલ હતો.

દરેક પાત્રનું આ રીતે ગુણાંકન કરી તેના કુલ વલણાંક નક્કી કરવામાં આવ્યા હતા અને જેના આધારે તેની ગણતરી કરવામાં આવી હતી.

#### ૧૬ પ્રાપ્ત માહિતી

પ્રસ્તુત અભ્યાસમાં માહિતી એકત્રીકરણ દરમિયાન સ્વતંત્ર ચલને ધ્યાનમાં લેતાં આ મુજબ માહિતી પ્રાપ્ત થઈ હતી :

૧. રાજકોટ જિલ્લાની માધ્યમિક શાળાઓના ૩૬૨ વિદ્યાર્થીઓ પાસેથી માહિતી પ્રાપ્ત થઈ હતી
૨. જેમાં માધ્યમિક શાળાના ૧૮૦ કુમારો અને ૧૭૨ કન્યાઓ પાસેથી માહિતી પ્રાપ્ત થઈ હતી.
૩. જેમાં માધ્યમિક શાળાના ૧૫૨ અનામત વિદ્યાર્થીઓ અને ૨૧૦ બિનઅનામત વિદ્યાર્થીઓ પાસેથી માહિતી પ્રાપ્ત થઈ હતી.
૪. જેમાં ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાના ૨૦૮ વિદ્યાર્થીઓના અને શહેરી વિસ્તારની માધ્યમિક શાળાના ૧૫૩ વિદ્યાર્થીઓ પાસેથી માહિતી પ્રાપ્ત થઈ હતી.

#### ૧૭ માહિતી પૃથક્કરણ

આત્મ સ્વીકૃતિ માપદંડ પર માહિતી એકત્રિત કર્યા બાદ સંશોધક તે માહિતીનું વિશ્લેષણ કર્યું હતું. આ માટે આત્મ સ્વીકૃતિ માપદંડની કલમોનું પૃથક્કરણ કરવામાં આવ્યું હતું. જેમાં સરળતા મૂલ્ય અને ભેદપરબક્ષમતા મૂલ્યની ગણતરી કરવામાં આવી હતી. આત્મ સ્વીકૃતિ માપદંડની વિશ્વસનીયતા અને યથાર્થતા શોધવામાં આવી હતી.

પ્રસ્તુત અભ્યાસના ચલો: જાતીયતા, સામાજિક સંવર્ગ અને શાળા વિસ્તાર વચ્ચે પ્રાપ્ત થયેલાં પ્રાપ્તિઓની સરાસરીના તફાવતની સાર્થકતા તપાસવા માટે ક્રાંતિક ગુણોત્તર (T- Ratio) શોધવામાં આવ્યો હતો. T-Ratio દ્વારા ઉત્કલ્પનાઓની ચકાસણી કરી તેનું અર્થઘટન કરવામાં આવ્યું હતું. જરૂર જણાય ત્યાં આલેખાત્મક રજૂઆત કરી હતી. આ માટે કમ્પ્યુટર પ્રોગ્રામ SPSS નો ઉપયોગ કરવામાં આવ્યો હતો.

#### ૧૮ અભ્યાસના તારણો

પ્રસ્તુત સંશોધનમાં સંશોધકે અભ્યાસના હેતુઓ પ્રશ્નો અને ઉત્કલ્પનાઓની ચકાસણી કર્યા બાદ અભ્યાસના તારણો તારવવાનો પ્રયાસ કર્યો હતો. જે નીચે પ્રમાણે છે.

૧. આત્મ-સ્વીકૃતિ માપદંડની વિશ્વસનીયતા ઊંચી જોવા મળી હતી.
૨. આત્મ-સ્વીકૃતિ માપદંડ ઘટક યથાર્થતા ધરાવતો હતો.
૩. આત્મ-સ્વીકૃતિ સંદર્ભ માધ્યમિક શાળાના વિદ્યાર્થીઓની જાતીયતા (કુમાર અને કન્યા) માં અસર જોવા મળી હતી.
૪. આત્મ-સ્વીકૃતિ સંદર્ભ માધ્યમિક શાળાના વિદ્યાર્થીઓના સામાજિક સંવર્ગ (અનામત અને બિન-અનામત)માં અસર જોવા મળી હતી.
૫. આત્મ-સ્વીકૃતિ સંદર્ભ માધ્યમિક શાળા વિસ્તાર (શહેરી અને ગ્રામ્ય)ના વિદ્યાર્થીઓમાં અસર જોવા મળી ન હતી.
૬. આત્મ-સ્વીકૃતિ સંદર્ભ ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાના અનામત કુમારો અને કન્યાઓમાં અસર જોવા મળી હતી.
૭. આત્મ-સ્વીકૃતિ સંદર્ભ ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાના બિન-અનામત કુમારો અને કન્યાઓમાં અસર જોવા મળી ન હતી.
૮. આત્મ-સ્વીકૃતિ સંદર્ભ શહેરી વિસ્તારની માધ્યમિક શાળાના અનામત કુમારો અને કન્યાઓમાં અસર જોવા મળી ન હતી.
૯. આત્મ-સ્વીકૃતિ સંદર્ભ શહેરી વિસ્તારની માધ્યમિક શાળાના બિન-અનામત કુમારો અને કન્યાઓમાં અસર જોવા મળી ન હતી.
૧૦. આત્મ-સ્વીકૃતિ સંદર્ભ ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાના અનામત બિન-અનામત કુમારોમાં અસર જોવા મળી ન હતી.
૧૧. આત્મ-સ્વીકૃતિ સંદર્ભ ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાની અનામત અને બિન-અનામત કન્યાઓમાં અસર જોવા મળી ન હતી.

૧૨. આત્મ-સ્વીકૃતિ સંદર્ભ શહેરી વિસ્તારની માધ્યમિક શાળાના અનામત અને બિન-અનામત કુમારોમાં અસર જોવા મળી ન હતી.  
 ૧૩. આત્મ-સ્વીકૃતિ શહેરી વિસ્તારની માધ્યમિક શાળાની અનામત અને બિન-અનામત કન્યાઓમાં અસર જોવા મળી ન હતી.  
 ૧૪. આત્મ-સ્વીકૃતિ સંદર્ભ શહેરી અને ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાના અનામત કુમારોમાં અસર જોવા મળી હતી.  
 ૧૫. આત્મ-સ્વીકૃતિ સંદર્ભ શહેરી અને ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાના બિન-અનામત કુમારોમાં અસર જોવા મળી ન હતી.  
 ૧૬ આત્મ-સ્વીકૃતિ સંદર્ભ શહેરી અને ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાની અનામત કન્યાઓમાં અસર જોવા મળી ન હતી.  
 ૧૭આત્મ-સ્વીકૃતિ સંદર્ભ શહેરી અને ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાની બિન-અનામત કન્યાઓમાં અસર જોવા મળી ન હતી.

## ૨૦.શૈક્ષણિક ફલિતાર્થો

પ્રસ્તુત અભ્યાસમાં સંશોધકે જાતીયતા (કુમાર અને કન્યા) શાળા વિસ્તાર (ગ્રામ્ય અને શહેરી) અને સામાજિક સંવર્ગ (અનામત અને બિન-અનામત)સંદર્ભ અભ્યાસના તારણો રજૂ કર્યા હતા. જેના આધારે નીચેના મુદ્દાઓ સ્પષ્ટ થાય છે.

૧. ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાઓના વિદ્યાર્થીઓ કરતા શહેરી વિસ્તારની માધ્યમિક શાળાઓના વિદ્યાર્થીઓમાં આત્મ-સ્વીકૃતિ ઓછી જોવા મળી હતી.

૨. ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાની કન્યાઓ કરતાં ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાના કુમારોમાં આત્મ-સ્વીકૃતિ ઓછી જોવા મળી હતી.

૩. શહેરી વિસ્તારની માધ્યમિક શાળાની અનામત કક્ષાઓ કરતાં શહેરી વિસ્તારની માધ્યમિક શાળાના અનામત કુમારોમાં આત્મ-સ્વીકૃતિ ઓછી જોવા મળી હતી.

૪. ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાની અનામત કક્ષાઓ કરતાં શહેરી કક્ષાઓમાં આત્મ-સ્વીકૃતિ ઓછી જોવા મળી હતી.

ઉપર્યુકત મુદ્દાઓના આધારે એવું ફલિત થાય છે કે શહેરી વિસ્તારની માધ્યમિક શાળાઓના વિદ્યાર્થીઓ, ગ્રામ્ય વિસ્તારની માધ્યમિક શાળાના કુમારો શહેરી વિસ્તારની માધ્યમિક શાળાના અનામત કુમારો અને કન્યાઓમાં આત્મ-સ્વીકૃતિ ઓછી જોવા મળી હતી.

૧. માધ્યમિક શાળાઓના વિદ્યાર્થીઓમાં આત્મ-સ્વીકૃતિ વધારવા માટે ૨. માધ્યમિક શાળાઓના વિદ્યાર્થીઓમાં આત્મ-સ્વીકૃતિ વધારવા મુક્ત ચર્ચા અને ક્ષમતા લક્ષી કાર્યક્રમોનું આયોજન કરવું જોઈએ.

૩. માધ્યમિક શાળાઓના વિદ્યાર્થીઓમાં આત્મ-સ્વીકૃતિ વધારવા પોતાની પ્રત્યે જાગૃતતા કેળવવી જોઈએ.

૪ . માધ્યમિક શાળાઓના આત્મ-સ્વીકૃતિ ધરાવતાં વિદ્યાર્થીઓ અને નિમ્ન આત્મ-સ્વીકૃતિ ધરાવતા વિદ્યાર્થીઓની સરખામણી કરી યોગ્ય પગલાઓ હાથ ધરવા જોઈએ.

૫. વિદ્યાર્થીઓમાં બુદ્ધિ, સ્વાતંત્ર્ય, ચિંતન, કાર્ય કરવા માટેની શક્તિ આગળ પડતો ભાગ લેવો, આત્મ વિશ્વાસ, રૂઢિચુસ્ત, રીતરિવાજોનો સ્વીકાર, કામની બાબતમાં સક્રિયતા, પોતાની જાતને સ્વીકારવી જેવા પાંસાઓને ઓળખવા અને તેના વિષયક મુક્ત ચર્ચા કરવી જોઈએ.

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## સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતા લોકોના સામાજિક મનોવલણો અંગેનો અભ્યાસ

વિજેતા ભગોરા  
રીસર્ચ સ્કોલર, મનોવિજ્ઞાન,  
સુરેન્દ્રનગર યુનિવર્સિટી વઢવાણ

## સારાંશ:

સામાજિક મનોવલણ વ્યવહારો ઉપર મહત્વપૂર્ણ પ્રભાવ પાડે છે. સામાજિક મનોવલણ ની આ મહત્વની ભૂમિકાને કારણે સામાજિક મનોવિજ્ઞાનિકો એ જાણવાનો પ્રયત્ન કરે છે કે, સામાજિક મનોવલણ નું નિર્માણ કઈ રીતે થાય છે, કારણ કે સામાન્ય વ્યવહારો ઉત્પન્ન કરવા માટે તેને અનુરૂપ સામાજિક મનોવલણ નું નિર્માણ આવશ્યક છે. તેથી સામાજિક મનોવલણના નિર્માણની પ્રક્રિયા નું સૂક્ષ્મ અધ્યયન કરવામાં આવ્યું છે. તથા આ પ્રક્રિયાને સમજવાનો પ્રયત્ન કરવામાં આવ્યો છે. આ મનોવલણોનું પ્રતિબિંબ માનવીની વાણી અને વર્તનમાં પડે છે. અને લોકો સાથેની આંતર પારસ્પરિક ક્રિયાઓ અને સંસ્કૃતિની અસરને લીધે મનોવલણો ઘડાય છે. સંશોધન કાર્યની દિશાસૂઝ માટે સંશોધકે પોતાના સંશોધનને અનુરૂપ સાહિત્ય જેમ કે સામયિકો, સર્વેક્ષણો, પુસ્તકો, અહેવાલો, વાર્ષિક અંકો ,સંશોધન સાર ગ્રંથો અને પોતાના સંશોધનના ક્ષેત્રમાં થયેલા અભ્યાસ અંગેનો ઊંડાણ પૂર્વકનો અભ્યાસ હાથ ધરી પ્રશ્નો દ્વારા ઉત્તરો મેળવી “ટી” મૂલ્યની ચકાસણી પદ્ધતિનો ઉપયોગ કરી પ્રસ્તુત શોધપત્ર તૈયાર કરવામાં આવ્યું છે

ચાવીરૂપ શબ્દો : સંયુક્ત કુટુંબની સ્ત્રીઓ, વિભક્ત કુટુંબની સ્ત્રીઓ, સામાજિક મનોવલણો

## પ્રસ્તાવના

સામાજિક જીવનમાં આપણે વિવિધ વ્યક્તિઓ કે જૂથો કે પદાર્થો પ્રત્યે સાનુકૂળ કે પ્રતિકૂળ મનોવલણ ધરાવતા હોઈએ છીએ જેમના તરફ સાનુકૂળ વલણ હોય તેવી વ્યક્તિઓ કે જૂથોને આપણે સ્વીકારીએ છીએ અને તેમના પ્રત્યેક પ્રતિકૂળ મનોવલણ હોય તેમને આપણે અસ્વીકારીએ છીએ અને દૂર રાખીએ છીએ આપણા સામાજિક વ્યવહારો આપણા મનોવલણો ઉપર આધાર રાખે છે. મનોવલણો આપણી વાણી , વ્યવહાર અને વર્તનમાં પ્રગટ થાય છે.

દેસાઈ અને દેસાઈ (1992) માં જણાવે છે કે કોઈ સંશોધન શૂન્યવકાશમાં થતું નથી બીજાની સંકલ્પનાઓ અને સિદ્ધાંતો આપણા સંશોધનમાં માર્ગદર્શક બને છે વિજ્ઞાનનો નિયમ છે કે વિષય અંગે અગાઉ કંઈક જોડાણ થયું હોય તેમાંથી જ નવું જ્ઞાન પર્યાપ્ત કરી શકાય. સંદર્ભ સાહિત્યને સમીક્ષા સંશોધન માટે પથદર્શક બને છે. દરેક વિજ્ઞાનમાં સંશોધન કાર્ય સતત થતું રહેતું હોય છે.

## સંબંધિત સાહિત્ય સમીક્ષા

ઓમ્પાસેલ ડી. ઈસવિસન 2007માં 520 કોલેજના વિદ્યાર્થીઓ પર અભ્યાસ કર્યો છે જેમાં સંશોધકે સ્નાતક અને અનુસ્નાતક કક્ષાના વિદ્યાર્થીઓના સામાજિક મનોવલણો અંગેનો અભ્યાસ આવરી લીધેલ છે અને અભ્યાસના અંતે ચોક્કસ તારણોમાં જોવા મળ્યું કે છોકરાઓ અને છોકરીઓના સામાજિક મનોવલણો વચ્ચેનો સાર્થક તફાવત છે. અને સ્નાતક અને અનુસ્નાતક કક્ષાના વિદ્યાર્થીઓના સામાજિક મનોવલણો વચ્ચે સાર્થક તફાવત છે.

ભૂમિ રેડ્ડી એન. ઈસવીસન 1991માં ઓસ્મનીયા યુનિવર્સિટી હૈદરાબાદ માંથી માધ્યમિક શાળાના શિક્ષકોના મનોવલણો અને શીખવાની અભિયોગ્યતા નો અભ્યાસ કર્યો છે જેમાં સંશોધકે ઓસમાનિયા યુનિવર્સિટી માંથી 100 શિક્ષકોનો

અભ્યાસ આવરી લીધેલ છે અને અભ્યાસના અંતે ચોક્કસ તારણોના અભ્યાસમાં જોવા મળ્યું કે માધ્યમિક શાળાના શિક્ષકોના મનોવલણો અને શીખવાની અભિ યોગ્યતા વચ્ચે સાર્થક તફાવત જોવા મળે છે.

#### સંશોધનના હેતુઓ

સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતા લોકોના સામાજિક મનોવલણો અંગેના અભ્યાસને લગતા હેતુઓ આ પ્રમાણે છે.

(1) સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતા લોકોના કૌટુંબિક વ્યવસ્થા પ્રત્યેના સામાજિક મનોવલણો માં શું તફાવત છે તે વિશે જાણકારી મેળવવી.

(2) સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતા લોકોના જાતીય શિક્ષણ પ્રત્યેના સામાજિક મનોવલણો માં શું તફાવત છે તે વિશે જાણકારી મેળવવી.

#### ઉત્કલ્પનાઓ

સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતા લોકોના સામાજિક મનોવલણો અભ્યાસને લગતી પૂર્વધારણાઓ આ પ્રમાણે છે.

(1) સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતા સ્ત્રીઓના કૌટુંબિક વ્યવસ્થા ની બાબતમાં કોઈ સાર્થક તફાવત ધરાવતા નહીં હોય.

(2) સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતી સ્ત્રીઓના જાતીય શિક્ષણની બાબતમાં કોઈ સાર્થક તફાવત ધરાવતા નહીં હોય.

#### સંશોધન પદ્ધતિ

પ્રસ્તુત અભ્યાસમાં સંયુક્ત અને વિભક્ત કુટુંબમાં 60 -60 અને સ્ત્રીઓના 30 -30 એમ કુલ 120 લોકોના નિદર્શ તરીકે પસંદ કરવામાં આવેલ છે. સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતા લોકોના સામાજિક મનોવલણોનો અભ્યાસ કરવા માટે ‘સામાજિક મનોવલણ માપન તુલા’ નો ઉપયોગ કરવામાં આવ્યો હતો. ત્યારબાદ કસોટીનું સંચાલન કરીને ઉત્તરદાતાઓના જવાબ મેળવવા માટે સંયુક્ત અને વિભક્ત કુટુંબમાં લોકોની પરવાનગી મેળવી હતી. અને ત્યારબાદ ઉત્તરદાતા તરીકે સંયુક્ત અને વિભક્ત કુટુંબના લોકોના યદદચ્છ રીતે પુરુષો અને સ્ત્રીઓની પસંદગી કરવામાં આવી હતી.

#### સંશોધન ડિઝાઇન ધરાવતું કોષ્ટક

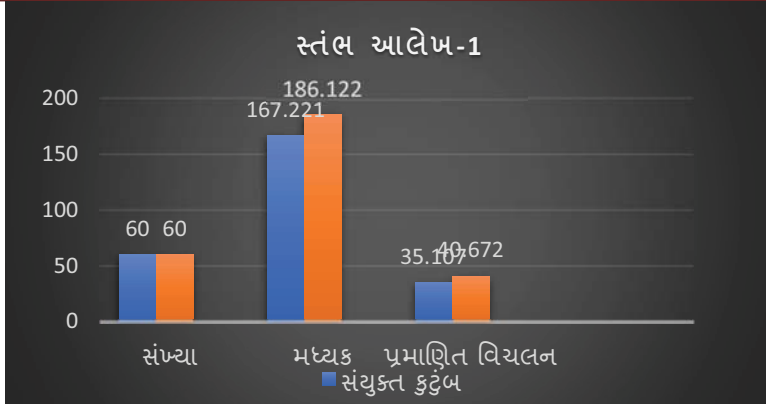
ક્રમ		પુરુષો	સ્ત્રીઓ	કુલ
1	સંયુક્ત કુટુંબ	30	30	60
2	વિભક્ત કુટુંબ	30	30	60
	કુલ	60	60	120

#### પૃથ્થકરણ અને અર્થઘટન

(1) સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતા લોકોના કૌટુંબિક વ્યવસ્થા અંગેના મનોવલણના સંદર્ભમાં મેળવેલા પ્રાપ્તોકોના મધ્યકનું પ્રમાણ દર્શાવતું કોષ્ટક અને સ્તંભ આલેખ.

#### કોષ્ટક:1

જૂથ	સંખ્યા	મધ્યક	પ્રમાણિત વિચલન	ટી મૂલ્ય	ટેબલ કિંમત 0.05	સાર્થકતાની કક્ષા
સંયુક્ત કુટુંબ	૬૦	૧૬૭.૨૨૧	૩૫.૧૦૭	૨.૭૨	૧.૮૮	સાર્થક
વિભક્ત કુટુંબ	૬૦	૧૮૬.૧૨૨	૪૦.૬૭૨			



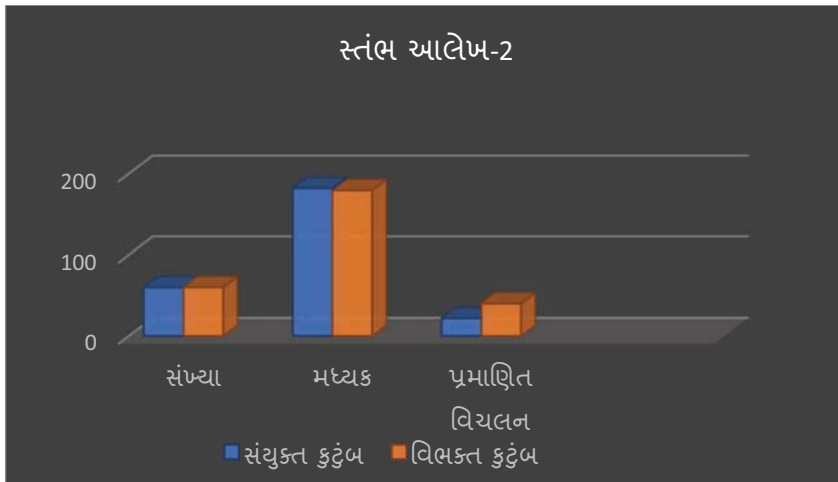
ઉપરના સ્તંભ આલેખ માં જોતા જણાય છે કે આલેખની એક ધરી પર સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતા લોકો દર્શાવવામાં આવેલ છે. જેમાં સંયુક્ત કુટુંબમાં રહેતા લોકોનો મધ્યક 167.221 અને વિભક્ત કુટુંબમાં રહેતા લોકોનો મધ્યક 186.122 છે. બંને જૂથ વચ્ચેનો તફાવત 18.901 છે. તેથી બંને વચ્ચેનો તફાવત સામાન્ય કહી શકાય નહીં. અહીં સંયુક્ત કુટુંબમાં રહેતા લોકોનો સ્તંભ આલેખ નીચો છે અને વિભક્ત કુટુંબમાં રહેતા લોકોનો સ્તંભ આલેખ ઊંચો જોવા મળે છે.

(3) સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતા લોકોના જાતીય શિક્ષણ અંગેના મનોવલણના

સંદર્ભમાં મેળવેલા પ્રાપ્તિકોના મધ્યક, પ્રમાણ વિચલન અને ટી મૂલ્ય દર્શાવતું કોષ્ટક અને સ્તંભ આલેખ.

કોષ્ટક:2

જૂથ	સંખ્યા	મધ્યક	પ્રમાણિત વિચલન	ટી મૂલ્ય	ટેબલ ક્રિમત 0.05	સાર્થકતાની કક્ષા
સંયુક્ત કુટુંબ	60	77.08	12.45	0.2814	1.98	અસાર્થક
વિભક્ત કુટુંબ	60	79.42	11.42			





ઉપરના સ્તંભ આલેખમાં જોતા જણાય છે કે સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતા લોકોના જાતીય શિક્ષણ અંગેના મનોવલણોનું ટી મૂલ્ય 0.2814 છે જે સાર્થક નથી આ તે શૂન્ય પરિકલ્પના નો સ્વીકાર થાય છે સંયુક્ત કુટુંબનો મધ્યક 77.08 છે અને વિભક્ત કુટુંબનો મધ્યક 79.42 જોવા મળે છે તથા પ્રમાણિત વિચલન અનુક્રમે 12.45 અને 11.42 છે સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતા લોકોના જાતીય શિક્ષણ અંગેના મનોવલનો વચ્ચે સાર્થક તફાવત જોવા મળે છે આથી અહીં શૂન્ય પરિકલ્પના નો સ્પર્શ સ્વીકાર થાય છે સામાન્ય તફાવત કહી શકાય તેથી બંને જૂથો વચ્ચે અસાર્થક તફાવત જોવા મળે છે.

#### સંશોધનના તારણો

સંયુક્ત અને વિભક્ત કુટુંબમાં રહેતા લોકોના સામાજિક મનોવલણોના અભ્યાસમાં 120 લોકો દ્વારા પ્રાપ્ત જવાબો પરથી મળતા તારણો નીચે મુજબ છે.

(1) અમદાવાદ શહેરમાં રહેતા લોકોની કૌટુંબિક વ્યવસ્થા અંગેના મનોવલણોમાં સાર્થક તફાવત ધરાવતા નહીં હોય. એટલે કે સામાજિક મનોવલણ બંને જૂથમાં સરખા છે. સંયુક્ત કુટુંબ અને વિભક્ત કુટુંબમાં રહેતા લોકોને કૌટુંબિક વ્યવસ્થા અંગેના મનોવલણોમાં કોઈ સાર્થક તફાવત ધરાવતા નહીં હોય એટલે કે સામાજિક મનોવલણ બંને જૂથમાં સરખા નથી.

(2) અમદાવાદ શહેરમાં રહેતા લોકોના જાતીય શિક્ષણ અંગેના મનોવલણોમાં સાર્થક તફાવત જોવા મળતો નથી. સંયુક્ત કુટુંબ અને વિભક્ત કુટુંબમાં રહેતા લોકોના જાતીય શિક્ષણ અંગેના મનોવલણોમાં કોઈ સાર્થક તફાવત જોવા મળતો નથી.

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## Effect of Psychological Factors on Occupational Stress Among Industrial Professionals

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### Abstract

This study explores the impact of psychological factors on occupational stress across different management levels in industrial settings. Data collected from 500 participants, ranging from workers to top management, reveal significant variations in stress levels influenced by job roles and responsibilities. The analysis highlights that middle and junior management experience the highest stress due to heightened responsibilities and limited control, while top management faces comparatively lower stress levels. The findings underline the necessity of tailored stress management interventions to improve workplace well-being and productivity.

**Keywords:** Occupational stress, Psychological factors, Industrial professionals, Stress management, Middle management, Workplace well-being.

### Introduction

Occupational stress is a pervasive challenge in modern industrial environments. It adversely affects employee productivity, mental health, and overall organizational performance (Cooper, 1998). Among the many factors contributing to occupational stress, psychological influences such as workload, lack of autonomy, and unexpected events significantly exacerbate the problem (Karasek, 1979). Industrial professionals in middle and junior management roles are particularly vulnerable, caught between operational demands and strategic responsibilities (Jones & Bright, 2001). The present study examines the prevalence of stress across various organizational levels and its correlation with psychological factors.

### Objectives

To examine the frequency of psychological stress across various management levels.

To analyse the impact of job demands and control on stress levels.

To identify strategies for reducing occupational stress among industrial professionals.

### Hypothesis

Middle and junior management experience higher levels of occupational stress compared to other cadres.

Job demands and lack of control significantly contribute to stress levels among industrial professionals.

### Methodology

A cross-sectional study was conducted with 500 industrial professionals across five hierarchical cadres: workers/helpers, junior management, middle management, senior management, and top management. A structured questionnaire captured data on stress-related experiences, including unexpected events, inability to control irritations, struggles with responsibilities, and overall stress levels. Chi-square tests were applied to assess the relationship between psychological factors and occupational stress (Sutherland & Cooper, 1990).

## Results& Discussion

Table 1: Frequency of Unexpected Upsetting Events in the Last Month

Profile/ Cadre	Very often	Fairly often	Sometimes	Rarely	No	Total	Chi square value
Worker/ Helper	27	17	12	4	2	62	4.26
Junior management	47	27	14	8	9	105	
Middle management	87	45	24	20	15	191	
Senior management	45	29	19	9	2	104	
Top management	15	11	7	4	1	38	

The table 1, illustrates the frequency of unexpected upsetting events experienced by industrial professionals across different management levels over the last month. The Chi-square value of 13 suggests a statistically significant relationship between the profile/cadre of employees and the occurrence of unexpected upsetting events.

Workers/helpers reported a significant portion (27) experiencing these events very often, indicating high occupational stress at this level. Among junior management, 47 individuals frequently encountered unexpected upsetting events, with a notable number (27) also experiencing it fairly often. The middle management cadre showed the highest frequency of very often occurrences (87), highlighting this group's vulnerability to occupational stress. In senior management, a substantial number (45) reported encountering upsetting events very often, indicating persistent stress at higher management levels. Top management professionals experienced the least frequency of unexpected upsetting events, with only 15 reporting very often, suggesting relatively lower occupational stress compared to other levels.

Overall, the data suggests that middle and junior management professionals are more prone to frequent unexpected upsetting events, thereby experiencing higher occupational stress. This trend may reflect the heightened responsibilities and pressures inherent in these roles. In contrast, top management and workers/helpers report lower frequencies, possibly due to differences in job roles, responsibilities, and coping mechanisms available to these groups. This conclusion aligns with existing literature on occupational stress, which indicates that mid-level management often bears a significant brunt of organizational stress due to their intermediary position between senior management directives and operational execution (Jones & Bright, 2001; Cooper, 1998; Kahn et al., 1964; Quick et al., 2000). Studies by Karasek (1979) and Sutherland and Cooper (1990) further support the finding that job demands and control significantly influence stress levels, with middle management often facing high demands and limited control.

The table 2 presents the frequency of feeling nervous and stressed among industrial professionals in the last month. The Chi-square value of 3.89 indicates a notable association between job profiles and stress levels.

Table 2: Frequency of Feeling Nervous and Stressed in the Last Month

Profile/ Cadre	Very often	fairly often	Sometimes	Rarely	No	Total	Chi square value
Worker/ Helper	12	9	11	8	22	62	3.89
Junior management	24	36	30	10	5	105	
Middle management	10	114	49	7	11	191	
Senior management	12	36	40	8	8	104	
Top management	12	4	6	7	9	38	

Workers/helpers show a mixed response, with 12 reporting feeling nervous and stressed very often, and 22 not experiencing it at all. This suggests a varied stress experience in this group. In junior management, a significant number (24) feel stressed very often, while a larger portion (36) experience it fairly often. This indicates considerable stress at this level. Middle management reports the highest frequency of fairly often occurrences (114), highlighting significant stress in this group. Senior management has a substantial number (36) feeling nervous and stressed fairly often, but also shows a balanced distribution across other categories. Top management reports lower stress levels, with only 12 feeling stressed very often and 9 not at all.

Overall, the data implies that junior and middle management experience higher stress levels. This may be due to increased responsibilities and workload. Workers/helpers and top management show more varied stress experiences. These findings are consistent with research indicating that middle management faces considerable stress due to their intermediary role (Jones & Bright, 2001; Cooper, 1998). Other studies also support that job demands and control impact stress levels (Karasek, 1979; Sutherland & Cooper, 1990).

Table 3: Feeling Unconfident in Handling Problems

Profile/ Cadre	Very often	fairly often	Sometimes	Rarely	No	Total	Chi square value
Worker/ Helper	22	18	8	10	4	62	3.29
Junior management	42	32	21	8	2	105	
Middle management	108	47	21	9	6	191	
Senior management	42	34	15	8	5	104	
Top management	12	9	6	7	4	38	

The table3 shows how often industrial professionals feel unconfident in handling problems. The Chi-square value of 3.29 indicates a relationship between job roles and confidence levels.

Workers/helpers have 22 individuals feeling unconfident very often, while only 4 never feel this way, suggesting a moderate level of confidence issues. Junior management reports 42 feeling unconfident very often, indicating significant stress in problem-solving abilities at this level. Middle management has the highest number (108) feeling unconfident very often, highlighting considerable stress and confidence issues in this group. Senior management shows a balanced spread, with 42 feeling unconfident very often and only 5 never experiencing this issue. Top management has the fewest (12) feeling unconfident very often, suggesting better confidence in problem-solving at the highest level.

Overall, the data implies that middle and junior management face higher levels of feeling unconfident in handling problems. This could be due to their crucial roles and responsibilities. Workers/helpers and top management show more varied responses, with top management generally feeling more confident. These

findings align with research indicating that middle management often experiences significant stress and confidence issues due to their role's demands (Jones & Bright, 2001; Cooper, 1998). Other studies also support that job demands and control influence confidence and stress levels (Karasek, 1979; Sutherland & Cooper, 1990).

Table 4 illustrates the frequency with which industrial professionals felt that things were out of control. The Chi-square value of 4.01 indicates a significant relationship between job profiles and the feeling of losing control.

Workers/helpers show mixed experiences, with 14 feeling very often out of control and 20 never feeling this way. Junior management has 38 frequently feeling out of control, indicating notable stress. Middle management reports the highest number (112) feeling very often out of control, highlighting significant stress in this group. Senior management has a balanced distribution, with 12 feeling out of control very often and 8 never feeling this way. Top management reports the least frequency, with only 7 feeling very often out of control, suggesting better control at the highest level.

Table 4: Feeling That Things Were Out of Control

Profile/ Cadre	Very often	Fairly often	Sometimes	Rarely	No	Total	Chi square value
Worker/ Helper	14	10	10	8	20	62	4.01
Junior management	38	28	24	10	5	105	
Middle management	112	42	16	12	9	191	
Senior management	12	36	40	8	8	104	
Top management	7	4	6	10	11	38	

The data from Table 4 suggests that middle and junior management experience higher levels of feeling out of control, possibly due to increased responsibilities and pressure. Workers/helpers and top management show more varied responses, with top management generally feeling more in control. These findings align with research indicating that middle management often faces significant stress and control issues due to their intermediary roles (Jones & Bright, 2001; Cooper, 1998). Studies support that job demands and control significantly impact feelings of control and stress levels (Karasek, 1979; Sutherland & Cooper, 1990).

Table5: Struggling to Cope with Responsibilities

Profile/ Cadre	Very often	Fairly often	Sometimes	Rarely	No	Total	Chi square value
Worker/ Helper	12	9	11	8	22	62	3.29
Junior management	25	35	30	10	5	105	
Middle management	38	111	21	15	6	191	
Senior management	11	31	44	8	10	104	
Top management	4	4	6	7	17	38	

Table 5 shows how often industrial professionals struggle to cope with responsibilities. The Chi-square value of 3.29 indicates a significant relationship between job profiles and coping difficulties.

Workers/helpers display varied responses, with 12 struggling very often and 22 not at all. Junior management has 25 individuals frequently struggling, indicating notable stress. Middle management reports the highest number (38) struggling very often and 111 fairly often, highlighting significant stress in this group. Senior management shows a balanced distribution, with 11 struggling very often and 10 not

at all. Top management reports the least frequency, with only 4 struggling very often and 17 not at all, suggesting better coping abilities at the highest level.

The data from Table 5 suggests that middle and junior management face higher levels of difficulty in coping with responsibilities, likely due to their increased workload and pressure. Workers/helpers and top management show more varied responses, with top management generally coping better. These findings align with research indicating that middle management often experiences significant stress due to their intermediary roles (Jones & Bright, 2001; Cooper, 1998). Studies also support that job demands and control significantly impact coping abilities and stress levels (Karasek, 1979; Sutherland & Cooper, 1990).

Table 6 shows how often industrial professionals feel unable to control irritations. The Chi-square value of 5.26 indicates a significant relationship between job profiles and irritability.

Workers/helpers have mixed responses, with 10 feeling unable to control irritations very often and 11 not at all. Junior management shows 22 frequently feeling unable to control irritations, indicating notable stress. Middle management reports the highest number (34) struggling very often and 92 fairly often, highlighting significant irritability in this group. Senior management has a balanced distribution, with 8 feeling very often unable to control irritations and 10 not at all. Top management reports the least frequency, with only 2 struggling very often and 19 not at all, suggesting better control over irritations at the highest level.

Table 6: Inability to Control Irritations

Profile/ Cadre	Very often	Fairly often	Sometimes	Rarely	No	Total	Chi square value
Worker/ Helper	10	22	12	7	11	62	5.26
Junior management	22	39	27	11	6	105	
Middle management	34	92	44	14	7	191	
Senior management	8	38	44	4	10	104	
Top management	2	4	6	7	19	38	

The data from Table 6 suggests that middle and junior management experience higher levels of irritability, likely due to their increased responsibilities and pressure. Workers/helpers and top management show more varied responses, with top management generally feeling more in control. These findings align with research indicating that middle management often faces significant stress and irritability due to their intermediary roles (Jones & Bright, 2001; Cooper, 1998). Studies also support that job demands and control significantly impact irritability and stress levels (Karasek, 1979; Sutherland & Cooper, 1990).

Table 7 illustrates the frequency with which industrial professionals experience occupational stress. The Chi-square value of 3.89 indicates a significant relationship between job profiles and stress levels.

Workers/helpers have 26 individuals feeling very often stressed, while 4 never feel this way, suggesting notable stress. Junior management shows 36 frequently feeling stressed, indicating considerable stress at this level. Middle management reports the highest number (89) feeling very often stressed, highlighting significant stress in this group. Senior management also shows high stress levels with 42 feeling very often stressed. Top management reports the least frequency, with only 2 feeling very often stressed and 15 not at all, suggesting better stress management at the highest level.

Table 7: Occupational Stress and Job Profiles

Profile/ Cadre	Very often	Fairly often	Sometimes	Rarely	No	Total	Chi square value
Worker/ Helper	26	14	11	7	4	62	3.89
Junior management	36	29	22	10	8	105	
Middle management	89	56	35	7	4	191	
Senior management	42	31	21	6	4	104	
Top management	2	5	6	10	15	38	

The data from Table 7 suggests that middle and junior management experience higher levels of stress due to their increased responsibilities. Workers/helpers and top management show more varied responses, with top management generally experiencing less stress. These findings align with research indicating that middle management often faces significant stress due to their roles (Jones & Bright, 2001; Cooper, 1998). Studies support that job demands and control significantly impact stress levels (Karasek, 1979; Sutherland & Cooper, 1990).

Table 8 illustrates the frequency of anger due to uncontrollable events among industrial professionals. The Chi-square value of 5 indicates a significant relationship between job profiles and the experience of anger.

Table 8: Anger Due to Uncontrollable Events

Profile/ Cadre	Very often	Fairly often	Sometimes	Rarely	No	Total	Chi square value
Worker/ Helper	28	9	11	6	8	62	4.18
Junior management	32	35	22	10	6	105	
Middle management	102	55	24	6	4	191	
Senior management	46	25	14	10	9	104	
Top management	16	7	6	5	4	38	

Workers/helpers have 28 individuals feeling very often angry, while 8 never feel this way, suggesting notable anger issues. Junior management shows 32 frequently feeling angry, indicating considerable stress at this level. Middle management reports the highest number (102) feeling very often angry, highlighting significant anger in this group. Senior management also shows high anger levels with 46 feeling very often angry. Top management reports the least frequency, with only 16 feeling very often angry and 4 not at all, suggesting better anger management at the highest level.

The data from Table 8 suggests that middle and junior management experience higher levels of anger due to uncontrollable events, likely due to their increased responsibilities and pressures. Workers/helpers and top management show more varied responses, with top management generally experiencing less anger. These findings align with research indicating that middle management often faces significant stress and anger due to their roles (Jones & Bright, 2001; Cooper, 1998). Studies support that job demands and control significantly impact stress and anger levels (Karasek, 1979; Sutherland & Cooper, 1990).



Table 9: Feeling Overwhelmed by Piling Difficulties

Profile/ Cadre	Very often	Fairly often	Sometimes	Rarely	No	Total	Chi square value
Worker/ Helper	31	9	10	4	8	62	2.98
Junior management	32	35	22	10	6	105	
Middle management	102	55	24	6	4	191	
Senior management	47	22	15	11	9	104	
Top management	15	9	6	4	4	38	

Table 9 shows the frequency of industrial professionals feeling overwhelmed by piling difficulties. The Chi-square value of 2.98 indicates a significant relationship between job profiles and feelings of being overwhelmed.

Workers/helpers have 31 individuals feeling very often overwhelmed, while 8 never feel this way, suggesting notable stress. Junior management shows 32 frequently feeling overwhelmed, indicating considerable stress at this level. Middle management reports the highest number (102) feeling very often overwhelmed, highlighting significant stress in this group. Senior management also shows high levels of feeling overwhelmed, with 47 experiencing it very often. Top management reports the least frequency, with only 15 feeling very often overwhelmed and 4 not at all, suggesting better stress management at the highest level.

The data from Table 9 suggests that middle and junior management experience higher levels of feeling overwhelmed, likely due to increased responsibilities and pressures. Workers/helpers and top management show more varied responses, with top management generally experiencing less stress. These findings align with recent research indicating that middle management often faces significant stress due to their roles (Mazzola, Schonfeld, & Spector, 2011; Cooper, 2011). Studies support that job demands and control significantly impact feelings of being overwhelmed (Ganster & Rosen, 2013; Bakker & Demerouti, 2017).

Table 10: Acceptance of Unchangeable Circumstances with a Healthy Attitude

Profile/ Cadre	Very often	Fairly often	Sometimes	Rarely	No	Total	Chi square value
Worker/ Helper	34	11	7	6	4	62	3.81
Junior management	41	29	19	10	6	105	
Middle management	114	51	15	7	4	191	
Senior management	52	25	12	9	6	104	
Top management	14	8	5	4	7	38	

Table 10 illustrates how often industrial professionals feel overwhelmed by psychological factors. The Chi-square value of 3.81 indicates a significant relationship between job profiles and stress levels.

Workers/helpers have 34 individuals feeling very often overwhelmed, suggesting notable stress. Junior management shows 41 frequently feeling overwhelmed, indicating considerable stress at this level. Middle management reports the highest number (114) feeling very often overwhelmed, highlighting significant stress in this group. Senior management also shows high levels of stress, with 52 experiencing it very often. Top management reports lower frequencies, with only 14 feeling very often overwhelmed and 7 not at all, suggesting better stress management at the highest level.

The data from Table 10 suggests that middle and junior management experience higher levels of stress due to increased responsibilities. Workers/helpers and top management show varied responses, with top

management generally experiencing less stress. These findings align with recent research indicating that middle management often faces significant stress due to their roles (Mazzola, Schonfeld, & Spector, 2011; Cooper, 2011). Studies also support that job demands and control significantly impact stress levels (Ganster & Rosen, 2013; Bakker & Demerouti, 2017).

Table 11 shows the frequency of industrial professionals feeling overwhelmed by psychological factors. The Chi-square value of 4.01 indicates a significant relationship between job profiles and stress levels.

Workers/helpers have 27 individuals feeling very often overwhelmed, suggesting notable stress in this group. Junior management shows 34 frequently feeling overwhelmed, indicating considerable stress. Middle management reports the highest number (129) feeling very often overwhelmed, highlighting significant stress in this group. Senior management also shows high levels, with 48 experiencing it very often. Top management reports lower frequencies, with only 11 feeling very often overwhelmed and 7 not at all, suggesting better stress management at the highest level.

Table 11: Proactive Positive Response to Stressors

Profile/ Cadre	Very often	Fairly often	Sometimes	Rarely	No	Total	Chi square value
Worker/ Helper	27	16	7	6	6	62	4.01
Junior management	34	28	19	14	10	105	
Middle management	129	44	12	4	2	191	
Senior management	48	24	14	10	8	104	
Top management	11	6	5	9	7	38	

The data from Table 11 suggests that middle and junior management experience higher levels of stress due to increased responsibilities. Workers/helpers and top management show more varied responses, with top management generally experiencing less stress. These findings align with recent research indicating that middle management often faces significant stress due to their roles (Mazzola, Schonfeld, & Spector, 2011; Cooper, 2011). Studies also support that job demands and control significantly impact stress levels (Ganster & Rosen, 2013; Bakker & Demerouti, 2017).

Table 12: Daily Life Planning and Execution

Profile/ Cadre	Very often	Fairly often	Sometimes	Rarely	No	Total	Chi square value
Worker/ Helper	24	21	11	4	2	62	3.99
Junior management	31	32	20	16	6	105	
Middle management	109	58	17	5	2	191	
Senior management	42	32	17	9	4	104	
Top management	7	4	4	9	14	38	

Table 12 illustrates the frequency with which industrial professionals experience difficulties in daily life planning and execution. The Chi-square value of 3.99 indicates a significant relationship between job profiles and these difficulties.

Workers/helpers have 24 individuals facing difficulties very often, indicating notable issues in this group. Junior management shows 31 frequently experiencing these difficulties, suggesting considerable stress. Middle management reports the highest number (109) facing difficulties very often, highlighting significant planning and execution challenges in this group. Senior management also shows high levels, with 42 experiencing difficulties very often. Top management reports lower frequencies, with only 7 facing difficulties very often and 14 not at all, suggesting better management skills at the highest level.

The data from Table 12 suggests that middle and junior management experience higher levels of difficulties in daily life planning and execution due to increased responsibilities. Workers/helpers and top management show more varied responses, with top management generally facing fewer issues. These findings align with recent research indicating that middle management often faces significant challenges due to their roles (Mazzola, Schonfeld, & Spector, 2011; Cooper, 2011). Studies also support that job demands and control significantly impact daily life planning and execution (Ganster & Rosen, 2013; Bakker & Demerouti, 2017).

### **Conclusion**

This study highlights the significant impact of psychological factors on occupational stress among industrial professionals across various management levels. The findings demonstrate that middle and junior management professionals are the most vulnerable to stress due to heightened responsibilities, limited decision-making authority, and frequent exposure to unexpected events. In contrast, workers/helpers and top management experience comparatively lower stress levels, benefiting from either clear role definitions or greater autonomy and control over work.

The data underscores the importance of addressing occupational stress through targeted interventions. Strategies such as stress management training, enhanced managerial support, better workload distribution, and increased decision-making autonomy for middle and junior management can significantly alleviate stress levels. This research reinforces the need for organizations to prioritize mental health and well-being in their workforce to enhance productivity and organizational success.

### **Significance of the Study**

The study holds several significant implications for organizational practices and policies:

**Practical Applications:**

Provides actionable insights for designing stress management programs tailored to specific hierarchical levels.

Highlights the need for resource allocation to support middle and junior management, who face the brunt of organizational stress.

### **Theoretical Contributions:**

Reinforces the relevance of the job demands-control model (Karasek, 1979) and the job demands-resources theory (Bakker & Demerouti, 2017) in modern industrial environments.

Offers empirical evidence supporting the relationship between job roles, control, and occupational stress.

**Organizational Impact:**

Promotes a healthier work environment by identifying stressors and mitigating their effects on employees.

Helps organizations understand how psychological factors influence productivity and employee retention.

**Broader Implications:**

Contributes to the growing field of occupational health psychology by addressing stress factors in industrial workplaces.

Serves as a foundation for future research exploring advanced interventions and coping mechanisms to improve employee well-being.

By addressing the key findings and leveraging their significance, this study provides a roadmap for organizations to create sustainable work environments that balance productivity with employee well-being.

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