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सामाजिक व्यंग्य एवम् : चन्द्रकान्त देवताले की कविता

कविता अनुभूतिको अभिव्यक्त करने का सशक्त माध्यम है। तथा जीवन जगत को जानने का एक बुनियादी आन्तरिक औजार भी। इसमें परिवेशगत सत्य और यथार्थ को ढूँढने और बदलने का सामर्थ्य है। कविता आम आदमी के जीवन संघर्ष, विकृतियों, विसंगतियों, विषमताओं और विदुषताओं की खुली पहचान है। और यदि हम व्यंग्य की बात करें तो वह एक ऐसा सशक्त बाण कहा जा सकता है, जिसका अत्यधिक धारदारी नोक होता है, और जिसके द्वारा अर्थगत प्रहार होता है। व्यंग्यकार इसका प्रयोग तब करता है जब उसका हृदय चारों ओर से परिवेशगत विसंगतियों से तिलमिला रहता है। इसलिए समाज में जहाँ कहीं भी उसे विसंगतियाँ दिखाई देगी, वहाँ वह निर्ममरूप से तीखा व्यंग्य प्रस्तुत करके उसको समूल उखाड़ने का प्रयत्न करेगा। आज का व्यंग्य पारम्परिक चुहल अथवा परिहास मात्र न होकर एक गम्भीर साहित्यिक कर्म है। वह एक व्यापक अर्थबोध लिए है। समाज के विकृत एवं गलित अंगों पर प्रहार करके पाठक एवं श्रोता को सचेत करना उसका मूलभूत प्रयोजन है। हिन्दी साहित्य में ऐसे बहुत से कवि हैं, जिन्होंने समाज में फैले आतंक और अविश्वास, भ्रष्टाचार, राजनीति में विद्यमान मूल्यहीनता अधोगति तथा सांस्कृतिक परिवेश में व्याप्त खोखलेपन आदि को व्यंग्य के माध्यम से प्रस्तुत करने का प्रयास किया है।

इस संदर्भ में अगर हम चन्द्रकान्त देवताले की कविता पर दृष्टिपात करें तो उनकी कविताओं केन्द्र में आज के त्रस्त किन्तु न पराजित होनेवाली भारतीय मानवता है। एक जागरूक कवि होने के कारण उनका दृष्टिकोण एकांकी नहीं रहा। उन्होंने समकालीन राजनीति, समाज और कुबेर संस्कृति की, अमानुषिकताओं और विसंगतियों से उत्पन्न लोगों की लाचारी, मुखबिरी, दो-मुँहापन, पाखण्ड और महत्वकांक्षा पर करारा व्यंग्य किया है। कवि में आक्रोश है, और आक्रामकता भी वर्तमान जीवन में दिखाई पड़नेवाली अकेलापन, दुश्मनी और हत्या पर मनुष्य रोज बदनसीब होता रहा है। कवि अपने आक्रोशभरे व्यंग्य सवाल उठते हैं -

"कब आएगा और कैसे ?

कब टूटेगी यह नींद

और हत्यारों सा टेंटुआ

मसलते हुए, कहेंगे हम-

आदमी की बदनसीबी के अन्त का सवेरा।"

इन पंक्तियों द्वारा कवि इस देश में बढ़ रही पाशविक सचाई को सामने लाता है। गरीबी, भूख, अभाव, उदासीनता के कारण रोज यहाँ हजारों भारतीय मर रहे हैं उसे हत्या क्यों न कहा जाये? और हत्यारों की सजा क्या होती है? इन सवालों में छिपा हुआ व्यंग्य बहुत अधिक सशक्त है। वर्तमान परिवेश में जीवन बितानेवाले मनुष्य की विविधरंगी चेहरे पर कवि का व्यंग्य इस प्रकार है -

"अभी मैं सिर्फ इतना ही बताता हूँ,

कि वह जो हैस रहा है,

उसका हाथ जेब में रखे चाकु पर है

दूर जंगलो में बन्दूक साफ कर रहा है

और वह जो प्रकट हो रहा है,

तुम खुद सोच लो

कि वह कौन है ?.....

आज हमारे समाज में हमेशा ऐसा ही घटित होता है। व्यक्ति के रंग बीच-बीच में बदलते रहते हैं। एक व्यक्ति को दुसरे व्यक्ति का विश्वास नष्ट हो गया है उपर्युक्त पंक्तियों में समाज की इस स्थिति पर मार्मिक व्यंग्य है। कवि ने रोजाना जिन्दगी की असहायता, ढ़न्द्ध और तनाव की गहरी भूमिका और अमानवी संघर्ष के बीच सच्चाई की तलाश करने का प्रयास किया है। इसलिए उनकी अधिकांश कविताएँ बाहरी विकृतियों और मनुष्य के भीतरी अन्तर्विरोधों को गहरे दर्द के साथ आक्रोश और क्रोध की मुद्रा में व्यंग्यबाण छोड़ती हैं। जिन्दगी और मौत के बीच अशान्त और परेशान रहनेवाले आज के समाज की विसंगतियों पर कवि का व्यंग्य देखिए.....

"परेशान शब्द से घिरा हुआ होने पर

कितना मुश्किल हो रहा है

एक भी शब्द ढूँढ लेना

उस चीज के लिए

जो मौत के बेहद नजदीक नहीं है

पर जिन्दगी से बहुत दूर जा गिरी है।"

एस.बी.महिला कालेज, हिम्मतनगर,

वे भाषा के छद्म से आदमी के सत्य को नहीं झुठलाते हैं। वर्तमान परिवेश में जीवन बिताने के लिए कई प्रकार के काम करनेवाली औरतों के बारे में भी कविने लिखा है कई कामों में जुड़ी हुई भी आज के समाज में अपनी वह अलग पहचान नहीं बना सकी। अपनी ऐसी गंतव्यहीन स्थिति में शताब्दियों से वह भटकती रहती है, और उसकी वह भटकन आज भी जारी है – इस स्थिति पर व्यंग्य करते हुए कवि के शब्द हैं –

"एक औरत का धड़
भीड़ में भटक रहा है
उसके हाथ अपना चेहरा ढूँढ रहे हैं
उसके पाँव
जाने कब से, सबसे
अपना पता पूछ रहे हैं।"

देवताले ने केवल सामाजिक हालातों के बारे में नहीं बयान दिए हैं, बल्कि वह समाज में चैन के दबावों में से गुजरा है इसलिए उसने समाज के ढाँचे की जटिलता पर व्यंग्य किया है, और अपनी वैयक्तिकता बनाये रखी है। देवताले ने मध्यमवर्गीय समाज की उस चिन्ताओं पर भी व्यंग्य किया है जहाँ दो लड़कियों के पिता होने से आदमी के भीतर बैचेनी है। दो लड़कियों के पिता होने पर आदमी अपने शब्द में बहुत हयां भरता है और उसके भविष्य पर हमेशा सोच विचार करता रहता है –

"सिर्फ बेटियों का पिता होने से
कितनी हया भर जाती है शब्दों में
पिता की कवि आँखें,
बेटियों को गुड़िया की तरह गोंद में खिलाते हाथ,
बेटियों का भविष्य सोच
बादलों से भर जाता है,
कवि का हृदय।"

वर्तमान परिवेश में अपमान सहनेवाले भूखे और निराश लोगों पर व्यंग्य करते हुए कवि कहता है कि आज लोगों की स्थिति खामोश हवा के समान है। जून की आँधी की तरह सचमुच एक दिन यहाँ के करोड़ों लोग क्रान्ति उठाने की ताकात दिखाएँगे।

"तपता हो देह के ब्रह्माण्ड में कितना कुछ
अपमान के पत्थर सहते रहते हैं
गूंगे दरस्तो की तरह आज
विनम्र देखती रहती है आँखें इनकी।"

आज के सामाजिक परिवेश में हर कहीं झूठ, पाखण्ड और विद्रोह की भरमार है। सब कहीं भलमनसाहत का परदा टंगा है, इसलिए आज के साधारण आदमी को इनके बीच अपने परिवार को सम्भालना असम्भव कार्य हो चुका है।

इस प्रकार इस संसार में दिखाई पड़नेवाली क्रूरता, हिंसा, दमन, अन्याय और ऐसे अनेक मानवद्रोहकी बातें हैं। कवि देवताले इन

सब की अपने ढंग से यथासंभव शिनाख्त करते हैं, उनके विरुद्ध चेतावनी देते हैं, और उनका मुकाबला करते हैं। कवि न्याय की लम्बी सरंग में सवर्ण हैंसी हैंसते हुए उन हत्यारों और राजदूतों पर व्यंग्य करते हैं, जो जुल्म के पहाड़ों को पुरन्ता करते हैं। कवि ने केवल सामाजिक हालातों के बारे में बयान नहीं दिए हैं, बल्कि समाज के ढाँचे की जटिलता पर व्यंग्य किया है, और अपनी वैयक्तिकता बनाई रखी है।



* रजिया समा

यशपाल ने उपन्यासों में शिल्पगत चेतना

प्रेमचंद के बाद हिन्दी कथा साहित्य को नयी दिशा निर्धारित करने के कार्य में यशपाल का सविशेष योगदान रहा है। हिन्दी के महान साहित्यकार यशपाल ने साहित्य की विभिन्न विधाओं पर अपनी कलम चलाई। उपन्यास, कहानी संस्मरण नाटक, निबंध और अनुवाद जिन्हें प्रमुख है। उपन्यास के क्षेत्र में यशपालने असीम यश संपादित किया है। उपन्यास में 'दादाकामरेड', 'देशद्रोही', 'दिव्या', 'पाटीकामरेड', 'मनुष्य के रूप', 'अमिता', 'झूठा-सच', 'बारह घण्टे', 'अप्सरा का शाप', 'क्यों फसे?', 'तेरी मेरी उसकी बात' आपके प्रमुख उपन्यास रहे हैं।

साहित्य का मूल्यांकन करते समय उसका बाहरी एवं भीतरी ढांचा परखा खाता है। साहित्य का शिल्प मूल्यांकन में विशेष महत्व रखता है। साहित्य का बाहरी रूप साहित्यकार की आत्माविव्यक्ति का साधन है। साहित्यकार जिन तरीके से या ढंग से अपने मन के भावों को व्यक्त करता है वही शिल्पविधि कहलाती है। भाषा और भाव एवं विचारों को पाठक के समक्ष रख सकता है। शिल्प यानी कला। शिल्पकार समाज का अभिन्न अंग है। समाज की विभिन्न समस्याओं को कलात्मक अभिव्यक्ति के साथ पाठक समक्ष रखता है। भाषा ही वह माध्यम है जो मनुष्य को मनुष्य से जोड़ता है। साहित्यकार का दायित्व है समाज की समस्या को अपने भाव और विचार के माध्यम से पाठक तक पहुंचाना। भाषा ही वह माध्यम है जो हृदय से जोड़ता है। हिन्दी भारत की समृद्ध भाषा रही है। हिन्दी का हृदय विशाल है अतः भिन्न भाषा के शब्दों को वह आसानी से स्वीकार कर लेती है। अतः विभिन्न भाषा के शब्द हिन्दी में अच्छी तरह से घूल मिल गये हैं। हिन्दी भाषा में विदेशी भाषा, देशी विभिन्न भाषा एवं बोलियों के शब्द भी घूलमिल गये हैं। संस्कृत के ज्यादातर शब्द हिन्दी में देखे जा सकते हैं।

विभिन्न साहित्यकारों में यशपाल का स्थान विशिष्ट रहा है। यशपाल की भाषा में कहीं पर भी बाह्याडम्बर दिखाई नहीं देता अलंकृत बनाके उसे बोझिल नहीं होने दिया। यशपाल की भाषा पर मार्क्सवादी विचारधारा का प्रभाव दिखाई देता है। राजनीतिक

हलचल का खुल्ला दस्तावेज उनका साहित्य बना है। मुहावरे कहावते, सुक्तियों का भरपूर प्रयोग करके अपने विचारों को पाठक तक पहुंचाने के कार्य में सफल रहे हैं। यशपाल का शब्दभण्डार विशाल रहा है। तभी संस्कृत, अंग्रेजी, पुर्तगाली, पश्तो आदि अनेक भाषा के शब्दों का प्रयोग उनके साहित्य में देख सकते हैं। सामासिक शब्दावली का भरपूर प्रयोग उनके उपसाहित्य में मिलता है। देश-विदेश की यात्राएँ यशपाल के शब्दभण्डार में बढ़ोत्तरी करते हैं। उर्दू, अरबी, फारसी आदि भाषा के शब्दों को यशपाल ने अपनी अभिव्यक्ति में स्थान दिया है। यशपाल की भाषा पर विभिन्न भाषाओं का प्रभाव देखा जा सकता है। भाषा के सम्बन्ध में कोई पूर्वाग्रह नहीं रखा पात्र की मानसिकता, पात्र के स्तर के अनुसार अपनी भाषाओं उनमें ढाल दिया है जैसा विषयवस्तु उसी प्रकार पात्र, परिस्थितियों के मुताबिक भाषा और शैली को अपनाया है। नाट्यात्मक शैली, वर्णनात्मक, विवराणत्मक और लाक्षणिकशैली, आशीर्वादात्मक शैली, उपदेशात्मक शैली, क्षेत्रिय बोलियों का प्रयोग, काव्यात्मक या सरस शैली का प्रयोग भी यत्र-तत्र पाया जाता है। अलंकृत शैली तथा उपमाओं का प्रयोग भी यशपाल ने किया है।

यशपाल के उपन्यास में संस्कृत, तत्सम् और तदभव शब्द पाये जाते हैं। जो निम्नलिखित हैं।

(अ) संस्कृत शब्द : यशपाल ने अपने उपन्यास साहित्य में संस्कृत शब्दों का प्रयोग विपुल मात्रा में किया है।

दिव्या : आलाप, ललना, ताम्र, तात, शयन, शीतल अन्याय, अग्रज, क्षण, कमल आदि

अमिता : अलक, अमित, अस्त, अमृत, आदेश, आसन, नेत्र, प्राण, प्रासाद, पक्ष, शस्त्र, ऋण, वधू, वरण, वंश आदि

अप्सरा का शाप : अप्सरा, अंगरक्षक, आश्रम, आखेटक, कच्छप, प्रमाद, वत्स, वहन, प्रसव, शीघ्र आदि

देशद्रोही : अवसर, अज्ञात, अपराध, रक्त, विषद, ममता, तेज, प्रकाश, विस्मय, पाप आदि

तत्सम शब्द :

दिव्या : कर्म, कृष्ण, कला, आशा, उत्तर, दया, मस्तक, मुख, मार्ग

अमिता : अग्नि, आयुष्यमान, आवास, गृह, मोद, विहार, लज्जा, नृत्य, नगर, प्रहर

अप्सरा का शाप : आकाश, कथा, कर्म, कार्य, कलश, भगिनी, सूर्य, सेवा, सौभाग्य, अलंकार

देशद्रोही : सेना, दुख, आशा, निराशा, अन्धकार, शिथिल, श्वास, विस्मय

झूठा-सच : अनुग्रहीत, अपरिग्रह, अवगत, अनुरोध, अनुनद, दुराग्रह, परिहास, शैशव, क्रंदन, सत्कार

तदभव् शब्द : यशपाल के उपन्यास में तदभव शब्द यत्रतत्र पाये जाते हैं जो निम्नलिखित हैं ।

दिव्या : कान, नदी, हाथ, आग, घर

अमिता : रात, उँचा, चाँद, घोड़ा, भाइ

देशद्रोही : गरमी, आँसू, काठ, नाच, बूढ़ा

अप्सरा का शाप : ओठ, बूँद, नदी, आँसू, कान, लाज

झूठा सच : आँख, आठ, नहाना, कमरा, चाँद

उर्दू शब्द : उर्दू के अनेक शब्द यशपाल के उपन्यासों में देख सकते हैं

दादा कामरेड : मजदुर, मजदुरी, रकाबी, खुफिया,

झूठा सच : इतमीनान, काफिला, तनखाह, मुहल्ला

देशद्रोही : तावीज, इनाम, नकाब, मजाल

(आ) विदेशी शब्द :

अरबी शब्द :

दादा कामरेड : इलाज, आदमी, किताब, उम्र, अखबार

झूठा सच : अदब, अदालत, कयामत, खबर, करम, कब्र,

देशद्रोही : अमीर, बदन, गरीब, मजाल, इज्जत, किस्मत, ईशारा आदि

फारसी शब्द :

दादा कामरेड : तेज, आराम

देशद्रोही : रिहाई, मकान, आराम, सूद, नेक, जायदाद, राह, बादाम आदि...

झूठा सच : कामयाब, खरीददार, खुद दस्तखत, गुनाह, बच्चा, बादशाह आदि

पश्तो भाषा (शब्दों) का प्रयोग :

देशद्रोही : वल्लटो विल, तबिहत खता, खैरयुस, खरबदोश आदि.....

तुकी से आये शब्द :

झूठा सच : कालीन, लाश, तलाश

पुर्तगाली से आये शब्द :

देशद्रोही : बोतल, अलमारी, मेज, तंबाकू

दादा कामरेड : कनस्तर, पिस्तौल, बालटी

झूठा सच : तम्बाकू, इस्त्री

फ्रांसीसी भाषा के शब्दों का प्रयोग :

देशद्रोही : कारतूस, अंग्रेजी

डच भाषा के शब्दों का प्रयोग :

बम (दादा कामरेड)

रूसी भाषा के शब्दों का प्रयोग :

देशद्रोही : सोवियत, रूबल, बिलेत, कोलखोज, सीवखोज, गस्तानित्सां

आदि 'देशद्रोही' उपन्यास की कथा वजीरी और रूस तक फैली हुई है । अतः इसमें पश्तो और रूसी भाषा के शब्दों के प्रयोग का मौका यशपाल को मिला है । यशपाल के उपन्यासों में अंग्रेजी भाषा के शब्दों का प्रयोग भी अधिक मिलता है ।

देशज शब्द :

यशपालने अपने उपन्यासों में स्थानीय या देशज शब्दों का प्रयोग करके अपनी लेखनी का चमत्कार दिखाया है । 'मनुष्य के रूप' उपन्यास में इसका प्रयोग बड़ी सफलता के साथ किया है । कोंगडा के पहाड़ी पहाड़ी प्रदेश के लोगों की भाषा में आंचलिक शब्दों का प्रयोग दिखाई देता है । कैसे.....पड़तनी, लाडी, धिर्थ मियाँ, बझियाणी, समरेढ, बट्टे, चलेरी, दाडी, तिहाजुं, घराट, कमीन.....आदि शब्दों के द्वारा वातावरण और जीवंत हो गया है ।

पंजाबी शब्द : पंजाबी जीवन और समाज से जुड़े शब्दों का प्रयोग यशपाल ने 'झूठा-सच उपन्यास' में किया है । जैसे.....कुडमाई, कुडियो, तंबी, तीमी, पीपल बेहडे, बल्ली बावे, भरजाई, मटियारे आदि.....

ईस प्रकार यशपाल के उपन्यासों में अनेक भाषा के शब्द पाये जाते हैं जिससे उपन्यास में जीवंतता आ जाती है । दिव्या, अमिता आदि उपन्यासों में सामाजिक शब्दों का प्रयोग भी देखते ही बनता है । कैसे..'दिव्या' उपन्यास में तल-तल, चार-चार, पूर्व-पुचिम, उत्तर-दक्षिण, परलोक, निर्बल, सिंहद्वार, मेघराज, पापमुक्त आदि.....'अप्सरा का शाप' उपन्यास में देखे तो देवलोक, देवराज, देवसभा, शयनकक्ष, धर्मसंकट, पंचाग्नि, छत्रपति, राजकृपा आदि.....।

यशपालने अपने उपन्यास साहित्य में मुंहावरों और लोकोक्तियों का भरपूर प्रयोग किया है । मुंहावरे, सुक्तियो, लोकोक्तियों के प्रयोग से उपन्यास की भाषा की गरीमा और बढ़ गई है । दष्टांत के तौर पर देखे तो

'मेरी तेरी उसकी बात' : आँख फोडना, आँख मूँदना, उलटे पाँव लौटना, कलेजा मुँह को आना, कलेजा मुँह को आना, मन बाग-बाग होना आदि.....

मनुष्य के रूप : कलेजे का टुकड़ा, कलेजा धडकना, माथा पीटना, आँखों में खून उतर आना, फूट-फूटकर रोना, आँख दोडाना आदि

यशपाल के उपन्यासों में सुक्तियों का प्रयोग अत्यंत प्रभावशाली ढंग से किया है ।

मनुष्य के रूप : सहृदयता जीवन की शोभा है । प्रेम केवल जीवन का पूरक है । दुनिया में नेक बने रहना बहुत मुश्किल है ।

'अमिता' उपन्यास :

अज्ञात शत्रु ही सबसे भयंकर होता है । जो पाप करेगा, उसका फल व पायेगा' आसक्ति और विलास से कभी संतोष नहीं होता । हाथी पाँव में सबका पाँव समा जाता है । भेद को भेद ही काटता है आदि यशपाल के उपन्यासों में कोष्टक का प्रयोग भी पाया जाता है ।

देशद्रोही :

पानी-फल (वाटर वर्क्स)

खूम्ब (धरती का फल)

शशलिवा प्रुती (यात्रा शुभ हो)

मतब (दवाखाना)

खिलावी (आया)

'मेरी तेरी उसकी बात' :

आई.डी.टी. दैनिक (इन्डियन डेली टेलीग्राफ)

मसावात (समता)

दूर (फोडे)

मुहाफिज (रक्षक)

एतकाद (विश्वास)

बौहटी (पत्नी)

हरिकेन (लालटेन) आदि



* Dr. Reji George

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I SHALL NOT HEAR THE NIGHTINGALE”: A SOCIO – PSYCHOLOGICAL STUDY OF HUMAN INSIGHTS

Khushwant Singh the most renowned columnist and reputed novelist of the Post – Independent India dealt with the sufferings and pains of human beings during the partition period in India and Pakistan.

All his famous novels like ‘Mano Manjra’, ‘The Train to Pakistan’, and ‘I Shall Not Hear the Nightingale’ dealt with the various issues of partition but it basically fathomed into the Socio- Psychological facets and its impact on common human beings. In this novel, the author has tried to explore the real subdued human sentiments and emotions explicitly and with a humane touch. In this paper, I have made a humble attempt to show that how various paradoxes of human relations and subdued sentiments are revealed. The present paper also exhibits the various human psyche reflected through various individuals in different phases of life and situations. A critical analysis of the deep insight of human sentiments that faced various tribulations at various layers of life and society is also examined critically. The word ‘Nightingale’ in the novel exhibits multi-dimensional image and symbol of realism and fantasy.

I shall Not Hear the Nightingale: A Socio – Psychological Study of Human Insights

Kushwant Singh, the most well read, columnist, author and journalist was born on 2nd Feb, 1915, in Haldai (now in Pakistan). He initially began his career as a lawyer and but soon he switched over to writing. In spite of being from a business family, he never showed his inclination towards business or construction. On the contrary, he developed the task of writing and published his first novel ‘*Mano – Manjra*’ that was later known as ‘*The Train to Pakistan*’. Initially, this work did not receive its due acceptance and praise but gradually it established Singh’s genius as a novelist. ‘*Train to Pakistan*’ won Grove Press Award in 1954. This award motivated him to try another novel and gradually ‘the Stone Started Rolling’ and another three novels such as like ‘*I Shall Not Hear the Nightingale*’ (1959), ‘*Delhi*’ (1990) and ‘*The Company of Women*’ (1999) won enough fame and name for Khushwant Singh.

The specialty of Khushwant Singh is that he unhesitatingly writes on the controversial issues and tries to present the real subdued human sentiments and emotions in an explicit manner. He is equally popular for his acerbic pen, wit, humour and also for satires on social issues.

In his novel, ‘*I Shall Not Hear the Nightingale*’ the social custom, atmosphere and family values system of pre-independence years has been beautifully presented. He has also boldly revealed the various paradoxes of human relations, subdued sentiments and its exhibitions in this work.

According to Santha Rama Rao : “Khushwant is direct to the point of brutality, unsentimentally observant, and in his bold characterization, he is ready to explore the least appealing aspects of human nature and relationship”.¹

The story ‘*I Shall Not Hear the Nightingale*’ moves around the Punjabi Sikh family of Buta Singh, who is a faithful magistrate of the British Raj. Contradictory to his beliefs and ideologies, his son

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Sher Singh becomes the leader of an anti-British group. The ideological conflict between a father and son is strikingly presented by Khushwant Singh. This reveals the tendencies and temperament of new generation and also ideological generation gap, that is to say, the Pro-British and the Anti-British. The novel also reflects upon the personal lives of the freedom fighters. This novel beautifully reveals the various human psyches reflected through various characters in different situations and phases of life. The story exhibits the religious, spiritual and traditional psyche of the characters. It also depicts the traditions, celebrations and rituals of the Sikh community during the world War II. Khushwant Singh has successfully made a creative rendering of the real. In this novel, he has made an attempt to explore the deep insight in to the human psyche that faced trials, tribulations and temptations at various layers and phases of life. The author has tried to explore and expose the hidden human and natural psychological reflections, insights and responses very meticulously and quite naturally. He has boldly exposed the extra marital relations and subdued natural human instincts through various characters and situations in which they are placed. The situation in the first chapter of the novel is rooted deeply in the characters, and illustrates their mentality of young school boys who pretends to be youth and matured warriors. Their inner psychological repression against the British is reflected in the performance of 'baptism in blood' in accordance to the conformity of the ancient Hindu custom of dipping sword in the blood of goat and laying them before Goddess Durga to be blessed. Thus, in the beginning itself Singh presents the custom – ridden psychology of younger generation during the Pre – Independence era.

The incident where Sher Singh is reluctant to shoot and kill the crane (sarus), as he believed that "if one of a pair is killed, the other dies of grief".²

It is the culture, inculcations and nourishment of the family values that forces Sher Singh to think so. Being brought up in a traditional Sikh family under the strict guidance and religious attitude of his mother – Sabharai, prevents him from killing a harmless bird. However, the influence of his friends like Madanlal

and other youngsters changed the harmless psychological approach of Sher Singh. Later, we observe that the same Sher Singh attains the courage to kill even a fellow human being. We witness the transformed brutal mentality of Sher Singh. The very idea of patriotism is reduced to a sordid murder which Sher Singh commits to save himself. However, Sher Singh neither owned the strength nor the manhood to cope up with the 'conflicting emotions of guilt and pride'

The nature and deeper insight of a true, elderly house wife is reflected in the portrayal of Sabharai - the wife of Bhuta Singh and an affectionate mother of Sher Singh. She embodies the Indian culture of her time. She is presented as a replica of common Indian housewives, who are generally, devoted to the services of family members and religious activities. She regarded '*The Granth Sahab*' as her source of knowledge and encouragement. She was a woman with great maturity, deeper understanding of life and true towards her own conscience. When she returns from Simla, she realizes that something has gone wrong back at home and invades her serene and religious world of moral values. On her return, she comes to know about her son's arrest and wants to meet him in the jail. Before proceeding, she reads the *Granth Sahab* continuously and she prays the entire night at the Golden Temple, takes a dip in the cold water in preparation for seeing her son. She conveys the message of her husband to her son. However, she reveals the true feeling which her conscience conveyed. She said :

"... my son had done wrong. But if he named the people who were with him, he would be doing greater wrong. He was no longer to be regarded as a Sikh and I was not to see his face again."³

It is this voice of truth and courage that elevates her status to a greater and higher position. Here, once again, the in-depth psychology of a conscientious mother is exhibited very naturally. She becomes the voice of truth and love and thus gives the correct advice.

She is the spirit of the entire family. She is a woman with an extraordinary, profound and instinctive understanding of life. Khushwant Singh has minutely

portrayed her matured sense of viewing and dealing with the issues of life.

Kushwant Singh has exposed the deeper and hidden unfulfilled carnal physical desires of a married woman and married man. It is clearly revealed in the physical intimacy and advances developed by Champak (the wife of Sher Singh) and Madanlal (the friend of Sher Singh). Champak is presented as a woman with unfulfilled lust which is reflected in her extramarital affairs with Madanlal. Here, the author wants to draw the attention towards the drawbacks of joint Indian family where married couples are forbidden to meet openly for satisfying their physical quest. Many young couples live with unfulfilled physical impulses 'resulting in an obsession with sex and in many perversions which result from frustration, sadism, masochism and most common of all exhibitionism'.⁴

Such psychological state of mind may lure them towards extramarital relations. One more example of the subdued physical urge of human being is exhibited through the character of Shunno – the middle aged maid servant. An interesting and shocking event emerges as Shunno was seen seeking help of Peer Sahib (A muslim saint) to get cure of a mysterious disease. As she had no faith on eastern or western medicines, she sought the help of Peer Sahib. This encounter with Peer Sahib 'violates the rules of celibacy' and we see Shunno engulfed in sensual pleasure with Peer Sahib, it is strikingly explicit in the following narration by Kushwant Singh: "Here was a man twenty years younger, strong and virile with an untamed lust savagely tearing off the padding of respectability with which she had covered herself. He stirred up the fires of volcano which had all but become extinct. It was wrong, but was deliciously irresistible...."⁵

The illicit physical relations with Peer Sahib and Shunno run counter with the illicit affairs of Madan and Champak. However, there is difference of social stratification. Madan and Champak belong to the upper class stratum of Indian hierarchical society and Shunno and Peer Sahib belong from lower section of the society. The author attempts to depict and expose the "tearing off the padding of respectability".

Infact, it is ironical presentation of this stark reality and truth in all 'its horror and elemental passion'. The author opines that any socio – psychological suppression especially related to sensual dissatisfaction can cause very serious consequences. Kushwant Singh has tried to treat the theme of carnal desire at psychological level which results into physical intimacy. Physical intimacy results out of love or attraction. Though it comes at a later phase, it remains one of the priorities for a balanced socio – psychological society. The author has boldly unveiled the stark and bitter truth of society which exists in the real world and has poignantly satirized these kinds of people. In this novel, the author has courageously presented the personal life of freedom fighters.

The novel also beautifully reveals the vivid traditional and cultural description of the Sikh rituals and traditions. In the present novel, Kushwant Singh has minutely explored the various socio – cultural spiritual, religious and psychological facets of the pre – independent Punjabi society with all its realistic representation.

The 'nightingale' in the novel is multi dimensional symbol. The symbol of 'nightingale' in *I Shall Not Hear the Nightingale* is, thus, a symbol of realism.

REFERENCE

- ⇒ Santha Rama Rao : *The New York Times Book Review*, December 13, 1959, P.36
- ⇒ Singh, Kushwant, *I Shall not Hear the Nightingale*, Delhi: Ravi Dayal Publisher, 1997, P.4
- ⇒ Ibid, P. 208
- ⇒ Ibid, pp. 47-48.
- ⇒ Ibid, p. 159



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ભારતમાં કૃષિક્ષેત્રનું મહત્વ અને આર્થિક વિકાસ

૧૮ મી સદી દરમિયાન ભારતએ ઉદ્યોગ પ્રધાન દેશ ગણવામાં આવતો હતો. દેશમાં ગૃહ ઉદ્યોગોનો સારો વિકાસ થયો હતો. ઔદ્યોગિક ક્રાંતિનાં આધારે ઈંગ્લેન્ડમાં કારખાના પદ્ધતિ દ્વારા ઉત્પાદન શરૂ થયું હતું તેજ સમયે ભારતમાં અંગ્રેજ શાસનનો પાયો નખાયો હતો. ભારતમાંથી કાચો માલ સસ્તા ભાવે લઈ જઈ ને ભારતનાં જ બજારોમાં તૈયાર માલ મોંઘા ભાવે વેચી ભારતમાં ઉદ્યોગ ધંધાનું શોષણ કરવામાં આવતું હતું. જેનાં લીધે ગૃહ ઉદ્યોગો નાશ પામ્યા અને ભારત ઉદ્યોગપ્રધાન દેશમાંથી કૃષિપ્રધાન દેશ બની ગયો.

વર્તમાન સમય દરમિયાન કૃષિક્ષેત્રમાં ૧૦ મી પંચવર્ષીય યોજના દરમિયાન કૃષિ વિકાસનાં દરનો લક્ષ્યાંક ૪.૧ % હતું તેની સામે યોજનાં દરમિયાન વાર્ષિક વૃદ્ધિ દર ૨.૨ % જેટલો જોવા મળ્યો હતો. ભારતની ૨/૩ વસ્તી હજી પણ આજિવિકા માટે કૃષિ પર આધાર રાખે છે. કૃષિક્ષેત્રએ ઔદ્યોગિક ક્ષેત્રને કાચો માલ પૂરો પાડે છે. હજી પણ રાષ્ટ્રીય આવકમાં ૨૪ % હિસ્સો કૃષિક્ષેત્ર માંથી આવે છે. તેમજ કૃષિક્ષેત્રે ૧૯૫૧માં લગભગ ૨૦ કરોડ લોકો રોકાયેલા હતા. આજે ૬૦ કરોડ કરતા પણ વધારે લોકો રોકાયેલા જોવા મળે છે. કૃષિક્ષેત્રમાં રાષ્ટ્રીય આવકનો હિસ્સો ૨૦ % જેટલો થયો છે. ૧૯૮૨-૮૩ થી ૨૦૦૩-૦૪ નાં સમયગાળા દરમિયાન મિશ્ર રાષ્ટ્રીય પેદાશો કૃષિક્ષેત્રે ૨.૧૪ લાખ કરોડથી વધીને ૫.૨૨ લાખ કરોડ થઈ છે. વધતી વસ્તી સાથે ભારતમાં ખેડાણોનાં ઘટકો ૧૯૮૧ માં ભારતમાં કુલ ખડકો ૧૦૬.૬૪ મિલિયન હતા તે ૧૯૮૫ માં વધીને ૧૧૬ મિલિયન થયા હતા.

આમ, જમીનની ઉત્પાદકતા જાળવવા માટે જમીનની ફળ દ્રુપતા જાળવવી જરૂરી છે. કૃષિક્ષેત્રે સિંચાઈ, જંતુનાશક દવાઓ અને રાસાયણિક ખાતરો નાં ઊપયોગથી ઉત્પાદકતામાં વધારો મેળવી શકાયો છે. અનાજ નો ભંડાર ગણાતા રાજ્યો જેવા કે પંજાબ અને હરિયાણા એ છેલ્લા ૭ વર્ષમાં કૃષિક્ષેત્રનાં ઉત્પાદનમાં વધારે ફાળો આપ્યો છે.

કૃષિક્ષેત્રમાં કાચો માલ તૈયાર થાય છે. જ્યારે ઉદ્યોગો મૂલ્ય વૃદ્ધિ કરે છે. આથી ઔદ્યોગિક ચીજવસ્તુઓનાં ભાવો ઊંચા જ રહેવાના હતા. કૃષિક્ષેત્રે વેપારની શરતો પ્રતિકુળ જોવા મળે છે. કિસાનોની સોદા શક્તિ નબળી જોવા મળે છે. ખેડુતોને નીચા ભાવો મળે છે. જ્યારે કુદરતી પરિસ્થિતિ પ્રતિકુળ હોય ત્યારે ભાવો ઊંચા હોય છે. ત્યારે ખેડુતો પાસે વેચવા માટે પાક હોતો નથી. કૃષિક્ષેત્રની આ સમસ્યા કૃષિક્ષેત્રની નીચી ઉત્પાદકતા, વધતું ઉત્પાદન ખર્ચ અને ઉત્પાદકતાનાં નીચા ભાવો સાથે સંકળાયેલી છે.

ભારતમાં ખેડાણ ધરાવનાર ખેડુતોમાંથી ૮૦ % ખેડુતો નાના અને સીમાંત ખેડુતો હતા. જેમની પાસે ૭ એકર થી ઓછી જમીન હતી. ૧૯૮૦-૮૧ માં તેમનું ખેડાણ ઘટક ૦.૩૯ હેક્ટર હતું તે ૧૯૮૫-૮૬ માં ૦.૪૦ હેક્ટર થયું હતું. પછીનાં વર્ષમાં એ શક્ય છે કે ખેડાણ ઘટક નાનું થયું હશે. ભારતમાં મોટા ખેડુતો ૧ % હતા જેઓ ૧૫ % ખેડાણ લાયક જમીન ધરાવતા હતા. ખેડાણ ઘટકનું સરેરાશ કદ ૧૯૮૦-૮૧ માં ૧.૪૯ હેક્ટર હતું. તે ઘટીને ૧.૧૪ હેક્ટર થયું છે. આ બાબત એક જ વિસ્તાર પૂરતી મર્યાદિત નથી. પરંતુ ૩ થી ૪ વિસ્તારને આવરી લે છે. ખેડાણ ઘટકોનું નાનું થતું જતું કદ કૃષિવિકાસને અવરોધે છે. ખેડાણ ઘટક નાનું હોવાને લીધે ખેડુતોને વધુ મૂડીરોકાણ માટે પ્રોત્સાહન રહેતું નથી. કૃષિમાંથી મળતી આવક અપૂરતી અને અનિશ્ચિત હોવાને કારણે ખેડુતોને કૃષિમાં રસ રહેતો નથી. એક અંદાજ પ્રમાણે ૫૦ % ખેડુતો કૃષિનો ધંધો છોડી દેવા તૈયાર છે. જેને કારણે ભારતમાં બીજી હરિયાણી ક્રાંતિની જરૂર વર્તાય છે. કૃષિક્ષેત્રમાં ખંડવિભાજન અને ઊપવિભાજન એ વસ્તી વધતા વધતું જ જશે. અને જમીન એ ભારતમાં સામાજિક મોભો અને પ્રતિષ્ઠાનું પ્રતિક મનાય છે.

સન ૨૦૧૧ સેન્સસ પ્રમાણે ભારતમાં વિશ્વની કુલ જમીનનાં ૨.૪ % , વરસાદનાં ૧ % , વનસ્પતિનાં ૫ % તથા ચરિયાણ ૦.૫ % છે. જેના પર વિશ્વની ૧૬.૭ % વસ્તી તથા ૧૫.૨ % પશુધન આધારીત છે. દેશની કુલ વસ્તીનાં ૭૨ % આજે પણ ભારતનાં દુર દરાજનાં વિસ્તારમાં

* એડહોક વ્યાખ્યાતા, શ્રીમતી પી.કે.કોટાવાલા આર્ટ્સ કોલેજ, પાટણ

વસેલા ૬ લાખ ઉપર ગામડાઓ છે. ભારતમાં ૧૪૦.૩ મિલિયન હેક્ટર જમીન વાવેતર વિસ્તાર હેઠળ આવેલી છે, જે છેલ્લા એક દશકાથી મામુલી વધઘટ થી લગભગ સ્થિર છે. ભારતમાં કુલ ૧૨.૭૩ કરોડ ખેડુતો તથા ૧૦.૬૮ કરોડ ખેત-મજૂરો છે. કુલ ખેડુતોનાં ૮૧.૮૦ % ખેડુતો સીમાંત અને નાના ખેડુતો છે, જેમની પાસે સરેરાશ ક્રમશઃ ૩૯ હેક્ટર તથા ૧૪૧ હેક્ટર છે. જેનું ક્ષેત્રફળ કુલ ખેતીલાયક જમીનના ૩૯ % છે. જ્યારે મધ્યમ ખેડુતો પાસેનાં ૧૮.૧ % ક્ષેત્રફળ સહિત મધ્યમ અને મોટા ખેડુતો પાસે કુલ ૬૧ % ક્ષેત્રફળ છે. વિશ્વમાં કુલ સિંચાઈ ક્ષેત્રનાં ૮૫.૮ મિલિયન હેક્ટર ક્ષેત્ર ભારતમાં છે. જે વિશ્વમાં સૌથી વધારે છે, જે પૈકી ૫૮ % ખેતી આજે પણ વરસાદ આધારિત છે.

કુલ મળીને ૪૮.૫૦ કરોડની વિશાળ પશુસંપત્તિ સાથે ભારત ભેંસ પાલનમાં પ્રથમ, ગાય પાલનમાં દ્વિતીય, ઘેટાં-બકરા પાલનમાં અનુક્રમે ત્રીજું અને ચોથું સ્થાન ધરાવે છે. જ્યારે મરઘા પાલનમાં પાંચમાં નંબરે છે. અને મત્સ્ય પાલન ક્ષેત્રમાં ભારતનું સ્થાન ત્રીજું છે. આજે વિશ્વમાં સૌથી વધુ દુધ ઉત્પાદન ભારતમાં થાય છે.

➤ **કૃષિક્ષેત્રને મજબૂત બનાવવા માટેની પદ્ધતિઓ :-**

- ❖ ખેતર પર કબજો વધારવાની પ્રક્રિયા.
- ❖ ખેતીની જમીન પરનો કાયદેસરનો ભાડુઆત.
- ❖ જમીનની સુધારણા.
- ❖ જમીનનાં સોદા માટેનું બજાર.
- ❖ જાહેર સાહસોમાં ઉત્પાદકતાની સુધારણા.
- ❖ કૃષિક્ષેત્ર માટે ધિરાણ.
- ❖ બજારની પ્રક્રિયા.
- ❖ વિસ્તરણ પ્રણાલીમાં સુધારા.

➤ **કૃષિક્ષેત્રનાં વિકાસ માટે સરકારે લીધેલા પગલાઓ :**

- ❖ ૨૦૦૪ થી કૃષિક્ષેત્રે ઉદ્ભવતી સમસ્યાઓનાં નિરાકણ માટે કિસાન કોલ સેન્ટર શરૂ કરવામાં આવ્યા છે.
- ❖ જમીન સુધારવાના કાય ક્રમો દ્વારા પણ કૃષિ વિકાસને આગળ વધારવાના પ્રયત્નો કરાયા છે.
- ❖ NAFED – National Agriculture Co-Operative Marketing febration of India Ltd. ની સ્થાપના કૃષિ પેદાશોના વેચાણની સરળતા ખાતર કરવામાં આવી છે.
- ❖ જમીન રેકૉર્ડની કમ્પ્યુટરીકરણ માટે ૧૯૮૮-૮૯ માં કેન્દ્ર સરકાર દ્વારા યોજના અમલમાં આવી છે.
- ❖ Isoporn-Intigrated scheme of Oilseeds Pulses, Oil Palm, and Maize કૃષિ મંત્રાલય દ્વારા કેન્દ્રીય યોજના શરૂ કરવામાં આવી છે.

❖ જયપ્રકાશ મિશન ઓફ લેન્ડ રીફોર્મ સ એન્ડ વેસ્ટ લેન્ડ ડેવલપમેન્ટ ગ્રામીણ વિકાસ મંત્રાલય દ્વારા રચના કરવામાં આવી છે.

❖ Agriculture Product Market Committee (APMC) ACT-2003 કૃષિ બજાર ક્ષેત્રે સુધારાઓ લાવવા કેન્દ્રીય યોજના શરૂ કરવામાં આવી છે.

❖ (NAIS) National Agriculture Insurance Scheme 1999-2000 ખેડુતોને પાક નુકશાનથી રક્ષણ આપવા માટે આ યોજના શરૂ કરવામાં આવી છે.

❖ કૃષિ શ્રમિક સુરક્ષા યોજના ૨૦૦૧ બહુ ઉદ્દેશીય કૃષિ શ્રમિકોને રક્ષણ માટેની આ યોજના છે.

❖ Farm Income Insurance scheme 2004 કુદરતી આપત્તિઓના કારણે આવક ગુમાવનાર કૃષિકારને રક્ષણ આપતી આ યોજના છે.

❖ નવી રાષ્ટ્રીય કૃષિ નીતિ – ૨૦૦૦

❖ સઘન કૃષિ ક્ષેત્રે કાર્યક્રમ – ૧૯૬૫

❖ પશુધન વિકાસ કાર્યક્રમ – ૧૯૮૩

➤ **ભારતમાં અનાજનું ઉત્પાદન :-**

છેલ્લા પાંચ દાયકાના ઈતિહાસ પર નજર કરતાં જોવા મળે છે કે ભારતીય કૃષિનાં હેક્ટર દીઠ ઉત્પાદનમાં ક્રમશઃ વધારો થતો જાય છે. મારા મતે આનો સૌથી વધારે યશ કોઈને પણ આપતા પહેલા ભારતીય ખેડુતોને આપવો જોઈએ. કારણ કે વિ વના વિકસિત દેશો કે જે ભારતને ગરીબ અને નિરક્ષરોનાં દેશ તરીકે ઓળખાવતા હતા, એવા નિરક્ષર અને ગરીબ ખેડુતોએ ખેતીનાં વિચારો, માન્યતાઓ , પ્રણાલિકાઓ અને સાધનો છોડીને જે નવો અભિગમ અપનાવીને દેશની કૃષિનો નકશો બદલી નાંખ્યો છે. ભારતે છેલ્લાં પાંચ દાયકામાં હેક્ટર દીઠ ઉત્પાદનની દ્રષ્ટિએ નોંધપાત્ર સિદ્ધ હાંસલ કરી છે. ભારતીય સેન્સસ તરફ નજર કરીએ તો છેલ્લા પાંચ છ દાયકામાં જેટલી તીવ્રતાથી વસ્તીમાં વધારો થયો છે તેટલા પ્રમાણમાં અન્નનો પુરવઠો ઉભો કરવો તે કૃષિતંત્ર માટે એક મોટી વિટંબણા હતી તેમ છતાં ભારતીય ખેતી અને ખેડુતોએ નવીન કૃષિવિદ્યા, સુધારેલા બિયારણો, જંતુનાશક દવાઓ, સિંચાઈની સગવડો, વૈજ્ઞાનિક પદ્ધતિઓ, કુત્રિમ ખાતરો તેમજ વનસ્પતિ સંવર્ધન અને કૃષિક્ષેત્રે અધ્યતન ટેકનોલોજીને અપનાવીને અન્નનાં ઉત્પાદનમાં નોંધપાત્ર વધારો કર્યો છે. ભારતમાં છેલ્લા કેટલાંક વર્ષોથી કૃષિ નીતિઓના કારણે અનાજનાં ઉત્પાદનમાં સ્વક્ષમતા અને સ્વવલંબન પ્રાપ્ત કર્યું છે. ખાદ્ય પાકોના ઉત્પાદનમાં ઈ.સ ૨૦૧૦-૧૧ માં ૨૪૪.૭૮ મિલિયન ટન થયું છે. રાષ્ટ્રીય આવક, મૂડીસંચય, રોજગારી, નિકાસ વગેરેનાં વિકાસમાં કૃષિ ક્ષેત્રનો ફાળો જોવા મળ્યો છે. રાષ્ટ્રીય આવકમાં ૧૪.૭ % ફાળો, મૂડીસંચયમાં ૨૦ % , રોજગારીમાં ૫૮ % અને નિકાસોમાં ૮.૧ % ફાળો

આપ્યો છે.

(ટેબલ નં- ૧) (ઉત્પાદનનું પ્રમાણ મિલિયન ટનમાં)

પાક	2007-08	2008-09	2009-10	2010-11	2011-12	2013-14
ચોખા	96.69	99.18	89.09	95.98	105.30	105.00
ઘઉં	78.57	80.68	80.80	86.87	94.88	92.50
જુવાર	7.93	7.25	6.70	7.00	5.98	6.00
બાજરી	9.97	8.89	6.51	10.37	10.28	10.00
મકાઈ	18.96	19.73	16.72	21.73	21.76	22.50
રાગી	2.15	2.04	1.89	2.19	1.93	2.00
નાનું અનાજ	0.55	0.44	0.38	0.44	0.45	0.50
જવ	1.20	1.69	1.35	1.66	1.62	1.50
મોટું અનાજ	40.75	40.04	33.55	43.40	42.01	42.50
અનાજનું કુલ ઉત્પાદન	216.01	219.90	203.45	226.25	242.20	240.00
દાળનું ઉત્પાદન	2007-08	2008-09	2009-10	2010-11	2011-12	2013-14
તુવર	3.08	2.27	2.46	2.86	2.65	3.20
ચણા	5.75	7.06	7.48	8.22	7.70	8.66
અડદ	1.46	1.17	1.24	1.76	1.77	1.83
મગ	1.52	1.03	0.69	1.80	1.63	1.33
દાળનું કુલ ઉત્પાદન	14.76	14.57	14.66	18.24	17.09	19.00
કુલ ખાદ્યન ઉત્પાદન	230.78	234.47	218.11	244.49	259.29	259.00

(Source :- Directorate of Economics & Statistic, Department of Agriculture, Govt. of India)

કોષ્ટકમાં દર્શાવ્યા પ્રમાણે ૨૦૦૭-૦૮ થી ૨૦૧૧-૧૨ના વર્ષ સુધીનું કુલ ઉત્પાદન અને ૨૦૧૩-૧૪નું વર્ષ ઉત્પાદનનો અંદાજ દર્શાવે છે. તે મુજબ ચોખા, ઘઉં, અને મકાઈ ભારતની કુલ અનાજની માંગના ૯૧.૬૩ % માંગ સંતોષે છે. અનાજનું કુલ ઉત્પાદન ૨૦૦૭-૦૮માં ૨૧૬.૦૧ મિલિયન ટન હતું, જે ૨૦૧૧-૧૨માં વધીને ૨૪૨.૨૦ મિલિયન ટન થયું છે. જો કે બરછટ ધાનની માંગ સતત ઘટતી જવાથી ખેડુતો તેના વાવેતરમાંથી પાછા પગ કરતા જોવા મળ્યા છે. પરંતુ તેમ છતાં ભારતે કઠોળમાં સ્વનિર્ભરતા પ્રાપ્ત કરી ૨૦૦૭-૦૮ થી ૨૦૧૧-૧૨ સુધીમાં કુલ ખાદ્યન ઉત્પાદન ૨૩૦.૭૮ મિલિયન ટન થી લઈને ૨૫૯.૨૯ મિલિયન ટન સુધી પહોંચાડ્યું છે.

વિશ્વની ૭ બિલિયન વસ્તીમાંથી ૧૭.૪૭ ટકા વસ્તી ધરાવનારો દેશ વિ વની કુલ ભુપૃષ્ઠના માત્ર ૨.૪ ટકા જ ભુપૃષ્ઠ ધરાવે છે. છતાં ભારત ધીમે ધીમે તેલબીયાના ઉત્પાદનમાં સ્વાવલંબન સાધવાના પુરા પ્રયત્નો કરી રહ્યું છે. ૨૦૦૮-૦૮ માં દેશમાં તેલબીયાનું કુલ ઉત્પાદન ૨૯૭.૫૫ લાખ ટન હતું, જે ૨૦૧૦-૧૧ માં વધીને ૩૨૪.૧૪ થયું હતું.

(ટેબલ નં- ૨) (ઉત્પાદન લાખ ટનમાં)

પાક	2007-08	2008-09	2009-10	2010-11	2011-12	2013-14
મગફળી	91.83	71.68	54.28	82.65	69.64	79.24
એરંડા	10.54	11.71	10.09	13.50	22.95	18.59
તલ	7.57	6.40	5.88	8.93	8.10	7.44
રામતલ	1.10	1.17	1.00	1.08	0.98	1.09
રઈ/સરસવ	55.34	72.01	66.08	81.79	66.04	74.90
અળસી	1.63	1.69	1.54	1.47	1.52	1.58
કુસુમ	2.25	1.89	1.79	1.50	1.45	2.75
સુરજમુખી	11.63	11.58	8.51	6.51	5.17	10.19
સોયાબીન	109.68	99.05	99.64	127.36	122.14	117.00
તેલબીયાનું	297.55	277.19	248.82	324.79	297.99	310.00
કુલ ઉત્પાદન						
કપાસ	258.84	222.76	240.22	330.00	352.00	353.00
શણ	102.20	76.34	112.30	100.09	107.36	106.03
શેરડી	3481.88	2850.29	2923.02	3423.82	3610.37	3417.73

(Source :- Directorate of Economics & Statistic, Department of Agriculture, Govt. of India)

➤ કૃષિક્ષેત્રનો નિકાસક્ષેત્રમાં ફાળો :-

૧૨૧ કરોડની વસ્તી ધરાવતો દેશ અન્ય કોઈ દેશનાં લોકોની અનાજની માંગ ને પુરીપાડે તો તે નવાઈ નથી, પણ ભારતીય ખેડુતોએ મહત્વની સિદ્ધિ હાંસલ કરી છે. આજે ભારત કૃષિક્ષેત્રે સ્વનિર્ભરતા પ્રાપ્ત કરીને એક નિકાસકાર દેશની પ્રતિભા ઉભી કરી છે. વૈશ્વિક મંદી અને યુરોપિયન દેશની નાણાકીય કટોકટી ભલે ભારતના દ્વિતીય અને તૃતીયક્ષેત્ર પર નકારાત્મક અસરો જન્માવી હશે પણ કૃષિક્ષેત્ર તેનાથી પર રહ્યું છે. ભારતમાં ખાદ્યનનો પુરવઠો બફરસ્ટોક અને રૂપિયાના બ્રાહ્મમૂલ્યમાં થયેલ ૧૩ ટકા જેવા અવમૂલ્યનને ભારતીય કૃષિ પેદાશને વિદેશમાં સસ્તી બનાવતા કૃષિ નિકાસને પ્રોત્સાહન મળ્યું છે. વર્ષ ૨૦૧૨માં ભારતે માત્ર ૮ અબજ ડોલરની કૃષિ પેદાશ નિકાસ કરી હતી, જે નાણાકીય વર્ષ ૨૦૧૩માં ૨૫.૪૫ અબજ ડોલરની નિકાસ કરી છે.

(ટેબલ નં - ૩) (લાખ ડોલરમાં)

કૃષિ પેદાશો	વર્ષ-૨૦૧૦	વર્ષ-૨૦૧૧	વર્ષ-૨૦૧૨	વર્ષ-૨૦૧૩
ચોખા	23,923	25,429	50,307	62,136
ઘઉં	-	02	2,135	19,277
ખાંડ-મોલાસિસ	294	12,364	18,920	16,177
મરી-મસાલા	12,978	17,654	27,586	28,155
તેલબીયાં ખોળ	16,508	24,295	24,616	29,079
મીટ-મીટ પ્રેપરેશન	13,250	19,665	29,445	32,903

VG VFGF SFZ6 HFIT I 7FG S IX1F6GF VEFJ ; DFHDF
 , uG SIF 5KL ; D: IFGM EMU AGTF CM I KP
 VS VY 5DF6 CC HFIT I IX1F6 V8 , AF/S VG TZ6MG
 HFIT I AFATM ; AWL IYFY VG J7FGS DFUNXGPCC
 DGMJ7FGSM HFIT I IX1F6G VFZLT ; DHFJ KP CC VY56
 HFIT I IX1F6 V jIISTGF ; JFUL jIISTtJGF IJSF ; GM
 VTUT EFU KP VG T HLJGGF AWFH DCTJGF TASSFVIG
 VFJZL , KP CC

#P HFIT I IX1F6G DCTJP

HFTLI IX1F6G DCTJ ; DHFJTF OMPNZF ; ZL SC K AF/
 SG JI 5DF6 . IgNIG TYF HFTLI 7FG VF5J VFJXIS
 K AF/S 5MT VFOL v VJ/L 4 KFG L K5GL VG UZZ:T
 NMZGF V` , L , DFICTL D/J VGF SZTF TM T ; FR4 ; RM84
 J7FGS 7FG ; DI ; ZD/JT JW . Q8 K ; 1F5DF HFIT I
 IX1F6 VGSZLT DCTJG KP jIISTUT :JF:yI VG SF8IAS
 :JF:yI V AG NIQ8V HFIT I IX1F6 BF ; DCTJ WZFJ KP
\$PHFIT I IX1F6 XF DF8 VF5J H~ZL Km

- S8A ; FY ; DFIMHG ; FWJFP
- IJF 5-LDF HFTLI AFATM 5tI TNZ:TL VG HFUTTF
IJS ; FJJFP
- J:TL JWFZJFGF NZDF W8FOM SZJF q J ; IT IJ:OM8G
V8SFJJFP
- ; DFHDF AGTF A/FtSFZGF IS ; ; FVMG 5DF6 38FOJFP
- IJF 5-LDF D/TL HFTLI IJSIT VG V7FGTF NZ
SZJFP
- jIISTGF ; FDFIHS jIJCZFGL ; DH VF5JF TYF
; FDFIHS ; :SFZG I ; RG SZJFP
- HFIT I IX1F6 VF5JFYL HFIT I JITVMG pwJLSZ6
SZL XSFI KP
- , uG HLJG VG HFIT I VGS , G DF8 H~ZL KP
- TZ6 v TZ6LVMDF YTF HFIT I ZIMU V8SFJL XSFI
KP
- jIISTtJGM IJSF ; ; FWJF HFIT I IX1F6 H~ZL KP
- TNZ:T GFUZLS VG VFNX DFTF v I5TF AGJF DF8
56 HFIT I IX1F6 VIGJFI KP
- HFIT I IX1F6 HFIT I GF VUGF EFDS VG ; SIRT
IJRFZIMDFYL ACfZ GLS/JF p5IMUL KP
- HFIT I TFGF BM8F bIF , MG NZ SZJF H~ZL KP
- :JVUM :JrKTF ZFBJF q HF / JJFP
- TZ6 v TZ6LVIMGL DHJ6 NZ SZJFP
- TZ6LVIMGF ZHINXGG WD ; FY ; FS/LG VKT
jIJCZFDFYL ACfZ , FJJFqZHINXG VS XFZLIS 5ISIF

KP VD ; DHFJJF HFIT I IX1F6 H~ZL KP

- WDFWTF tIHJF DF8 VG ; tITFGM :JLSFZ SZJFP
- , 584 NZFRFZL jIISTVMYL ARJF DF8 HFIT I IX1F6
VF5J VIGJFI KP

5P HFIT I IX1F6 DF8 X1F6S ; :YFVIMGF SFIM o
 HFIT I IX1F6 VF5TF DFwIDIMDF ; F 5YD S8A K 5ZT
 DFTFv I5TF S S8AGF VgI ; DIJI:S ; eI EF . vACG
 HFIT I IX1F6GF ; SIRT IJRFZGF SFZ6 3ZGF
 ; eIvTZ6vTZ6LG IX1F6vDFUNXG 5MTFGF ; TFGM
 TZOYL5KTF 5`GIMGF pOFp HJFAIM VF5 KP TDG VJM OZ
 CM I K S VFJ IX1F6 VF5JFGYL 5MTFG ; TFG VGITS
 HFIT I jIJCZFZ TZO NMZJFXP 5ZT T GZL V7FGTF K P
 VFJL S8A VG DFTF v I5TFGL V7FGTF NZ SZJF DF8
 XF/FvSM , HMDF JF , L ; D , G JBT DFTFvI5TFG S JF , LG
 HFIT I IX1F6 VUGF BM8F bIF , MG NZ SZJFG DFUNXG
 VF5L XSFI P

- XF/F S SM , HGF IX1FSM wJFZF JF , LVIMDF HFTLI
IX1F6GL HFUTTF , FJJF DF8 5ItGM SZJF P
- IX1FSIMV JF , LVIMG H6FJJ S 5MTFG ; TFG ! (JQFG
YFI TM TG ID+ ; DFG U6LG TG ; D: IFGF 5`GIMGF HJFA
VF5JF VG ; D: IF IGZFSZ6 , FJJF H6FJJJ
- JF , LqDFTF I5TFG H6FJJ S HM TD AFASIMG ; XI
ZfbIF JUZ HFIT I TFG IMuI DFUNXG GCL VF5M TM TDFZ
AF/SSIFZS VFJUDF VFJLH . G VW8LT 5U , EZLA ; X
P VFJF ; FDFIHS ; D: IFJF/F 5`GIMYL JFSO SZL XSFI P
- XF/FDF 56 IJnFYLVIMG IX1F6 5MT HFIT I IX1F6
VUGL ; DH VF5 SFZ6 S IX1FS 5MT DGMJ7FGSGF
HF6SFZ CM I KP VG TZ6 TZ6LVIMGL ; D: IF ; DHL XS
KP
- IX1FS AF/SIMG VM /BJFGL VG JFTFJZ6GL ; HJFG
SF I SZJ P
- IX1FSFVMV TZ6LVIM VG IX1FSIMV TZ6MG HFTLI
AFATM q TDGFDF VFJTF VFJUM q XFZLIS 5ZLJTGIM VUGM
bIF , VF5JMP
- IX1FSIMV AF/SGF VSYI EFJIMG HF6JF VG TDGL
JITVMG pwJLSZ6 YFI TJL 5JITVMG VFIMHG XF/F
S1FFV SZJ HD S DGMZHG4 ; ULT4 GtI4 ZDTM4 pt ; JM4
5JF ; JUZP
- TZ6 TZ6LVIMGF VFJUMG ; SFZfTDS INXFDF JF / JF
IX1FS DFUNXG VF5JP
- ; DFHDF AGTL IFG XIMQF6GL W8GFVIMGL XF/F
- SM , H S1FFV AF/SM HF6SFZL VF5JL TYF T VUG

I Mu I DFUNXG VF5JP

■ VGLITGF j IJCZY ARJF 5, MEGM t I FU SZJF4
TZ6 TZ6LVIG I Mu I DFUNXG VF5JP

■ IX1FSM V TZ6LVIGL HFTL I ; D: IFq ZMU IJXGL
HF6SFZL D/JJL VG I Mu I DFUNXG VF5J XSI CMI TM
DFTF v I5TF S JF, LG TZ6LVIGL ; D: IFYL JFSO SZLG
I Mu I IGNGF SZFJJF DFUNXG VF5JP

■ XF/F SM, H S1FFV HFIT I ZIUH HJFS ZIUH VG TGF
pNEJGF SFZ6M TYF IGJFZJGF p5FI M VUGF SF I SDIG
VFIMHG SZJ P

■ XF/F SM, HNDF :JF:y IINGGL pHJFJL SZLG HFIT I
IX1F6 VUGL HFUTTF JWFZJLP

■ XF/FDF IJ1JW 5SFZ ZIUH VG TGF pNEJGF SFZ6M
TYF IGJFZJGF p5FI M VUGF SF I SDIG VFIMHG SZJ P

■ XF/FDF IJ1JW 5RFZ VG 5; FZ DFwIDM HJF S
ZOLIM 8LPJL4 85ZSMOZ4 . g8ZG8Z wJFZF J7HGS -A HFIT I
IX1F6 VF5L XSF I P

■ 8I, IJHG 5Z NXFJTF SF I SDMDF IJ1JWTF, FJL HFIT I
IX1F6G VeIF; SD ; FY ; FS/LG TZ6MGF DFG ; DF
HFIT I TF 5tIGF TNZ: TL J, 6M BL, JL XSF I P

■ XF/FDF IX1FSM V NIGS 5+M VG ; DI5T 38GFVIGF
IRTFZG ; I1F%T J6G SZLG AF/SMG I Mu I INXFDF
DFUNXG VF5L XSF I P

■ IJOLIM S1gOg; 5Z 56 HFIT I IX1F6GF 5MUFDMG
IGCF/L VG HFIT I TFGF 5`GMG IGJFZ6 DF8GF 5`GItTLZ
SZJF XF/F v SM, HDF VFIMHG SZJ P

■ IX1F6SFZM VG IJRfZSMGL I; wWS, D, BFI, HFIT I
DFUNXG ; AWL v 5: TSM HF6LG AF/SMG JFRJF E, FD6
SZL XSF I P

■ 3D: YFGM VG TLY: YFGM 5Z SMTZF I, IX<5 S, FGF
: YF5tIMYL HFIT I IX1F6 VF5L XS KP

■ T DF8 XF/FGF IX1FSM V IX<5: YF5tIMG 7FG VF5L
HFIT I IX1F6 VF5L XSF I P

■ XF/F SM, HDF HFIT I IX1F6G, UTL IXIAZIG
VFIMHG SZJ P

■ XF/F v SM, HDF ; DFHDF WDWTF VFRZTF ; FW v
; TIGL 5F5, L, FVMGL HF6SFZL VF5JLP

■ , 58 v UZ q IX1FS q ; FW q ZFHSFZ6L q pnMU5IT S
VgI SM. 56 j IISTG VF/BLG TGFYL NZ SZJF H6FJJP

■ IFG XIQF6YL ARJF DF8 UEZF IF JUZ, FE p9FJGFZL
, 58 j IISTVMG ; DFHDF pnFOL 5F0JF TZ6MG DFUNXG
VF5JP

■ IX1FSM V XF/FDF NZFRFZ SZGFZ IX1FS CMI TM TG
I Mu I DFUNXG VF5LG ; LWF Z: T, FJJM VYJF TM
XF/FGF VFRF I zLG 5IZI: YITYL JFSO SZJF HYL VFJGFZL
; D: IF V8SP

■ IFG XIQF6 SZGFZ j IISTVM D8 SOS IX1FFG VFIMHG
XF/FGF IGIDM VFWFIZT SZJ P

■ :+L Z1F6GF ; ZSFZL 5U, FDF :+LVIM V p5IMUL
AGJF DF8 5ItGM SZJF TYF ; ZSFZGF !) _ ! OMG ; JFGM
p5IMUL 50LT :+LVIM V SZJM TG DFUNXG XF/FDF VF5JP

■ JTDGF ; IDDF VIX1FT 4 IX1FT4 prRJU 4 IGdGJU
S UfdI VG XCZL IJ:TFZGL GMSZL4 3ZSFD S DHZL STL
:+LVIM 5Z TYF GFGL AFI, SFVM 5Z ; FDCL S A/FtSFZGF
S ; JW O<IF v O<IF KP, MSM IG, HH Ag IF KP TGFYL
XF/FGF AF/SM DFICTUFZ SZJ P

■ XF/DFDF IX1FSM q IX1FSFVM q ; , FCSFZM S DFUNXG
DFUNXG VF5JF H6FJJ S ; ZSFZGF SF I NFVMGM B18M
, FE G p9FJJM S VgI SFZ6M ; Z j IISTG IFG XIQF6DF
UGFUFZ ATFJJL T pIRT GYLP

■ IFG XIQF6GM EMU AGGFZ j IISTG gIFI V5FJJF
DF8 VG gIFI D/JJF DF8 ; DFH I Mu I 5U, F EZJF TYF
HFT H 50LT j IISTV IGE I AGLG ; DFHG q 5M, L ; G q
; ZSFZ VG S8AGL j IISTVMGM HF6 SZJL v HYL
V ; DFHHS TtJIG OFDL XSF I TYF I Mu I gIFI D/JL XSF I
T DF8 I Mu I DFUNXGG XF/FDF VFIMHG SZJ P

■ XF/FDF ICddT SZLG VFU/ VFJ, L j IISTVMGL I ; lww
VG gIFI D/J, L j IISTVMGL DFICTL AF/SMG VF5JL
HYL AF/SMDF ICDT VG 5Z6F D/P

■ IJnFYLVIGF ; :SFZ I ; RG SZ TJF ; FZF 5: TSMG H
JFRG SZJF H6FJJP

■ XF/FV IJnFYLVIG ALP5LP I5SRZ S . g8ZG8 5ZGF
5MGMUFOL IR+M VG IO<DMGF p5IMUYL NZ ZCJF DFUNXG
VF5JP

■ IX1FSM V IJnFYLVIG DGMJ7HGS 7FG VF5LG ; FDL
j I SITGF DGG HF6JFGL S, F q XIST S /JJL HYL
VF5ItTYL ARL XSF I P

■ XF/FGF IX1FSM V IJnFYLVIG ; IQ8 IJZwWGF StIMYL
ARJF I Mu I DFUNXG VF5JP

■ IX1F6DF D<IM ; DFIJQ8 VeIF ; SD ZRJMP HYL
AF/SMDF ; FRF ; :SFZIG I ; RG YFI4 ; tI4 5D4, FU6L4
GITSTFGM IJSF ; SZJMP

■ WFIDS UYMDFYL ; FZF ; :SFZ UC6 YFI TJM
VeIF ; SD XF/F v SM, HNDF ZRF I P

■ DCFG RFIZtIJfG jIISTVIGF HLJG IRIZ+M4
VeIf; DF; FS/JF TYF TDGF HLJGDF AG, L 38GFVIGF
pNFCZ6MIGM p5I MU SZJ M NPTTP :JFDL IJJSFGNG VS ;NZ
:+LV 5MTFGF 5IT AGFJLG TDGF YSL 5NF YI, F 5+GL
DFU6L SZL TM :JFDLHLV ;NZ:+LG 5U, FULG DFTFGM
NZHHM VFIMIP VG CHTDFZM 5+K VD SCLG SDF; ST
:+LG ;tI DFU, . VFjIFP

■ XF/FGF A, 8LG ANO 5Z TYF XF/FGL INJF, M 5Z
; ; :SFZM JF/F ; JFSIM, BJF TYF XF/FGF IX1FSM wJFZF
AF/SIMDF T ; JFSIMGM p5I MU VS VD, SZFJJMP

■ XF/F v SM, HMDF D<IM ; JWG SZ TJF WDXF:+MIG
VFNX JFRG SZFJJF HYL AF/SIMDFGL IJSITG B0G YFIP

■ NZZIMH XF/FDF ; IJRFZMGL ZHVFT YFIP

■ DFGI;S XFIT D/ VG DGGF IJSFZM NZ YFI T DF8
XF/FDF IMU IX1F6GL jIJ:YF SZFJJLP

■ XF/FDF AF/SIG 5D ; CFGEIT4 ; CSFZ D/ TJL
5JTLVM IMHJLP

■ XF/Fv SM, HMDF ; DFHG HFUT SZJF DFTF v I5TFG
qJF, LVIMDF ; :SFZ I ; RG YFI T DF8 5F` JFtI IZT IZJFHMGIM
DNICFW KIMOLG EFZTL I IZT v IZJFHMG 5Go :YF5G VG
VD, LSZ6 YFI T DF8 JSTjIq ; IDGFZqID8LUMG VFIMHG
SZL XSFI P

■ ; FDFIHS ZLT v IZJFHIMDF S8AGF ; eIMG NZHHF
5DF6 DFG v ; dDFG D/ TJF ; :SFZIG I ; RG XF/FDF
YFI TM JW pIRT U6L XSFI P

■ XF/F v SM, H S1FFV SgIFVMG SZF8 IX1F6GL TF, LD
SgNM :YF5JF HYL EIJQIDF pELYTL ; D: IFYL ARL XSP

p5; CfZ 0

VFD4 XF/F v SM, H S1FFV HFIT I IX1F6GL TFTL H~Z KP
VG IG0 ; SMR 5DF6 XF/F v SM, H S1FFV HFIT I IX1F6
VF5X TM ; DFHDF VJxI I FGvXMQF6 v A/FtSFZGF
IS: ; M VIMKF YX VG AF/SIMDF ; tI 7FG 5U8 YXP HFIT I
IX1F6G ; FR 7FG D/JLIJnFYL 5MTFG TZ6FJ:YFYL X~
SZL JWWFJ:YF ; WL ; FYSv HLJG HLJL XSX TDF XSFG
SM. :YFG GYLP

; NE ; IR

⇒ S8A S<IF64 VPHLPXFC4 HPSPNJ4 VGOF 5SFXG4
VDNFJFNP

⇒ , uG S8A VG ; U56 ; AWM4 VPHLPXFC4 HPSPNJ4
VGOF 5SFXG4 VDNFJFNP



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UHZFTDF :+lv ; XISTSZ6

NXEZDF VFIYS ; FWGv ; 5NFGI NIQ8V UHZFT DIBZFG
:YFG WZFJ KPVCL SgIF S/J6L4 A8L ARFJM VG :+L
; XISTSZ6GL VGSIJW IHHGFVN VD , DF VFJL KP
NXEZDF UHZFT H VS VJ ZFHI K S HIF cSJZAF . G
DFDZc IHHGF YSL UZLA 5ZLJFZM DF8 ZFHI ; ZSFZ BN
cISTFc GL EIDSF EHJ KP

SgN ; ZSFZ DIC , FVINGF ACDBLIJSF ; DF8 Z___ ! GF JQFG
DIC , F ; XISTSZ6 JQF TZLS HFCZ SI KP VF JQFDF
DIC , FVJWZF ; XST AGLG VFU / VFJ V W I I ZFBJFDF
VFJ I K4 5ZT UHZFTGL GFZLV TM 36F ; DIYL 5MTFGL
I:YITDF 5ZLJTG X~ SZL NLW KP VFH UHZFTDF
:+lv ; XISTSZ6 SZJF VGS IHHGFVIM IJSF ; SFISDM
VG ; :YFVINGL :YF5GF SZJFDF VFJL KP (DL DFR
VFTZZFQ8LI DIC , FING IGIDc UHZFTDF :+LVINGF
IJSF ; G , UTF SFISDM VG EFQF6M ZFBJFDF VFJ KP VF
p5ZFT :JI6D UHZFT IHHGFDF :+LVINGL ; Z1FF VUA8L
ARFJM VG NLSZMvNLSZL VS ; DFG HJF SFISDM CFY
WZJFDF VFJ IF KP

JTDFG ; DIDE DIC , FVM ; FRF VYDF VFWIGS AGL K
VG 5MTFGL ; J ; FDFgI NA / TFVING NZ SZLG 5MTFGL
DHAT SZJFGL 5MTFGL :JT+ VM / BG a- SZJFGL VG
5~QFGL ; FY BEBEM ID , FJLG RF , JFGL SMIXQF SZL KP
VFHGL GFZL ; FCI ; S45Z5SJ4 ; ICQ6 VG DHAT IJRFZM
WZFJTL DIC , FGF~5DF ACZ VFJL KP VSAFH T6 cSZLIZ
JDGC GM IBTFA D / j I M K TM ALHL AFH T cCWD DSZc GF
~5DF 3ZUC :YGL TDFD HJFANFZLVIM ; O / TF5JS 5FZ
5FO KP

UHZFTDF GFZL DF4 ACG4 ; F ; 4 JC S 5tGLGF ~5DF TM
; JzQ9 K H 5ZT TGL ; FYM ; FY UHZFTGL GFZLV VGS
1F+MDF VIaTLI 5UIT ; FWL KP

IJIJW 1F+MDF UHZFTGL :+LVIMV SZ , L 5UIT 0

!P IX1F6 1F+ :+lv ; XISTSZ6 0

UHZFTDF IX1F6 1F+ :+L v ; XISTSZ6GF VGS SFISDM

Y . ZCIF KP UHZFT 5MTFGF AH8GF Z_@ WGG IX1F6
5FK / BR KP cDIC , F IX1F6 DOTc HJL 5C , UHZFT
ZFHI aFZF H Y . KP UHZFTGF IJnFACG IG , S9 S HVM
5C , F :+L UHIV8CTFP tIFZAFN UHZFTGL VGS GFZLVIM
IX1F6 1F+ VFU / JWL KP UHZFTGF VFGNLACG 58 , S
HVM :+LVINGF X1FI6S IJSF ; DF8 VUFW 5ItGL SZL ZCIF
K VG 5MIZANZ BFT ZCTF ; IJTFACG DCTFV 56
IX1F61F+ VG GtIS / F 1F+ VIEgG 5UIT ; FWL K p5ZFT
Sgã VG ZFHI ; ZSFZIX1F6GF 5RFZ VG 5 ; FZDF8 IJIJW
SFISDM VG IHHGFVIM VD , DF DSL KP HD S VGF5RFZLS
IX1F64 DwlFCG EHHG IHHGF4 :+LVIM DF8 VMKF BR
IX1F6GL IHHGF4 DIC , F ; DFbI IHHGF4 ; JIX1FF
VIE IFG JUZP

VFD4 ZFHI ; ZSFZ :+LGF X1FI6S IJSF ; DF8 HFUT AGL
K VG :+LVIM X1FI6S IJSF ; DF VFU / 56 JWL ZCL KP
ZP VFIYS :JFJ , AG 1F+ :+lv ; XISTSZ6 0

UHZFT ; ZSFZ :+LVING jIJ ; FI D / L ZC VG TVIM VFIYS
ZLT 5UEZ AG T DF8 5ItGXL , KP :+LVING 5MTFGF
UCpniU :YF5JF ASM , MG VF5 K TDH DIC , F DO / M
VG DIC , F pniU SgNIGL :YF5GF SZJFDF VFJL KP VFIYS
1F+ JTDFG ; DIDE :+LVIM 36L VFU / JWL KP UHZFTGF
; FJZS0 , F 1F+ S , FSFZLUZLDF J ; TACG SJOL IFG ZFQ8LI
5Z :SFZ D?I M KP VFH DIM8FEFUGL :+LVIM UCpniU
R , FJL ZCL K HDF TVIM 5F50 J64 VUZAcL AGFJ4 DHZL
SFD SZ4 3Z X6UFZGL J :TVIM AGFJ p5ZFT 3ZI ; , F . SFD
VG XFSEFHL JRF6 SZLG 56 5MT SDF . XS KP IX1FT
IJTLVM 5MT ; IJ ; S AlhGXDF HMOF . G VFIYS ZLT
5UEZ AGL ZCL KP VFH 36L VJL IJITVM K S H 5MT
SDF . G 5MTFG VG S8AGF ; eifMG EZ65FQF6 SZ KP

#P ZFHSLI 1F+ :+lv ; XISTSZ6 0

UHZFTDF 36L IJITVMV ZFHSFZ6DF h5 , FJ I K4 H :+L
v ; XISTSZ6GM H VS EFU SCL XSFI P ; ZSFZ :+LVIM
DF8 ##@ VGFDTG ; IJWF SZL K H CF , :+LVIM DF8

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5_@ VGFDTGL ; IJWF ACfZ 5F0JFDf VFJL K HGf SFZ6
36L :+LVV ZFHSLI 1F+ 5MTFGL EFULNFZL GWWFJL KP
UHZFTGF . , FACG EÎ S HVV ZFHSLI 1F+ 5MTFG
I UNFG VF5L ZCIf KP VFp5ZFT UHZFTGF EFJGFACG
IRBI, IF4 pID , FACG 58 , 4 VFGNLACG 58 , 4
OPDFIFACG SMOGFL JUZ ZFHSLI 1F+ I UNFG VF%I
KP VFH UHZFTGF ZFH15F , TZLS DFGGLI OFF SD , F
AGLJF , 5JT KP

\$P ; FDIHS 1F+ :+lv; XISTSZ6 0

UHZFTGL DIC , FVV ; DFHDF 5MTFGL VFUJL VV / B
éEL SZL KP VJL 36L :+LVV K S HVV ; FDIHS 1F+
36L 5UIT SZL K VG ; DFH DF8 56 5MTFG I UNFG
VF5L ZCL KP pNFCZ6 TZLS HM . V TM ; ZTGF ICDFXL
X , T S HVV ; DFH ; IJSF TZLS IGZFWFZ :+LVV VG AF /
SM DF8 JFt ; <I DIT ; DFG :+LZtG KP VF p5ZFT
UHZFTGF V~6FACG N ; F . HVV ; DFH ; JF 1F+ SFDULZL
AHFJL ZCIf KP p5ZFT VS HF6LTF pNFCZ6 TZLS HM . V
TM S :TZAf S HVV UFWLHL ; FY D / LG ; DFHGL DS
; JF SZL KP

5P VgI 1F+IDF :+lv; XISTSZ6 0

jIFJ ; FII S 1F+4 :JF:yI 1F+4 VFnnIUS 1F+4 SF8IAS
NZHHF 1F+ VG ZDTvUDT 1F+ VFD IJIJW 1F+IDF
:+LVV 5UIT SZL KP :+LVV 5MTFG DF8 HFUT AGL KP
TDH UHZFT ; ZSFZ äfZF VFH :S , DF :+LVV VF I GGL
UM / LV5FI K p5ZFT Dw I FCG EMHG I MHGF VG ; JFJOL
:+LVV DF8 ; BOL IJTZ6 I MHGF HJL VGS I MHGFV
VD , DF DSJFDf VFJL KP SF8IAS NZHHF 1F+ HM . V TM
:+LG I5TF VG 5ITGL ID , STDFYL JFZ ; M D / JJFG
VIWSFZ KP :+LVV DF8 3Z , IC ; FIJ~WW SFGG 56 p5 , aW
KP
VFH VJ SM . 1F+ GYL S HIF :+LVVGL ; FD , ULZL G
CM I P VFHGL :+L 5MTFG 5IZJFZ VG AF / SINGL HJFANFZL
; FYV ; FY VgI SF I IDF 56 HMOF . KP



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IU 5Z5ZDF VIWSFZM DF8 DFIFG AI, NFG

UHZFTL ; FICTI VFH TGL 5ZL ; HHTFYL VFU / W5L
ZCI KP DbIWFZFGF ; FICTI GL , UM , U VYJF TM SCL
XSFI S4 VGFYL 56 D9LÉRZ AGL ZCI KP NI , T ; FICTI
HLJGGL IJ8A6FVM VGF ; B NoB TDH KJFOFGF DF6 ; GF
; R , GIG VS ; FSOF 5IZ3DFYL IJ:TTTF A1FL KP TM
HLJGGL IJIJW TZFCIG VGF 5ZF 5IZDF6M ; FY BM , L VF5L
KP

JQFMYL H 5HF XMQFFTL ZCL KP VxI5xI TFGF GFD HDGL
; TT VJU6GF YTL ZCL K DFGCHG YTL ZCL KP VJF
XMQFT45LIOT4 NI , T JUGL ; D: IFVIG IJXF / HG ; DNF I
; FD DSL VF5JFG SFD NI , T ; FICTI ÆZF YI KP VF
; JNGFVMG NI , T ; HS VGF IJIJW :J~5 ; HG SZ KP
N , 5T RCF6 UHZFTL NI , T ; FICTI DF GFDGF 5FMT ; HS
KP TDGL S , D GJ , SYF4GJI , SF4SIJTF4p5ZFT GF8S HJF
NxI zFjI :J~5DF 56 BF: ; UH SF- KP -VGFIFJT
TDGM 5YD GF8I ; UC KP VF ; UCDF +6SGF8SM VGSD
-VGFIFJT^VITD NI I^VG -5F86G UMNZ^HMF
D / KP VF GF8SMD ; HS NI , T ; DFHGL VFTZ AFCI
UITIJIWGM 5IZRI SZFJJFGL ; FYM ; FY TtSF , LG ; DI
; DFHGL TF ; LZG 5U8 SZJFGM VFXI ZfbI KP
5F86G UMNZ . P ; P !) ((DF ZRFI , VITCFI ; S SYFGS
5Z VFWFIZT GF8S KP +6 VS VG ; FT NxI MDF
IJEFIHTVF GF8SDF 56 VtI HMGL SZD SCF6L VF , BF .
KP GF8SDF IG~15T 5F+M HMTF TM VD H , FU S NLW
GF8SDF HM . TF SZTF I VIC ; IJXQF 5F+M B0S , M SZJDF
VFjI KP

5YD VSGF 5YD NxIDF ZUDR 5Z S8 , FS VM / FVM
ZUDRGF VS B6YL 5JX SZL WLD WLD VFU / JW KP
NZSGF CFYDF WZJBZLGM ; FDFG KP G 8M / WLDYL VFU /
JWT ZUDR 5Z VFJL 3Z KF5ZF AFWL ; FDFG jIJI:YT
UM9JTF HF I K ALHL AFH VS VJFH VtIH DFIFG
AI , NFGGL UFYF 5U8 SZ KP G8 VG ; +WFZGF ; JFNDF
VtIH 5Z YTF H<DGL SCFGL HMJF D / KP TM J / L A

WMO ; JFZM VFJLG GUZX9GF CSD VF7FGL JFT SZOFSL5JS
SZ K VF WMO ; JFZM ÆZF YTM XFIZZLS VtI FRFZ NI , T 5HFG
NI FD6L AGFJL DS KP

CDM4 BDM4 EDM4 JF , M4 EUT VG DF I M VF 5F+M 5MTFGF
5Z YTF VgIFI VtI FRFZGL JFT NoBL K4 G VDFYL K8JF
; FG EUF YJF DF I M SCTM CMI K tIFZ EUT H SC K T
BZBZ JWS KP o ZFH VF56G VJL ZLT EUF YJF NX m
J9vJFZFG JI9IF IJGF ZFH SD RF , XP VDGf BTZ SM6
BOX m SJF4 T / FJ SM6 UF / X m VDGf DZ , F -M4 STZF4
IA , FOF SM6 BRX m ; TZ SM6 J6L VF5X m ! J9DFYL
K8JFGF pWDFD VF , MSIG DhJL GFB KP TM ALHL TZO
; J6M ÆZF YTM AWLH 5SFZGM VgIFI VF , MSIG ; CG
SZJM NQSZ AGL ZCKP

ALHF NxIDF ; DI pGF / FGL A5MZGM K G ; +WFZ G8
RF , TF H . ZC IF KP NI , T 5HF 5F6L IJGF 8 / J / K G
IR+ ; +WFZvG8GL VFB 50 K 5F6L DF8 VKTM GUZ
; WL VFJL 5CMI IFG HF6 YTF H WMO ; JFZM K8 K G
:+LVvAF / SMGL RL ; M IRIR IFZLVIMYL VFB JTFJZ6
UDULG AGL HF I KP EUT4 DF I M4 CDM4 JF , M JUZ 5F+M
VF W8GFYL CATF . HF I K4 TM ; FYM ; FY VgIFI ; FD
AFY ELOJF SI8AWW YJF Tt5ZTF I NFBJ KP

ALHF VSGF 5YD ÆXIG :Y / 5F86G GF8S0 CF8 AHFZ
KP ; +WFZ VG G8 VKTMG SFZ6 5F86 5Z pTZLVFJ , L
VFOT AFAT ; JFN SZTF CMI K TDH ZFH NZAFZDF VF
IJX RF , TL RRF v IJUT HF6JF K5L ZLT HJFGM DFU SF-
KP

ALHL TZO GUZ X9 VG ZFHUMZ ZFHFI ; WWZFHG VKTMG
SFZ6 WDM , M5 Y . ZC IFG TDH ; DFHGF JFOF T8L
ZC IFGL UELZ JFT H6FJ K VJDFD DWUMTG VFUDG
YFI KP DWUMT 56 VKTMG SFZ6 ZFH 5Z pEL YGFZL
vVFJGFZL 5IZI:YITGL JFT SZKP V8 , ZFH U: ; Y .
VFJ SZGFZG 5SOL , FJL OF ; LG DFR0 , 8SFJL NJFGM CSD
SZTM CMI KP VFJL IJS8 I:YITDF DCF VDFtI DHF ,

* આસી. પ્રોફેસર, આર્ટસ એન્ડ કોમર્સ કોલેજ, વસો-નડીયાદ

DCfZFHFG pTfJ/ G SJFGL XLB VF5 KP 56 ZFHf TM
EUT VG DFIFG 5SOL DUFJL TDG X/LV R-FJL NJF
Tt5Z AG KP VF ; DI DHF , VFJGFZL I:YITGM TFU SF-
TF ZFHFG VFBM I DFD , M 5MTFG ; 5JF H6FJ KP ZFHf
56 VF 5IZI:YITGM I MUI TMO SF-JF DHF , G DFD , M ; 5
KP DHF , 5C , YL ZFHUWZ 5F ; 1DFD DFUL G SF I 5FZ
5F0JF SI8Aww AG KP

VSALHFGF ALHF NxIDF :Y / s5f86f GUZGM RUISIJ:TFZ
KP GUZGM NFOLJF / M GUZGF ; C:+I, U T / FJDF A+L ;
 , 1F6F JLZ5~QFG AI , NFG V5FI TM H 5F6L 8S4 VJL
HFCZFT SZ KP 8M / VF HFCZFT ; FE / L IJDF ; 6DF 50KP
VG VNZNvVNZ JFTRLTGM NIZ ; WF I KP ; FGF ; B DF8
Y . G SM . JLZ 5~QF 5MTFGL . rKFYLA I , NFG VF5 TM H
S . S NFcOM J / VJ KP DWU%T VG U%TRZ VF VFBM I
B , HM I F SZTF CM I K KJ8 VFJ AW AGJF 5FK / , MS
TM VKTMG H HJFANFZ U6TF CM I KP NFOLJF / M A +6
JFZ VF AFATGM ; FN 5F0 K G VTAI , NFG VF5JF DF I M
TIFZ YFI K G TGF AI , NFGGMINJ ; DCF DF ; GL ; FTD
GSSL YFI KP VF INJ ; JLZ 5~QF DF I FGM JJ3MOM ZFHDFU
5Z OZJJFGM TDH DF I F V H 5FR JZNFG ZFHf 5F ; DFU I F
K TG U6FJTF NFOLJF / M SC K VKTM CJYL 5U , E ; JF
SDZ hFB~ AFWX GIC4 DFY OF / SM AFWX GIC4 VFUOLG
+LHL AF I ZFBX GIC4 5MXXXXPXXXXP AM , X GIC4 VFHYL
VKTMG DF6 ; U6JDF VFJXPPPPPVF56 VG VKTM
 ; ZBFPPPP ; ZBFZPPPP ; F ; FN ; FE / HMPPPPPVF ZFH VF7F
KPPPPVVD , SZHM GICTZ ZFHGM VGFNZ AN , X / LV R-
FJJDF VFJXPPPP Z

NFOLJF / FG OZDFG ; FE / L GUZHGM VNZN VNZ VKTM
IJX RRFV M SZ KP TDF 56 TtSF , LG HG DFG ; GM
HG ; DFHGM 5IZRI D / L ZC KP VKTM ; FY ; DF656
j IJCFZ SZJFGL JFT VF , MSIG BR V 56 :JEFIJS K4
TM VKTGF , MCLYL sAI , NFGf VF5 , 5F6L VF56 5LJFG
V JFT ; J6M DF8 S5ZL AGL ZC KP

+LHF VSDF 5YD NxIDF ; JFZGM ; DI K VG :Y / TZLS
VKTJ:TLGM JF ; KP VCL BD14 ED14 CD14 JF , 14 HLJ14
EUT JrR DF I FGF AI , NFGGL JFTGL HDfvpWFZ AFHRRF
KP ZFHfV GUZ VG ; J6M 5t I GM VFSIXTM VF , MSIGF
 ; JFNDF 5U8 YFI KP 56 VYLI JWTM . `JZ 5ZGM VFSIX
VCL HMJF HJM KP

JF , M o TDFZL JFT ; FRL K EUT4 DFZM pRF8 JWTM HF I KP
TD SM V8 , D , S KMOL NJM GSSL 5KLTM . `JZ HJM W6L
KPPPPPP

EUT o VF56 DF I FG 5KJ 504 VG VFJJFN14 AI , NFGTM
V6 VF5JFG K4 V X SC K m 5KL CIZPPPPPCIZPPPP
BDM o XGM CIZ OZL m VF CD M I . `JZ . `JZ SZ K m C
5K K4 EUT PPPPP-OG J / L . `JZ CM I m

EUT o . `JZ TM AWFGM CM I BDF4 VFD SD AM , K m
BDM o -OG J / L . `JZ CMTF CX4 CM I TM VFD WM / INJ ;
VFA~ , 8FTL GF CM I 4 ; DHIF EUT m #

DF I FGF AI , NFG 5KLI ZFHf TZOYL BZBZ SCJFTF , FEM
VF5JDF VFJX S SD m VGL I RTF VF , MSIG ; TFJL ZC
K TM ALHL TZO DF I M 56 5MTFGL GFTG E , YT CM I TM T
DF8 Y . G AI , NFG VF5JF T IFZ YI , M KP ZFHFGM I ; 5F .
DF I FG AM , FJJF VFJ KP DF I M K< , DFTFvI5TF VG JF ; GF
 ; FG D / LG HJF Tt5Z AG KP

+LHF VSGF ALHF NxIDF ; DI E / EF B / FGM KP VKTMGF
JF ; DF , MSIM HFUL UIFKP VFH DF I FGF AI , NFGGMINJ ;
KP JF , 14 EUT4 BD14 ELD14 JUZ VF IJX JFTM SZTF CM I
K t I F TM ZFHFGF I ; 5F . VM VFJLG VFBFI JF ; G WDSFJL4
JZ3MDFD SM . V OZJFG GYL4 TJM ZFH CSD H6FJ KP G
SM . HM N , L , SZ K TM TG RFASYL O8SFZTF CM I KP , MSIMDF
E I j I F5L HF I K G V8 , SM . DF I FGF JZWMOFDF HJFGL
CFD EL0T GYL4 I ; 5F . VMGF UI F5KL JF , F4 EUT4 CD14
HLJM JUZG , FU K S ZFHf NUFBMZ GLS? I M KP TYL CJ
D , S KMOL NJM HM . VP 56 EUT D , S KMOLJFGL JFT 5FKF
50 K4 G KJ8 AZFvKMSZF ; FY WMSIMv , FSOL , . T / FJ
HJF T IFZ YFI KP T T / FJ 5CMRTF TM ; J6M TDG CIY IFZM
 ; FY HMTF H EFUMPPPPPVKTM R-L VFj I F KP SCTF EFUJF
DF0 KP VKTMGL ICDT GUZHGMGL RRFGM IJQF I AGL ZC
KP VCL VKTM afzFIJAMCGM H ; Z , BS ATFj I M K TDF
VKTMGL XFIZZLSXIST AFAT SNFR AZFAZ CM I PPPPP5ZT
DFGI ; S ZLT IJRFZLV TM ZFHFGF S8S VFU / VF , MSIM
B< , M A0 5MSFZ JFT HZF VITXIMIST 56 , FUJF ; EJ
KP

+LHF VSDF V8 , S VITD NxIDF VKTMGF CFYDF
CIY IFZ VG RFZ TZO CFs , Fv50SFZGF VJFHM VFj I F SZ
KP 8SZL 5Z DF I FGF NCGL IRTFG A / TL HM . G , MSIM T
TZO HJF IJRfZ K 56 TGL OZT DS , M R1SL
5CZMvI ; 5F . VM TDG HJF NTF GYL V8 , J / L 5FKF
VFJU4 H : ; 14 HMZ 5S0 KP KJ8 DF I FGF AI , NFG5KLI
T / FJDF 8L5I 5F6L G O8TF VKTMGF DGDF ZFHf IJX
EXvJZ EFJGF 5HHJ / L é9 KP G V8 , H TM JF , MSCTM
CM I K ; F , F ZFHf V TM VF56L HM O NUFBMZL SZLG SIFI
JZ ; FN GF VFj I 14 T / FJDF 5F6L GF VFj I

PPPPPSI F I P P P P P D F I F G F A I , N F G G I F N Z F B J F V F , M S I E U T
 A I , F J T D 5 F R S X Z T I V J Z N F G D F I F V Z F H F ; D 1 F D S I F
 C T F T A I , F J K G ; F H I X E Z A I , K P V F V J F H Z F H F G F
 A C Z F S F G ; W L , . H J F E U T G L ; F Y ; F Z F H D C , T Z O
 H J F 5 I F 6 S Z K P P P P P \$
 G F 8 S G F V T ; + W F Z V G G 8 G F 5 J X G L ; F Y G 5 y I D F , B S
 H ; J F N D S I I K T G F 8 S G C F N K P H I I G T D m V F U .
 S F , G L J F T G Y L 4 C D 6 F G L J F T K P U . S F , Y L V F H ; W L
 B R F . V F J , L J F T K P I U 5 Z 5 Z F D F D F G J V I W S F Z D F 8 G I
 5 Y D V F S I X 5 Y D A I , N F G C T I U I G I V W F Z C H L X d I I
 G Y L P S A L Z 4 Z N F ; 4 G Z I ; C D C T F 4 D C F t D F O , 4 D C F t D F
 U F W L 4 O I P A F A F ; F C A V F A O S Z ; W L G L D F G J V I W S F Z G L
 , O F . C H L X D L G Y L P D F I F G A I , N F G 5 Y D E , C I I 4
 5 6 V I T D G Y L P C H L J L Z D F I F V I H g D X 4
 I ; W W Z F H H I I ; C I I T D G F A I , N F G I , X P G H F 6 V F D F G J
 V I W S F Z I D F 8 C H L S 8 , F D F I F V I G F A I , N F G V F 5 J F
 5 0 X P P P P P S 8 , F P P P P P m 5

; N E ; I R

⇒ V G F I F J T v N , 5 T R F C F 6 U H Z F T N I , T ; F I C t I
 V S F N D L 4 V D N F J F N 5 Y D V F J I T v Z ____
 ⇒ V H G 5 P &&
 ⇒ V H G 5 P (&
 ⇒ V H G 5 P) _
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* ડૉ. ઉષાબેન જી. પટેલ

Arts [GUJARATI]

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UHZFTL GJ, SYFGM ZD6LI XU 0 ccD / , F ÒJcc

ccD / , F HLJcc V 5gGF, F, 58, GL TDH UHZFTL
; FICTI GL DCTJGL SIT SCL XSFIP DF+ YNOFS H 5Q9MDF
; DFIJQ8 VF GJ, SYFV UHZFTL ; FICTI DF DFGJT : YFG
5F%T SI KP GJ, SYFGM SYGIJQFI4, BSGLEFFX, L VG
J6GS, F âZF êOL V ; Z p5HFJL XSGFZ S, FGF S ; AL
VJF 5gGF, F, 58, GL VF I ; lâ UFUZDF ; DFJIF HJL KP
VF HM . V TM VF VS 5IZIRT 56ISYF KP ; FDFgITo
56IDF AG K VJ H VIC 56 AG KP A 56IL CIGF
V8, S HLJL VG SFGHLG cHLJc TM VGFIF ; H D/L
HF I K 56 cHLJGc D/L XSTF GYLP VG KJ8 D/ K TM I
G D?IF HJF H ZC KP VD SCLV TM RF, P
GJ, SYFGF 5YD 5SZ6 c5YD ; UFYc DF SFJIOIF
OUZGL GF/DF HgDFQ8DLGF D/FG ZUL, JFTFJZ64 T/
5NF, MSHLJGG VG DuW 56IGL pgDFNS, FU6LVIG
IR+6 SZLG, BS GJ, SYFGM S, FtDS4 5EFJXF/L VG
VFSQFS 5FZE SIM KP HLJL VG SFGHL VGFIF ; H D/
FDF D/L HF I K VG 5YD ÛQ8V H AG VSAHFHF 5DDF
5OL HF I KP RUOM/GL 5F, BLDF DZS DZS C ; TL HLJL
SFGHLG 5K K 0 ccVF 5fJF TM NBf0JF ZfbIF K S
JUf0JF mcc VG SFGHL 5FJDF HF6LTL ULTGL A, L8L
JUFO KP

cc0FU/G JfIZ VfjIF HMAIGIF4

JXfBL JfIZ p0L HTF ;

EFJJIHSVJLVFA, L8L SFGHL 5FJDF K0K VG tIFZYL
H JJFI K 56IALHP D/YL 5FKF J/TF ; UFYDF
56IvVSZ 5U8K VG HMTHTFDF ALHF VSFN ID, GDF
TM Ap CIF VS AGL HF I KP 56 tIF H VS DM8M 5`G
pEM YFI K4 5ZGFTGL SpTZTL GFTGL HLJLG 5Z6FI XL
ZLT m 56I 5IZ6IDF G 5IZ6DV H TM 56ISYFG 5JTS
TtJ KP G TYL H HLJL 5tIGF 5MTFGF VNdI VFSQF6GL
CLZF VFU/ SA, FT SZTM SFGHL 5MTFGL VFTIZS 56IGL
, FU6LGM VF NNCZFDF NXFJ K 0

ccD, TFZF Z WIZL TFZ XLU0,

J/L 3MOL, SFG 8LXIZ,

s56f XZ VSFI D, DFGJL,

TFZF CIF TM êOF V3MZ !cc

VCL SFGHLG hfHJFGF H/ ; DL, FUTL HLJLG TGL H
GFTGF G 5MTFGF WI/ I FGF 3ZDF A ; FOJF CLZM ; RJ KP
HLJL DF8, FIS GIC VJM W/M HLJL 5Z JCD ZFBL VG
EFZ NoB VF5 KP HLJLGL IFTGF GIC HM . XSJFYL SFGHL
GMSZLG ACfG SF-L UFD KMOL RF<IM HF I KP 5IZ6FD HLJL
JW NoBL YFI KP V 5MTFGF HLJGGM VT, FJJF 5MTFG
DF8 AGFJ, hZJF/M ZM8, M E, YL W/M BF. HF I K VG
V DtI 5FD KP VCL W/F HJF B, GFIS ; DF 5F+G DtI
56 VGS5F HUFO KP HLJL 5MT IGNMQF CILJF KTF, MSH
VG NIQFL DFG KP, MSIGF VGS 5SFZGF D6fvS8F1F VG
; F ; GF SOJF AM, GM +F ; ; CTL T SFGHLGL ; TT ZFC HM I
KP VCL SFGHLG 5F+ 56 HLJLGL HD HLJT ZLT
VF, BFI, HMJF D/ KP VS TZO 5DGF DWZ :J%G VG
ALHL TZO ; ; FZGL S8 JF:TIJSTF JrR VF AG 5DLVM
; TT EL ; FIF SZ KP
SFGHLGL IFNDF T05TL 4 VGF VFJJFGL SFUOM/ ZFC HMTL
CTL V SFGHL VFJ K TM 56 TG D?IF IJGF H 5FKM
RF<IM HF I KP tIFZ HLJLG BA H VF3FT, FU KP VG T
IR& EDGL VJ:YFG 5FD KP VCL SYFGM SZ6Z ;
5ZFSFQ9FV 5CMR KP

cc5YD ; UFYc VG ccD / , F HLJcc V A DbI IANVMGL
JrR A IJFG CIFGL JNGFGL JFT 38FI K4 VS VGIBM
; ; FZ ; HF I KP CF4 A 5DLHGIM H GIC4 ; DU
UFDHGTFGM VFBM ; ; FZ VCL IJ:TZ KP SFTSL 5GDGF
D/FDFYL UFOL HLJLG SFGHL 5MTFGL ; FY XCZDF, .
HF I KP VT D/FDFYL X~YI, LGJ, SYF D/FDF H IJZD
KP

VFJF H HgDFQ8DLGF D/FDF SFGHL VG HLJL 5YDJFZ
D?IF CTF VG tIFZ H SFGHLV HLJLG VFJL ZLT ; FY
ZFBJFGLICDT NFBJL CMT TM TM SNFR GJ, SYFG ; HFTP

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VCL SFGHL VG HLJL A DbI 5F+IG , BS HF6 ZDTF
 DSL NLWF CMI VD VF5VF5 IJSF ; 5Fd IF KP TDG
 jIISTtJ 56 S8 , pNFz K! DGQI 5MTFG 36 AW UDFJ
 K4 TG UDFJTF HMI . JFRSG JNGF YFI KP SDS UDFJGFZ
 jIIST TZO TGF pDNF RfIZeI TYF BDZJTF jIISTtJG
 , LW ; F SM . G ; CFGEIT YFI KP tIFZ UDFjIF 5KL 56
 T DFGJTfGL 5ITQ9F SZTM CMI KP tIFZ DFGJDGGL EjITF
 VG EjI DCFGTfGM bIF , VF5 KP cc**VS 5F** , **MC**GF
SU/F TMI **ALHL 5F J/L 5LTGF 380F** !cc VF IJWFG
 VCL BZBZ ; FYS , FU KP

VCL 5C , F 5SZ6DF YTF GFISvGFII SFGF ; BN
 ID , GYL H JFRS SYF 5JFCDF T6FJF DFO KP VG CJ

5KL X m GL IH7FXFJIT JFRSGF DGDF ; TT RF , TL ZC
 KP H GJ , SYFGF JFRGZ ; G TLJ AGFJ KP HD HD
 GJ , SYFDF VFU/ JWLVT DTD ; TT , Fu IF SZ K S H
 AGLZCI K TG AGJ HMI . VP HAG K TYL 5F+MI TZOGL
 ; CFGEITG SFZ6 VF56 NoBGM VGEJ SZLV KLVPTDH
 , BS SITG XLQFS VF%I KP cc**D/** , F **HLJcc 56** VCL TMI
 IJB8F 50L ZLAFTF HLJMGF , uG5DGL S~6FIgTSF 8HOL
 KP VCL ; LW ; FN HLJG GHJf SFZ6 ; Z SCMI S YMIOLS
 GA/F . G , LW EFZ NoBN AGLZC KP VF TtJ H cc**8H0Lcc**
 G DbI , 1F6 KP HJL ZLT 8HOLDF HLJGGM CF ; YFI K4
 TJHS . S VCL 56 YFI KP 56 V CF ; G VT DFGJTfGF
 EjI IJHIGL 5TfSF , CZFTL HMI . XSFI K



*** T.R. Sharma**

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PREDICTORS OF CHILDREN'S PARTICIPATION IN PHYSICAL ACTIVITY AND EXERCISE.

Physical fitness is the fundamental human need like food, clothes and shelter. Physical fitness provides an individual greater physical strength which would rather help him to cope up with his daily problems. If this trend of inactivity continues for existence of healthy or fit individuals will disappear. The scientific community and general public acknowledge that increase in exercise and physical activity can produce worthwhile health benefits. Social-cognitive theory involves analysing the effects of parental and peer influences, child beliefs and personality on the adoption of a particular behaviour i.e. physical activity. Increased levels of high activity were primarily associated with increased self-efficacy and social influence scores. Use of computer is sedentary behaviour that is becoming increasingly common and is associated with lower levels of physical activity. To be most effective, interventional efforts to increase physical activity should primarily target decreasing television and computer time and increasing physical activity. Behaviour patterns, children's activity levels are modelled on that of their parents.

Key words: Social-cognitive, peer, self-efficacy, sedentary activities.

Introduction:

The children of the present day are the future citizens of our nations. Physical fitness is the fundamental human need like food, clothes and shelter. It is not an isolated phenomenon. It is an integral part of the life itself. Physical fitness provides an individual greater physical strength which would rather help him to cope up with his daily problems. If this trend of inactivity continues for existence of healthy or fit individuals will disappear. This is purely because of modern life style.

Definition:

Physical activity has been characterised as any bodily movement resulting in energy expenditure above resting levels. (Mohan, 1991; 2000a; 2001; Freedson and Meller, 2000)

The important factors like health and physical activity, social-cognitive, sex differences, self-efficacy, self-esteem, sedentary activities, parents role, role of family are contributing in child's behaviour and thereby affecting their growth. A brief description of each sub domain is as follows:

Health and Physical Activity:

The scientific community and general public acknowledge that increase in exercise and physical activity can produce worthwhile health benefits. Pate et al. (1995) and Krista et al. (2003) reported that even 30 – 40 minutes of walking or moderate physical activity on most days i.e. four times a week promotes higher level of physical fitness and reduced risk for several chronic diseases.

Psychosocial correlation of physical activity in healthy children. Previous research has demonstrated that most children are largely sedentary. Using data from Muscatine study, Janz et al. (1992) found that pubertal and post pubertal children spends only 8 to 10 minutes per day in aerobic activity.

Social Cognitive factors:

Determinants of levels of childhood physical activity are complex. Social-cognitive theory involves analysing the effects of parental and peer influences, child beliefs and personality on the adoption of a particular behaviour i.e. physical activity. It is now

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widely accepted that family, peers, and school affect physical activity levels in children. Access to physical activities, such as the locations of parks and schools, and opportunities to participate in games and sports are also factors affecting sports involvement. Similarly parents who play with children regularly and provide transportation to activities have more active children. Personality, characteristics, such as achievement motivation, self confidence, independence and one's perceived ability to be active i.e. self-efficacy are also associated with physical activity levels (Strauss et al, 2001).

Sex differences:

It has also been suggested that physical activity, particularly sports participation, may affect the development of self-esteem in adolescent. However, most previous studies have been limited by including only small numbers of adolescents, no objective measurements of physical activity, and out-dated global self-esteem scores with any subscales. Strauss et al (2001) conducted a study to identify social and cognitive factors associated with physical activity in children aged 10 to 16 years. This study also aimed to further explore the relationship between sedentary activities (such as television viewing) and physical activity and the relationship between physical activity and self-esteem in children. Results revealed that physical activity levels are related to age and sex. Before age 13 years, similar levels of physical activity were present in girls and boys ($P = 0.43$); however, after age 13 years boys were significantly more active than girls (total activity time: $23.5\% \pm 4.7\%$ vs. $19.0\% \pm 3.8\%$; $P < 0.05$). Moderate and high level activity decreased significantly between ages 10 and 16 years for both sexes. Among girls, overall time spent at all physical activity levels was 35% higher in preteens compared with that in teenage girls ($P < 0.01$).

Self-efficacy:

Further, the study revealed that increased levels of high activity were primarily associated with increased self-efficacy and social influence scores. Time spent on sedentary activities was not correlated with high activity. Similarly, higher health beliefs scores were not correlated with high activity levels. In contrast,

all three measures of self-efficacy were significantly correlated with high activity. Overall, children with increased levels of self-efficacy were significantly more likely to have increased levels of high activity compared with children with low levels of self-efficacy. In addition, social influences scores were significantly associated with increased high activity. Multivariate regression analysis demonstrated that age, sex, and self-efficacy were significant independent correlates of high activity, with approximately 10% of the variance in high activity explained by self-efficacy scores.

Self-esteem:

In this study, high level but not moderate level physical activity was associated with improved self-esteem scores. Positive association between physical activity and self-esteem in adolescents have been reported by Ferguson, et al, (1989). Page and Tucker (1994) demonstrated those adolescents who rarely exercise are more likely to experience loneliness, shyness and feelings of hopelessness. In contrast, no relationship was observed between physical activity levels and anxiety. In adults exercise must be prolonged and be fairly strenuous to reduce anxiety. In conclusion, this study demonstrated that healthy children aged 10 to 16 years rarely engaged in vigorous physical activity. Use of computer is sedentary behaviour that is becoming increasingly common and is associated with lower levels of physical activity. To be most effective, interventional efforts to increase physical activity should primarily target decreasing television and computer time and increasing physical activity. The increased levels of physical activity are an important component in the development of self esteem in children.

Sedentary Activities:

Some other studies also tried to explore the substantial variations in the extent of participation of children in physical activity. Simmons-Morton et al. (1997) conducted a large survey of over 2,400 third grade (8 to 9 year old) children in four US States. They found that not only did boys participate significantly more in moderate to vigorous physical activity, but they also participate more in sedentary activities. Specifically, boys spent more time than

girls watching television and playing video games.

Parents Role:

According to Marks et al, (2000), initial attempts to explain children's participation in sports activities also focussed on parental modelling. Moore et al, (1991) found that more active parents are more likely to have more active preschool children. Simons Morton et al (1997) found that support from parents, teachers and peers predicted extent of physical activity among the children. Thus, as with other behaviour patterns, children's activity levels are modelled on that of their parents.

Role of Family:

In an attempt to distinguish between parental influence and children's attributes, Stucky-Ropp and Diloranzo (1993) conducted a study in Midwestern American town which involved structured interviews with over 200 (10 to 12 years old) children and their mothers. Statistical analysis of their findings showed that the children's reported enjoyment of physical activity was the most salient predictor of exercise behaviour. In addition, the mother's perceptions of barriers to exercise (eg lack of time) and mother's reports of family support were important. There were also some gender differences. Boy's activity was also predicted by their perception of modelling and support of exercise behaviour by family and friends, whereas girl's activity was more predicted by presence of exercise-related equipment at home and parental modelling. These results confirm the central role of family environment in establishing an interest in physical activity among children (Stucky, Ropp and Diloranzo, 1993).

Parsons et al, (1999) conducted a study to identify childhood predictors of adult obesity included parental fatness, physical inactivity, dietary factors and other behavioural factors like self esteem and personality.

Conclusion:

The results of many ongoing studies in this area are still at a preliminary stage and further research is needed to identify definite patterns or factors associated with improving adherence to exercise especially among children. This is so because a carry over of physical activity from childhood to adulthood

is a likely possibility. There is great potential in furthering research in this area of exercise and health as significant impact of such research may jolt the public into exercising more and replacing its rich benefits.

REFERENCE

- ⇒ **Ferguson, K.J., Yesalis, C.E., Promrehn, P.R., Kirkpatrick, M.B. (1989).** Attitudes, knowledge and beliefs as predictors of exercise intent and behaviour in school children. *J. School Health*. 59, 112-115.
- ⇒ **Freedson, P.S. and Miller, K.M. (2000).** Objective monitoring of physical activity using motion sensors and heart rate. *Research Quarterly for Exercise and Sport*, 71 (2), 21-29
- ⇒ **Krista, A.B., Timothy, T.H. and Patricia, M. Dubbert (2003).** Physical inactivity as a risk factor for Chronic diseases. In Cohen, L.M., Mc Chargue, D.E. and Collins, F.L. (ed.). *The Health Psychology Handbook*. London : Sage Publications.
- ⇒ **Marks, D.F., Murray, M., Evans, B. and Willing, C. (2000).** *Health Psychology: Theory, Research and Practice*. Sage Publication Ltd., New Delhi.
- ⇒ **Mohan, J. (1991).** *Psychology of Sports: The Indian experience*. New Delhi: Friends.
- ⇒ **Mohan, J. (2000).** *Personality across Cultures*. New Delhi: Oxford University Press.
- ⇒ **Mohan, J. (2001).** *Stress and Sports*. Proceedings Xth World Congress of Sport Psychology, Greece.
- ⇒ **Moore, L.L., Lombardi, D.A., White, M.J., Campbell J.L., Oliversia, S.A., and Elison, R.C. (1991).** Influence of parent's activity levels on activity levels of young children. *Journal of Pediatrics*, 118: 215-219.
- ⇒ **Page, R.M., Tucker, L.A. (1994).** Psychological discomfort and exercise frequency: an epidemiological study of adolescent. *Adolescence*, 113, 184-191.



*** Y.L. Chaudhari**

A COMPARATIVE STUDY ON ANTHROPOMETRIC MEASUREMENTS AND SELECTED MOTOR FITNESS COMPONENTS AMONG SCHOOL GUJARAT

INTRODUCTION

Play is a Voluntary activity or occupation executed within certain fixed limits of time and Place, according to rules freely accepted and absolutely binding, having its aim in itself and accompanied by a feeling of tension, joy and consciousness that is “different” from “ordinary life”. Anthropometry simply means “measurement of people”. The word is derived from the Greek ‘anthros’ meaning man, and ‘metron’ measure. more formally it is the study of the size, shape and strength of the human body, including, mass, volumes, mobility, proportions, centers of gravity, and inertial properties of the whole body segments.

One of the important tasks for physical educationists is measure different parts and components of human body. The scientific terminology given to the measurement of man is “Anthropometry”. There are hundreds of human body measurements which have attracted attention of many types of specialists like anatomists, physical educationists, anthropologists, human biologists, human physiologists, ergonomists, designers, artists, pediatricians, sports scientists, coaches, etc. Another term coined more recently for the measurements of that body part which are which are related to human body movements is “Kin anthropometry”. Ross et al. (1978) have defined kin anthropometry as, “the application of measurements to the study of human size, shape, proportion, composition, maturation and gross functions so as to help understand human movement in the context of growth, exercise, performance and nutrition”. Anthropometric measurements like nose length, ear

not included in kin anthropometry.

Significance of the study

The study will help to identify the difference between motor fitness performances.

1. The study would help to find out the significant relationship between jumpers, runners and throwers on motor fitness components.
2. The study would give an additional knowledge to the area of research.
3. The study would help the coaches and physical education teachers to find out the athletic jumpers, runners and throwers are better on the selected motor fitness variables.
4. The findings of the study by bringing forth adequate, inadequacies in physical Education of schools in four districts of Gujarat.
5. Specific contributions of the study for the development of Physical education programmers would include the following areas.
6. Relation of physical education programs with the educational programmers.
7. Fiscal management of the physical educational programmer.

Objectives of the study:

The study undertaken will study the following objectives:

1. To examine the difference between runners, throwers and jumpers in relation to their motor ability fitness components.
2. To assess the difference between runners, throwers and jumpers in relation to their pull-ups performance.
3. To assess the difference between runners,

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throwers and jumpers in relation to their push-ups performance.

4. To assess the difference between runners, throwers and jumpers in relation to their Vertical jump performance.

5. To assess the difference between runners, throwers and jumpers in relation to their Standing Broad jump performance.

6. To acquaint the reader with the common methods of finding the measurement of body composition.

7. To acquaint the reader with the techniques of commonly used anthropometric measurements.

8. To measure the Height, Weight, Sitting Height, arm length, leg length and motor fitness components among runners, and jumpers throwers.

Hypotheses:

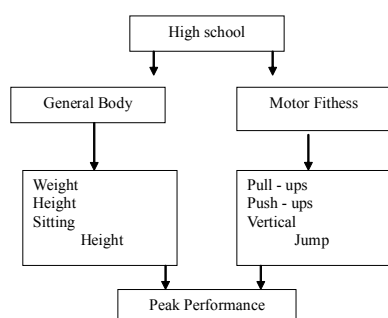
Based on the review of literature discussed in chapter two and the theoretical framework developed in the present study, the following hypotheses have been formulated.

1. There might not be any significant difference between Runners and Throwers in relation to their Motor Fitness.

2. There might not be any significant difference between Runners and jumpers in relation to their Motor Fitness.

3. There might not be any significant difference between Throwers and jumpers in relation to their Motor Fitness.

DESIGN OF THE STUDY



SAMPLE OF THE STUDY

For the present investigation the sample considered was high school boy's athletes as Runners, Throwers and jumpers. 300 Athletes were taken for the study, the data collection are representing from 4 Districts in Gujarat

S.No	District	Runners	Throwers	jumpers	Total
1	Surat	25	25	25	75
2	Tapi	25	25	25	75
3	Navsari	25	25	25	75
4	Narmada	25	25	25	75
Total		100	100	100	300

TOOLS USED:

The following instruments have been used in the study.

- Standard Anthropometric Kit Was used to Measure the anthropometric measurements of High School Athletes.

- Standardized Indiana motor fitness components test was adopted to measure the motor fitness components of High School Athletes.

DATA COLLECTION PROCEDURE:

The sample of the study was the school athletes age group ranging between 11 to 16 years from three types of athletes (jumpers, runners and throwers) the jumpers, runners and throwers consisting four districts (Surat, Tapi, Navsari and Narmada) each districts has 75 boys total of 300 are studying in Govt. of Gujarat. The subjects were randomly selected consisting the Factors such as height, weight, sitting height, arm length and leg length of the total sample this group was given the orientation of the Indiana motor fitness test like pull-ups, push-ups, vertical jump and standing broad jump were taken accordingly.

Results and Discussion

The table and graph-1 showing the significant difference between Runners and Throwers in relation to their Motor Fitness

Activity	Sample	Mean	SD	t'	P.value
Motor fitness	Runners	100.90	11.76	1.88	0.061
	Throwers	97.73	12.01		

DISCUSSION

From the result Shown in the above table it is very clear that there was no significant difference between Runners and Throwers in relation to their motor fitness. The mean value of Runners higher than the mean value of throwers and obtained 't' value was 1.88 and P. value was 0.61 which was not found to be significant.

The table and graph-2 showing the significant difference between Runners and Jumpers in relation to their Motor Fitness

Activity	Sample	Mean	SD	t	P.value
Motor fitness	Runners	100.90	11.76	-5.33	0.000
	Jumpers	112.06	17.28		

DISCUSSION

From the result Shown in the above table it is very clear that there was no significant difference between Runners and Jumpers in relation to their motor fitness. The mean value of Jumpers higher than the mean value of Runners and obtained t value was -5.33 and P. value was 0.000 which was not found to be significant.

The table and graph-3 showing the significant difference between Throwers and Jumpers in relation to their Motor Fitness

Activity	Sample	Mean	SD	t	Pvalue
Motor fitness	Throwers	97.73	12.01	6.80	.000
	Jumpers	112.06	17.28		

DISCUSSION

From the result Showing in the above table it is very clear that there was no significant difference between Throwers and Jumpers in relation to their motor fitness. The mean value of Jumpers than the mean value of Throwers and obtained t value was -6.08 and P. value was 0.000 which was not found to be significant.

CONCLUSIONS:

The Following Conclusions were drawn on motor Fitness among high school athletes (*Jumpers, Throwers, Runner*)

1. No significant difference was found between Runners and Throwers in relation to their motor fitness.
2. significant difference was found between Runners and Jumpers in relation to their motor fitness.
3. significant difference was found between Throwers and Jumpers in relation to their motor fitness.

Striking features of the Research: A pioneer attempt was made in the area of Physical Education which focused on General Body Measurements (Weight, Height, and Sitting Height) and Motor Fitness components (pull-ups, Push-ups, Vertical Jump, Standing Broad Jump).

The Striking features of the study resulted into the

final conclusion have clearly indicated that Throwers and Jumpers was showing a significant role in Motor fitness components was showing highly significant effect on other motor fitness component (i.e., Weight). With regard to pull-ups and Push-ups, as the results and discussions have clearly focused on drawing the final components which was not found to be significant at 0.01 level of significance. Similarly, the study was scientifically proved that throwers and jumpers have shown a meagre impact on other variables.

REFERENCE

- ⇒ M.K.Kamalesh & M.S.Sangral, Principles and History of Physical Education, (Ludhiana : Prakash Bothers, (1985), p.1.
- ⇒ Earle F.Zeigler, Physical Education and Introduction, (Philadelphia : Lea- Feibiger), 1982, p.226.
- ⇒ Baxter-Jones, Helms, Maffull, Baines Preece and Preece, 1995; Boucher Muttimer, 1994; Brewer, Balsom, Davis & Ekblom, 1992).
- ⇒ From American Association for Health, Physical Education and Recreation, Journal of Health Physical Education and Recreation, (March, 1969), 59-60.
- ⇒ Marcel, G., The Mystery of Being, Gifford lectures, 1949-50, Regnery, Chicago 2 Vols., n.d.
- ⇒ John Walsh (1968) First Book of Physical Fitness , (London : Heinement Education Books Ltd.),
- ⇒ Carl Will Goose, (1961) Evaluation in Health Physical Education , (New York: McGraw Hill Books Company,), p.6.
- ⇒ Roboson M.,) Basic Understanding of Physical Fitness Orientation Course in Scientific Aspects of Physical Fitness , Report and Papers (LNCE Gwalior), October, 1983.
- ⇒ Lawrence E., Morehouse and Augustus T. Miller, Physiology of Exercise (St. Louis: The C.V.Moshy Company, 1976), p.224.



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Impact of circuit training on cardio respiratory endurance of valsad district Hockey Players

Abstract

The purpose of this study was to discover the effect of Circuit Training on the cardio-respiratory endurance of valsad district hockey players. A total of 40 males ranging in age from 18 to 25 years old were chosen from male hockey players of valsad district for the research. Group-A: Experimental (N1=20) and Group-B: Control (N2=20) were randomly assigned to the individuals. The purpose and method of the observation were explained to all the subjects. The subjects in Group-A were subjected to an eight-week Circuit Training Program. Group-B performed as the control group, which did not participate in any extracurricular activities. T-tests were used to find out the statistical significance of each group's pre and post-mean differences. The level of significance was set at $p < 0.05$ level of confidence. The results of the study stated that the Circuit Training had significantly improved Cardio-respiratory Endurance of the subjects.

Introduction

Circuit training program was developed by R.E. Morgan and G.T. Anderson in 1953 at the University of Leeds in England. There onwards this training has become one of the training to improve the physical fitness qualities of athletes. Circuit training was a workout routine that combines cardiovascular fitness and resistance training. Initial routines were arranged in a circle by doing the different sets of exercises in alternating sequence and therefore named circuit training. By allowing only a short rest interval of 30-90 seconds between stations, cardiovascular fitness is gained along with the benefits of another related training effect. The different exercises in different stations are fixed depending on the trainee's training stage, age, and demand to improve physical fitness and physiological qualities.

Circuit training is a type of physical conditioning that involves moving from one activity to the next through a set of stations

or pieces of equipment. Circuit training is a type of fitness training that focuses on the entire body. Circuit training improves muscular strength, endurance, cardiovascular fitness, agility and flexibility all at the same time if done on a regular basis. Circuit training is a method of fitness training that is designed to develop general, all-round physical and cardiovascular fitness" (Scholich, 1990). It is a great training program for improving all types of physical fitness abilities based on the program in various stations.

Methodology

For the purpose of present study, Total Forty (40) male subjects, age ranged from 18 to 25 years were selected as subjects from valsad district male hockey Players. The subjects were randomly divided into two groups: Group-A: experimental (N1=20) and Group-B: control (N2=20). All the subjects were informed approximately the purpose and method of the observation. The Subjects from Group-A had been subjected to an 8-

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week of Circuit Training Program. Group-B acted as control who did not take part in any special training apart from the regular curricular sports.

Table 1: Selected Variables and Test

S. No	Selected Variables	Test
1	Cardio respiratory Endurance	Cooper's 12 Minute Run/Walk test

Statistical Analysis

The data collected in the study was subjected to statistic analysis with appropriate use of SPSS package. T-test was used to find out the statistical significances of each groups pre and post mean differences. The level of significance was set at $p < 0.05$ level of confidence.

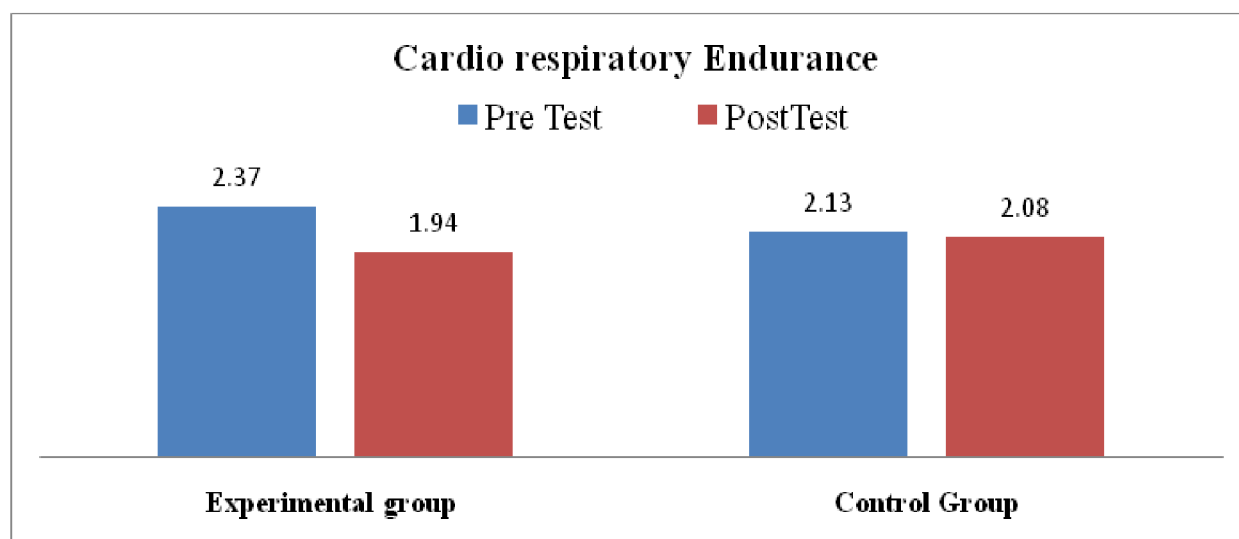
Result and Discussion

Table 2: Show Statistics of Selected Variables Male Hockey Players.

S. No	Variables	Group	Pre-test		Post-test		T- Test
			Mean	S.D	Mean	S.D	
1	Cardio respiratory Endurance	Experimental	2.37	0.316	1.94	0.234	7.969*
		Control	2.13	0.408	2.08	0.365	0.408

1. Cardio respiratory Endurance

Table - 2 presents the result of experimental group and control group with regard to the Cardio respiratory Endurance. The descriptive statistics shows the Mean and SD value of endurance of pre-test and post-test of experimental group was 2.37 ± 0.316 and 1.94 ± 0.234 respectively, whereas, the Mean and SD value of endurance of pre-test and post-test of control group was 2.13 ± 0.408 and 2.08 ± 0.365 . The 't' value of experimental group was 7.969* and control group was 0.408. It clearly means that there was statistically significant difference found in endurance between pre-test and post-test experimental group of hockey players.



Conclusion

The researcher has analyzed the collected data as per the purpose of study. The statistical analysis of the study shows that circuit training has significantly improved the cardio respiratory endurance of hockey players.

Reference

- “Effect of circuit training on speed, agility and explosive power among inter collegiate handball players” Dr. P Gopinathan Assistant Professor, Tamil Nadu Physical Education and Sports University, Melakottaiyur Post, Chennai, Tamil Nadu, India. International Journal of Yogic, Human Movement and Sports Sciences 2019; 4(1): 1294-1296
- “EFFECT OF CIRCUIT TRAINING PROGRAMME ON SELECTED PHYSICAL FITNESS VARIABLES AMONG SPORTS PERSON”2020 IJCRT | Volume 8, Issue 11 November 2020 | ISSN: 2320-2882. Dr. Ramdas R. Jadhav Director of Physical Education RajarshiShahu Arts, Commerce & Science College Pathri, Dist. Aurangabad (MS), India.
- Vikeshkumar, Research Scholar, Department of Physical Education (T),Guru Nanak Dev University,Amritsar, India. “ Effect of circuit training program on selected motor abilities among university male “ International Journal of Physical Education, Sports and Health 2016; 3(4): 255-257,
- “Effects of Circuit Training on Physiological Variable of Adolescent Boys Kabaddi Players”. *Bharathiar National Journal of Physical Education and Exercise Science* (ISSN:0976-3678)E-ISSNApplied(InternationalPeer-ReviewedJournal), 10(1),09 17.<http://www.budpejournal.com/index.php/bnjpees/article/view/4>
- Mecklish, P. (2001) “Effect of Circuit Training Programme on Hitting Ability for Distance and Shooting Accuracy in Hockey”, Unpublished Masters Thesis, Submitted to University of Madras.



* Kajal Trivedi

COMPARATIVE STUDY OF PHYSIOLOGICAL FACTORS ON HANDBALL AND VOLLEYBALL PLAYERS OF AHMEDABAD CITY

An Research and Study of physiological Factors on Handball And volleyball players of Ahmedabad city to see comparison of handball players and volleyball players physiological Factors like 1) Blood pressure 2) Pulse rate 3) Vital capacity I have also put forth my efforts to study For this study Handball and Volleyball players was selected The age group was between 15-19 years. 32 boys of Ahmedabad city school were selected randomly for the purpose of the study. There will two game selected 16 boys of Hand ball and 16 boys of volleyball From the Statistical Analysis it is seen that there is no significant difference in physiological factors. Handball players heart beat efficiency is more than volley ball players. Handball player Systolic Blood Pressure score was good than volley ball players. Handball players Diastolic Blood Pressure score was good than volleyball Players. Volley ball Vital Capacity was seen high than Handball players.

Introduction

A branch of physiology concerned with how the body adapts physiologically to the acute (short-term) stress of exercise or physical activity, and the chronic (long-term) stress of physical training. Exercise physiologists, for example, study how our bodies obtain energy from the food we eat and use the energy to initiate and sustain muscle activity. A sound knowledge of exercise physiology enables coaches and athletes to optimize the amount and type of training. Exercise physiology is the study of the acute responses and chronic adaptations to a wide-range of physical exercise conditions. In addition, many exercise physiologists study the effect of exercise on pathology, and the mechanisms by which exercise can reduce or reverse disease progression. Accreditation programs exist with professional bodies in most developed countries, ensuring the quality and consistency of education. In Canada, one may obtain the professional certification title - Certified Exercise Physiologist for those working with clients (both clinical and non clinical) in the health and fitness industry. The physiology of exercise is a broad concept that addresses the central issue as to

how the body adapts itself to the demands of physical activity. Physiology is the academic study of the various processes, systems, and functions of the human body as influenced by the performance of physical activity. Exercise is a term that has a variety of possible meanings, each dictated by circumstances. In a sports context, exercise is the performance, conditioning or training undertaken in respect to a particular athletic or sporting purpose. Exercise may also be directed to improvement of a person's general health, physical fitness, or as physical therapy, to augment an existing treatment to remedy or to ameliorate the effects of a disease or illness upon the body. The term exercise physiology is used to identify the corresponding course of academic study offered at universities around the world. The human body undergoes adaptations on a continuous basis. Sport tends to heighten the power of the body to adapt to training, competition, or other circumstances, as sport is often the most profound stress experienced by the body. As an example, when the body is subjected to a fever, where the subject's temperature becomes significantly elevated above its usual range centered

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at 98.6°F (37.7°C), the body's metabolism (the overall rate of activity in the body's processes) increases; the running of a marathon may increase metabolic rates to many times their normal level. Virtually every process and organ within the body is affected by exercise. As an example, the skin, the largest human organ, undergoes physical changes when exposed to the environmental factors encountered in sport, such as increases and decreases in external temperatures. The physiology of exercise tends to center upon the most important physical systems to athletic performance: the cardiovascular system, the cardiorespiratory system, the thermoregulatory system, body composition and the musculoskeletal system. It is these aspects of human function that tend to have the greatest impact upon the ability of an athlete to maintain or improve their level of performance in any sport. The cardiovascular system is the physical network composed of the heart and its connected arteries, veins, and capillaries. The cardiovascular system is the vehicle through which the oxygen and fuels required by the cells within the body are supplied; the cardiovascular system removes all waste products from the cells and organs for disposal. When the body is subjected to exercise, and its increased physical demands, the cardiovascular system is forced to work more quickly and more efficiently to fulfill bodily needs. A number of physiological changes occur over time to this system through exercise.

Method

32 boys of Ahmedabad city school were selected randomly for the purpose of the study. There will be two groups selected: 16 boys of Handball and 16 boys of Volleyball. **physiological Factors like** 1) **Blood pressure** 2) **Pulse rate** 3) **Vital capacity**

Result and discussion

TABLE-1

Blood pressure

The Difference of the Significance of the Mean of Handball and Volleyball in the Performance of Systolic Blood Pressure

GROUP	MEAN	DIFFERENCE	"T" RATIO
HAND BALL	122.91	3.17	1.77
VOLLEY BALL	126.08		

The mean difference is. Received "T" ratio is, which is more than, hence, it is significant level at 0.05(22) is 2.074

From table 1 it is seen that Handball group mean is 122.91 and Volleyball group mean is 126.08. Mean difference between these two groups is 3.17 and 't' ratio is 1.77 which is not significant at 0.05 level. Graphically it is represented in Graph 1

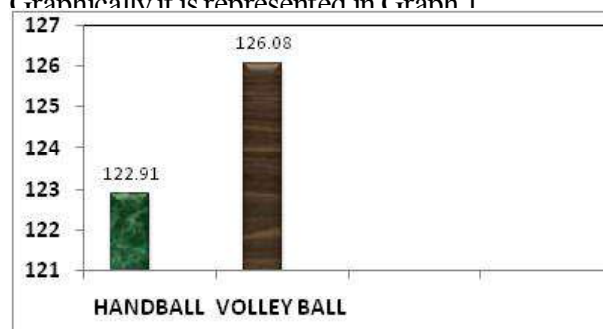


TABLE-2

Blood pressure

The Difference of the Significance of the Mean of Handball and Volleyball in the Performance of Diastolic Blood Pressure

GROUP	MEAN	DIFFERENCE	"T" RATIO
HANDBALL	62.5	1.42	0.41
VOLLEYBALL	63.91		

The mean difference is. Received "T" ratio is, which is more than, hence, it is significant level at 0.05(22) is 2.074

From table 1 it is seen that Handball group mean is 62.5 and Volleyball group mean is 63.91. Mean difference between these two groups is 1.42 and 't' ratio is 0.41 which is not significant at 0.05 level. Graphically it is represented in Graph 2

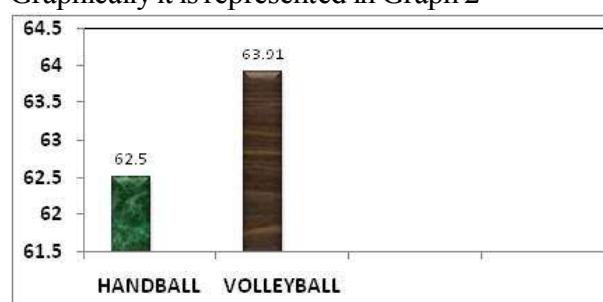


TABLE-3
PULSE RATE

The Difference of the Significance of the Mean of Hand ball and volley ball in the Performance of Pulse rate

GROUP	MEAN	DIFFERENCE	"T" RATIO
HANDBALL	79.42	0.08	0.02
VOLLEYBALL	79.5		

The mean difference is. Received "T" ratio is, which is more than, hence, it is significant level at 0.05(22) is 2.074

From table 1 it is seen that Handball group mean is 79.42 Volley ball group mean is 79.5 Mean difference between this two groups is 0.08 and 't' ratio is 0.02 which is not significant at 0.05 level. Graphically it is represented in Graph 3

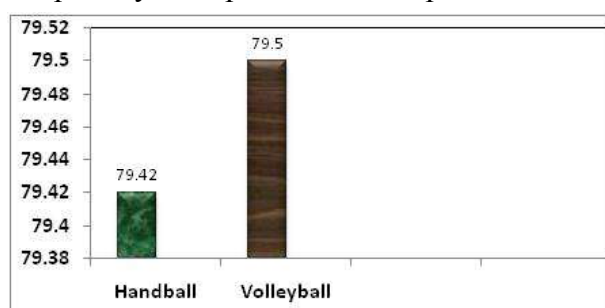
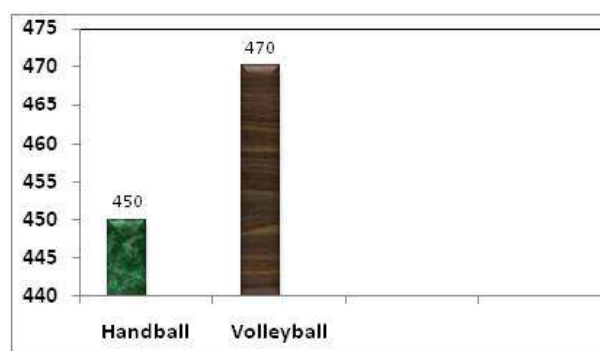


TABLE-4
PEAK FLOW

The Difference of the Significance of the Mean of Hand ball and volley ball in the Performance of Peak flow

GROUP	MEAN	DIFFERENCE	"T" RATIO
HANDBALL	450	20	0.83
VOLLEYBALL	470		

The mean difference is. Received "T" ratio is, which is more than, hence, it is significant level at 0.05(22) is 2.074
From table 1 it is seen that Handball group mean is 450 Volley ball group mean is 470 Mean difference between this two groups is 20 and 't' ratio is 0.83 which is not significant at 0.05 level. Graphically it is represented in Graph 4



Conclusion

1. Handball players heart beat efficiency is more than volley ball players.
2. Handball player Systolic Blood Pressure score was good than volley ball players.
3. Handball players Diastolic Blood Pressure score was good than volleyball Players.
4. Volley ball Vital Capacity was seen high than Handball players.

REFERENCE

- ⇒ Anindita Mondal "Anthropometry and Physiological Profile of Indian Shooter" International Journal of Applied Sports Sciences 2011, Vol. 23, No. 2, 394-405
- ⇒ Arun Singh Rathore "A COMPARATIVE STUDY OF ANTHROPOMETRIC MEASUREMENTS BETWEEN HANDBALL AND VOLLEYBALL PLAYERS" QUARTERLY ONLINE INDEXED DOUBLE BLIND PEER LNUPE Gwalior, M.P, India www.ijems.net vol-1 issue-02 Dec- 2012
- ⇒ E I Iconaru, "Anthropometric and physiological factors predicting young adults' motor skills" Br J Sports Med 2010;44:i24 doi:10.1136/bjsm.2010.078972.74 Volume 44, Issue 14



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THE EFFECT OF SELECTED EXERCISE ON BODY COMPOSITION OF GIRLS OF VAPI CITY

An Research and Study of human as specially in case of women body composition has been introduced late in the 20th century. The main objective was to see and study the effect of physical exercise in girls body composition. I have also put forth my efforts to study the effect in this respect, Forty women were selected from Vapi city. (aged between 13-16 years) and their samples were taken by purposive sampling method and divided into two main groups like Experimental and Control group of girls. In this course of study of body composition, variables contains like Weight, B.M.I, Fat%, Fat Mass and Total Body Water were Twelve Week Training Programme (Hopping, Surya namaskar, sits up) was conducted and after training, measurement shows the difference between Control Group and Experimental Group. It was found that Experimental group was significant on weight reduce, BMI was normal, Fat % was decrease and Fat mass was

Key word : Fat, B.M.I, Fat mass, T.B.W

Introduction

Obesity in the over -35 urban Indian women is causing serious concern to the medical fraternity. Sedentary city lifestyles, rich food, lack of exercise, a gradual slowing down of the metabolic rate are playing havoc with the waist -to-hip circumference, according to a research. According to Dr. Reddy, excess fat deposit in a woman's body can also give rise to pancreatic problems, gall stones, cancer of the uterus, osteoporosis and serious interruption in the sleep pattern "Some of these ailments cannot be detected in the initial stages, but they trouble a woman in her middle age when the body's resistance starts weakening.

Condition of being significantly and un healthily overweight. The body mass Index (BMI) is commonly used to define obesity. People with a BMI between 25 and 30 are described as overweight, while those with a BMI over 30 count as obese. Obesity increase susceptibility to disease, strains the vital organs, and reduces life expectancy; it is usually remedied by controlled weight loss, healthy diet and exercise. Level of obesity has risen significantly in

many of the wealthier nations since the middle of the 20th century.

What is the Body Mass Index (BMI) and how is it calculated?

- ◆ The body mass index is calculated using weight and height.
- ◆ A higher number means more fat and a lower means less fat.
- ◆ Enter your weight and height at the right to calculate your BMI.
- ◆ The range for good health is between 18.5 and 25; up to 28 is acceptable if over age 50.
- ◆ Obesity is form 30 to 40 and morbid obesity is over 40
- ◆ Severe malnutrition is 17.5 and lower.

The study of human body composition has been several decades. The body composition assessment is generally linked to the determination of the relative amount of in the fat body having application in several fields of study such as medicine, public health, nutrition, health and fitness, and exercise science.

Material and methods

40 girls of Vapi city girls were selected randomly

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for the purpose of the study. There was two groups control and experimental group. For this group A and B has made.

Taking into consideration, the above reviews, and the following physiological aspects was selected for this study Age, Height (cm,) Weight (kg), Body Mass index, fat (%), Fat Mass, Total Body water, were obtained from the test conducted by Tanita Body Composition Analyzer.

Result and discussion

TABLE-1

The difference of the significance of the mean of Vapi city girls pre test and post test in the performance of weight table

NO	GROUP	PRE TEST	POST TEST	MEAN DIFFERENCE	"t" ratio
1	EXPERIMENTAL	54.06	51.91	2.15	3.66*
2	CONTROL	54.46	54.98	1.02	1.7

* Significant level is 0.05

The mean difference is received "t" ratio is, which is more than, hence, it is significant level at 0.05 (1.96) From table of weight it seems that experimental group mean is 54.06 of pre test and after giving training post test mean is 51.91 and control group pre test mean is 54.46 and post test mean is 54.98 .Mean difference of two group is experimental 2.15 and control group is 1.02 and "t" ratio of experimental group is 3.48 and control group is 1.7. .Therefore it can be said that there is significant experimental group and not significant control group's weight.

GRAPH 1

The difference of the mean of Vapi city girls experimental group and control in the performance of weight

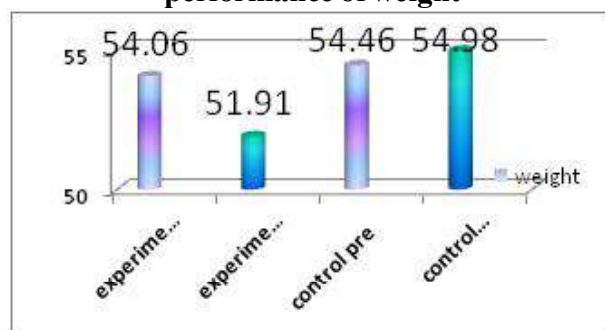


TABLE-2

The Difference of the significance of the Mean of Vapi city girls experimental and control group in the performance of Body Mass Index

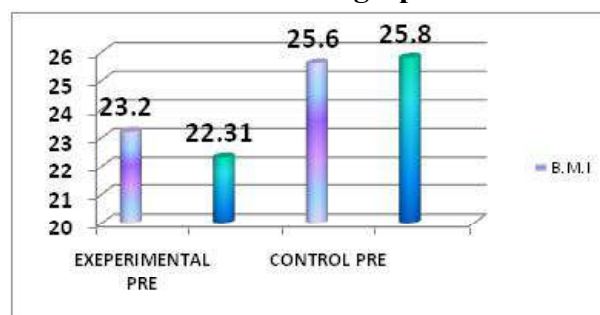
NO	GROUP	PRE TEST	POST TEST	MEAN DIFFERENCE	"t" ratio
1	EXPERIMENTAL	23.20	22.31	0.89	3.36*
2	CONTROL	25.60	25.80	0.20	0.75

* Significant level is 0.05

From table Body Mass Index that experimental group mean is 23.20 of pre test and after giving training post test mean is 22.31 and control group pre test mean is 25.60 and post test mean is 25.80 .Mean difference of two group is experimental 0.89 and control group is 0.75 and "t" ratio of experimental group is 3.36 and control group is 0.75. Therefore it can be said that there is significant for experimental group and control group's is not significant girls B.M.I.

GRAPH 2

The Difference of the significance of the Mean of Vapi city girls experimental and control group in the performance of Body Mass Index graph



TABEL 3

The Difference of the significance of the Mean of Vapi city girls experimental and control group in the performance of Fat %

NO	GROUP	PRE TEST	POST TEST	MEAN DIFFERENCE	"t" ratio
1	EXPERIMENTAL	31.45	27.18	4.27	6.82*
2	CONTROL	30.93	31.04	0.11	1.89

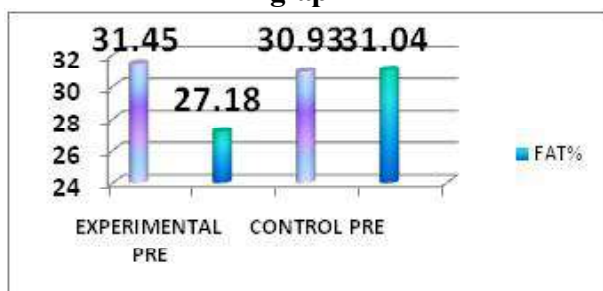
* Significant level is 0.05

From table of Fat % it seems that experimental group mean is 31.45 of pre test and after giving training post test mean is 27.18 and control group pre test

mean is 30.93 and post test mean is 31.04 .Mean difference of two group is experimental 4.27 and control group is 0.11 and “t” ratio of experimental group is 6.82 and control group is 1.89 .Therefore it can be said that there is significant for experimental group and control group’s is not significant girls Fat %

GRAPH – 3

The Difference of the significance of the Mean of Vapi city girls experimental and control group in the performance of Fat % graph

**TABEL-4**

The Difference of the significance of the Mean of Vapi city’s girls experimental and control group in the performance of Fat Mass

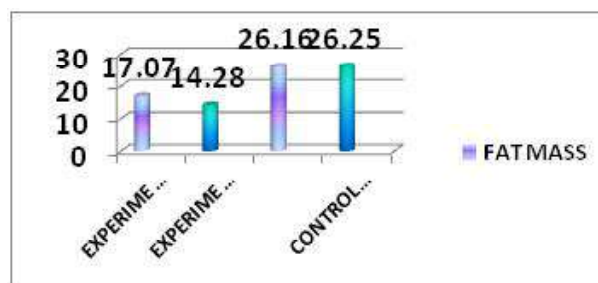
NO	GROUP	PRE TEST	POST TEST	MEAN DIFFERENCE	“t” ratio
1	EXPERIMENTAL	17.07	14.28	2.79	6.52*
2	CONTROL	26.16	26.25	0.09	1.18

* Significant level is 0.05

From table of Fat Mass it seems that experimental group mean is 17.07 of pre test and after giving training post test mean is 14.28 and control group pre test mean is 26.16 and post test mean is 26.25 .Mean difference of two group is experimental 2.79 and control group is 0.09 and “t” ratio of experimental group is 6.52 and control group is 1.18 . .Therefore it can be said that there is significant for experimental group and control group’s is not significant girls Fat Mass

GRAPH – 4

The Difference of the significance of the Mean of Vapi city girls experimental and control group in the performance of Fat Mass Graph

**TABEL-5**

The Difference of the significance of the Mean of Vapi city girls experimental and control group in the performance of Total body water

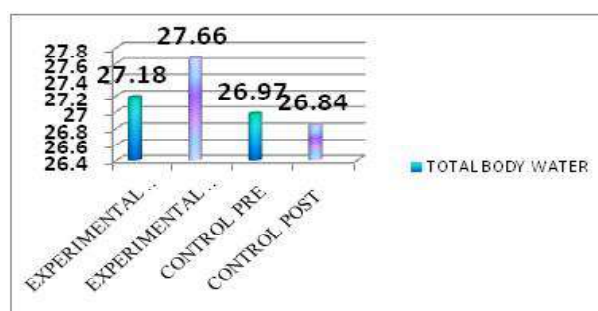
NO	GROUP	PRE TEST	POST TEST	MEAN DIFFERENCE	“t” ratio
1	EXPERIMENTAL	27.18	27.66	0.48	5.8*
2	CONTROL	26.97	26.84	0.13	0.71

* Significant level is 0.05

From table of weight it seems that experimental group mean is 27.18 of pre test and after giving training post test mean is 27.66 and control group pre test mean is 26.97 and post test mean is 26.84 .Mean difference of two group is experimental 0.48 and control group is 0.13 and “t” ratio of experimental group is 5.8 and control group is 0.71 .Therefore it can be said that there is significant for experimental group and control group’s is not significant girls Total body water.

GRAPH – 5

The Difference of the significance of the Mean of Vapi city girls experimental and control group in the performance of Total Body Water



Discussion of finding

The “t” ratio of the Vapi city Girls experimental group in body weight was 3.66 which was significant at 0.05 levels and control group body weight was 1.7 which wasn’t significant at 0.05 levels.

The “t” ratio of the Vapi city Girls experimental group in B.M.I was 3.36 which was significant at 0.05 levels and control group B.M.I was 0.75 which wasn’t significant at 0.05 levels.

The “t” ratio of the Vapi city Girls experimental group in fat% was 6.82 which was significant at 0.05 levels and control group in fat% was 1.89 which wasn’t significant at 0.05 levels.

The “t” ratio of the Vapi city Girls experimental group in fat mass was 6.52 which was significant at 0.05 levels and control group in fat mass was 1.18 which wasn’t significant at 0.05 levels.

The “t” ratio of the Vapi city Girls experimental group in Total body water 5.80 which was significant at 0.05 levels and control group in Total body water was 0.71 which wasn’t significant at 0.05 levels.

Conclusion

Therefore, statistical analysis shows that there is significant effect of exercise on experimental group

REFERENCE

- ⇒ ACSM Fitness Book Leisure Press Champaign Illinois American College of Sports Medicine 1992
- ⇒ Arrows The complete Book of Exercise The Diagram Group Books Limited 1979
- ⇒ A penguin Book 2055 Physical Fitness Australia
- ⇒ Bray George A. History of obesity Edited by Gareth Williams and Gamma Fruhbeck 2009 John Wiley & sons, Ltd
- ⇒ Kamat’s potpourri Research database 1996 / books/Kareducation
- ⇒ M. Evans company The aerobics way A bantam book/ published by arrangement with, Inc November 1977
- ⇒ Tiwari Saket Raman and Rathor Chhote La, History of Physical Education Jalandhar: Publish by Yogesh Kumar sing 2006
- ⇒ Alan Maryon Obesity: the prevention, identification, Assessment and management of overweight and obesity in adults and children. National Institute for Health and Clinical Excellence, 2006 Available at: <http://www.nice.org.uk/guidance/CG43>
- ⇒ Tanaka k.nakanishi Apple human science obesity and life style changes for healthy aging 1196 jul 15 (4)



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THE EFFECTS OF SELECTED EXERCISE ON ANTHROPOMETRIC MEASUREMENT OF BHARUCH CITY GIRLS

The main objective was to see and study the effect of physical exercise in Girls. Anthropometric measurement. I have also put forth my efforts to study the effect in this respect, Forty girls were selected from Bharuch city girls . (aged between 13-16 years) and their samples were taken by purposive sampling method and divided into two main groups like Experimental and Control group of girls . In this course of study of Anthropometric measurement variables like butt, belly, and thigh, eight Week Training Programme was conducted (Cycling, Step up, Skipping, sits up,) and after training, measurement shows the difference between Control Group and Experimental Group . It was found that Experimental group was significant on butt, belly, and thigh

Key words : Anthropometric, Butt, belly, thigh

Introduction

Physical education as well as promoting healthy exercise and healthy living, also aims to promote team building and working as a member of a team. Games such as foot ball, cricket and badminton where the use of teams are a must aims to help the students build a rapport with their counterparts and also show how they can win- or at least play to their best- whilst working as a unit.

Ideally, healthy habits, including a fitness program, should begin early in life It's easier to practice a healthy life style as an adult if you grew up eating healthy foods and exercising. If you haven't exercised in a while, you will begin to see a training effect within a week or two after you start your program. Your heart muscles will become stronger. You'll begin to have greater endurance for every day task. After about eight weeks of the exercise program your body will adapt to the increased demands. If you want to see continued improvement, you may need to increase the time or the intensity of your workout and /or add some new activities. Adding variety to your workout will help to keep it interesting and will increase your ability to be consistent in exercising week after week.

Material and methods

40 Girls of Bharuch city girls were selected randomly of Bharuch District for the purpose of the study. There was two groups control and experimental group. For this group A and B has made. Group A has given special excises of butt, belly and thigh . Taking into consideration, the above reviews, and the following physiological aspects was selected for this study Anthropometric measurement of body parts from anthropometric tape.

Result and discussion

TABEL-1

The Difference of the significance of the Mean of Bharuch city girls experimental and control group in the performance of BELLY HIGH

No	Group	Pre test	Post test	Mean difference	"t" ratio
1	Experimental	71.8	70.25	1.55	7.85*
2	Control	118.54	118.64	0.1	1.55

* Significant level is 0.05

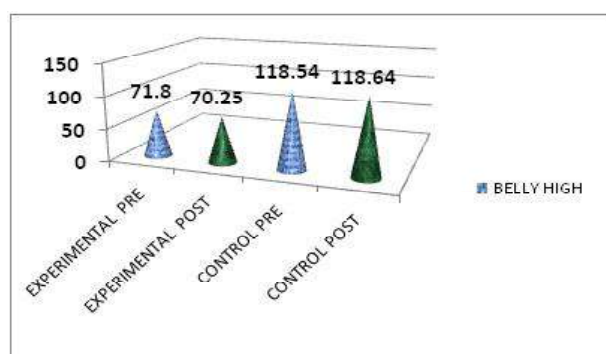
From table of Belly high it seems that experimental group mean is 71.8 of pre test and after giving training post test mean is 70.25nd control group pre test mean is 118.54 and post test mean is 118.64 Mean difference of two group is experimental 1.55 and

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control group is 0.1 and “t” ratio of experimental group is 7.85 and control group is 1.55 .Therefore it can be said that there is significant for experimental group and control group’s is not significant girls Belly high

GRAPH-1

The Difference of the significance of the Mean of Bharuch city girls experimental and control group in the performance of Belly High



TABEL-2

The Difference of the significance of the Mean of Bharuch city girls experimental and control group in the performance of BELLY MEDIUM

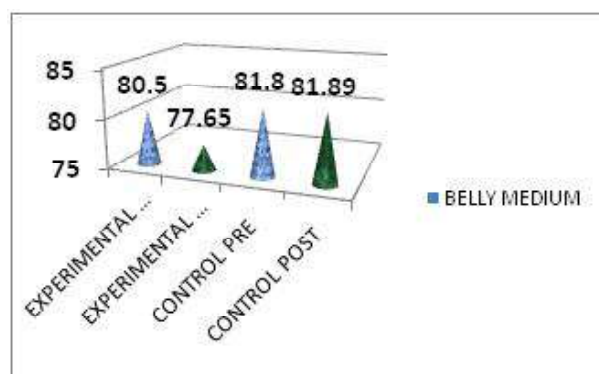
No	Group	Pre test	Post test	Mean difference	“t” ratio
1	Experimental	80.5	77.65	2.85	7.42*
2	Control	81.8	81.89	0.09	1.86

* Significant level is 0.05

From table of Belly medium it seems that experimental group mean is 80.5 of pre test and after giving training post test mean is 77.65 and control group pre test mean is 81.8 and post test mean is 81.89 .Mean difference of two group is experimental 2.85 and control group is 0.09 and “t” ratio of experimental group is 7.42 and control group is 1.86 .Therefore it can be said that there is significant for experimental group and control group’s is not significant girls Belly medium

GRAPH – 2

The Difference of the significance of the Mean of Bharuch city girls experimental and control group in the performance of Belly Medium



TABEL-3

The Difference of the significance of the Mean of Bharuch city girls experimental and control group in the performance of Belly low

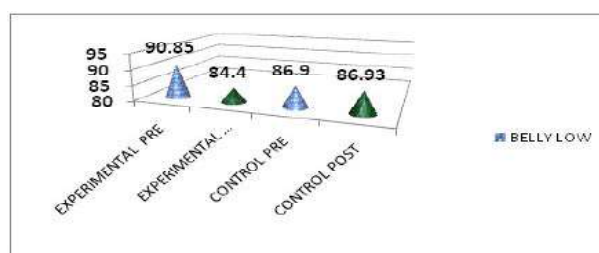
No	Group	Pre test	Post test	Mean difference	“t” ratio
1	Experimental	90.85	84.4	6.45	9.44*
2	Control	86.9	86.93	0.03	1.26

* Significant level is 0.05

From table of Belly Low it seems that experimental group mean is 90.85 of pre test and after giving training post test mean is 84.4 and control group pre test mean is 86.9 and post test mean is 86.93. Mean difference of two group is experimental 6.45 and control group is 0.03 and “t” ratio of experimental group is 9.44 and control group is 1.26 .Therefore it can be said that there is significant for experimental group and control group’s is not significant girls Belly low

GRAPH – 3

The Difference of the significance of the Mean of Bharuch city girls experimental and control group in the performance of Belly Low



TABEL-4

The Difference of the significance of the Mean of Bharuch city girls experimental and control group in the performance of Butt

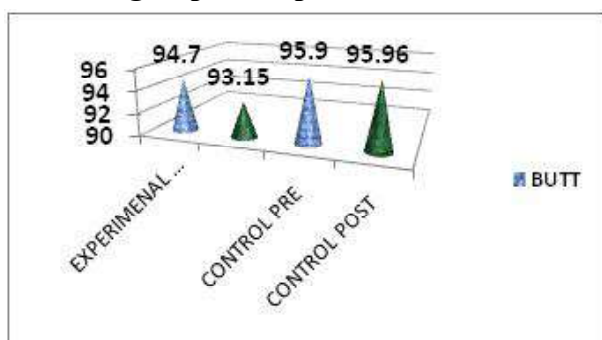
No	Group	Pre Test	Post Test	Mean Difference	"t" Ratio
1	Experimental	94.7	93.15	1.55	14.04*
2	Control	95.9	95.96	0.06	1.05

* Significant level is 0.05

From table of Butt it seems that experimental group mean is 94.7 of pre test and after giving training post test mean is 93.15 and control group pre test mean is 95.9 and post test mean is 95.96 .Mean difference of two group is experimental 1.55 and control group is 0.06 and "t" ratio of experimental group is 14.04 and control group is 1.05. Therefore it can be said that there is significant for experimental group and control group's is not significant girls Butt.

GRAPH – 4

The Difference of the significance of the Mean of Bharuch city girls experimental and control group in the performance of BUTT

**TABEL-5**

The Difference of the significance of the Mean of Bharuch city girls experimental and control group in the performance of Thigh near

No	Group	Pre test	Post test	Mean difference	"t" ratio
1	Experimental	40.1	38.9	1.2	13.05*
2	Control	39.25	39.45	0.2	1.89

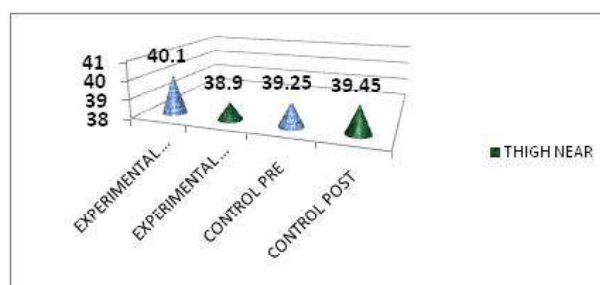
* Significant level is 0.05

From table of weight it seems that experimental group mean is 40.1 of pre test and after giving training post test mean is 38.9 and control group pre test mean is 39.25 and post test mean is 39.45 .Mean difference of two group is experimental 1.2 and control group

is 0.2 and "t" ratio of experimental group is 13.05 and control group is 1.89. Therefore it can be said that there is significant for experimental group and control group's is not significant girls in Thigh near

GRAPH – 5

The Difference of the significance of the Mean of Bharuch city girls experimental and control group in the performance of Thigh near

**TABEL-6**

The Difference of the significance of the Mean of Bharuch city girls experimental and control group in the performance of Thigh above knee

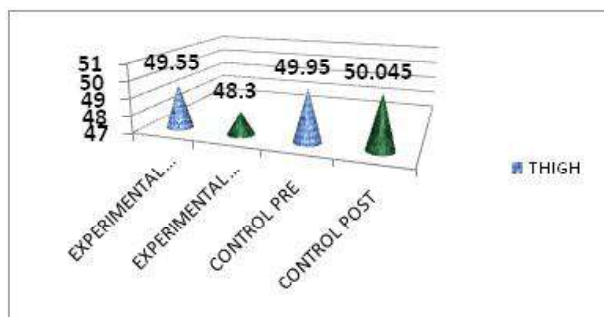
No	Group	Pre test	Post test	Mean difference	"t" ratio
1	Experimental	49.55	48.3	1.25	10.45*
2	Control	49.95	50.045	0.095	1.95

* Significant level is 0.05

From table of Thigh above knee it seems that experimental group mean is 49.55 of pre test and after giving training post test mean is 48.3 and control group pre test mean is 49.95 and post test mean is 50.045. Mean difference of two group is experimental 1.25 and control group is 0.095 and "t" ratio of experimental group is 10.45 and control group is 1.95. Therefore it can be said that there is significant for experimental group and control group's is not significant girls Thigh above knee

GRAPH – 6

The Difference of the significance of the Mean of Bharuch city girls experimental and control group in the performance of Thigh above knee

**Discussion of finding**

The “t” ratio of the Bharuch city girls experimental group in high belly 7.85 which was significant at 0.05 levels and control group in high belly was 1.55 which wasn’t significant at 0.05 levels.

The “t” ratio of the Bharuch city girls experimental group in medium belly 7.42 which was significant at 0.05 levels and control group in medium belly was 1.86 which wasn’t significant at 0.05 levels.

The “t” ratio of the Bharuch city girls experimental group in low belly 9.44 which was significant at 0.05 levels and control group in low belly was 1.26 which wasn’t significant at 0.05 levels.

The “t” ratio of the Bharuch city girls experimental group in butt is 14.04 which was significant at 0.05 levels and control group in butt is 1.05 which wasn’t significant at 0.05 levels.

The “t” ratio of the Bharuch city girls experimental group in thigh above 13.05 which was significant at 0.05 levels and control group in thigh above was 1.89 which wasn’t significant at 0.05 levels.

The “t” ratio of the Bharuch city girls experimental group in thigh near 10.45 which was significant at 0.05 levels and control group in Thigh near was 1.95 which wasn’t significant at 0.05 levels.

Therefore, statistical analysis shows that there is significant effect of exercise on experimental group.

Conclusion

Keeping in view the basic limitations, of the research work, conclusion shows that Exercise group loss inches in Butt, Belly and Thigh then control group.

REFERENCE

- ⇒ M. William, company The aerobics way A bantam book/ published by arrangement with, Inc November 1981
- ⇒ Jackson R., Sharman and Central Advisory Board of physical Education and Recreation
- ⇒ ACSM Fitness Book Leisure Press Champaign Illinois American College of Sports Medicine 1992
- ⇒ Arrows The complete Book of Exercise The Diagram Group Books Limited 1979
- ⇒ A penguin Book 2055 Physical Fitness Australia
- ⇒ Kamat’s, potpourri Research database 1998 /books/Kareducation
- ⇒ K R Sonnevile, Department of Nutrition and Dietetics, Harokopio University, Athens,



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COMPARISON OF PHYSICAL FITNESS COMPONENTS OF CHAMPION AND NON CHAMPION BOXER AT UNIVERSITY LEVEL

The present study has been carried out on 24 male Boxer (12 champion and 12 non - Chama) belonging to different college affiliated to Kurukshetra university Kurukshetra. The subject of the study to compare the teveiot physical fitness champion and non champion male boxers. To collect Data” Level of physical fitness measure test” contracted by MALHOTRA et al 1982. The Data collected through this test were statistically analysed and computed through mean, standard deviation, and t-test. The value of t-ratio 26.70 (Both champion and non-champion) were found to be statistically significant at 0.01 level of confidence. The Result indicated that the champion boxer seem to be on an Average more physically fit than there who are non-champions.

Introduction:

Physical fitness has always been a concern of man from pre-historic time, it was survival for the fittest. Throughout human evolution has been a nomad, a hunter and a farmer, his body has a high degree of adaptability for walking, running, Jumping and throwing. But inrecently time complete changes have taken place due to industrialization, automatisaton and motorisation and demand to gross motor activities have been greatly reduced. These change have caused a member of so-called “hypokinatic diseases” and has lowered the degree of physical fitness. The teramphysical fitness has been defined by Harris (1960) as composed of function such as strength cardiorespiratory Endurance, speed power, flexibility and coordination. Each of these qualities is believed to be important for the kind of fitness needed for daily living. It is the ability of person's body to meet the demands meet placed upon it by is work, by way o life and necessity to meet emergency situation. from the perusal of the skills involved in boxing it can be inferred that one of the the factor required to be a good boxer is physical fitness. All components of physical fitness speed, strength, Endurance, flexibility or Agility affect the Boxers

performance. The problem now under: Investigation would be that how many different components of physical fitness differ between champion and non-champion in boxing or the relationship of physical fitness components to performance in boxing.

Objectives of the Study:

1. To find out physical fitness and its components scores of champion boxer s.
2. To find out physical fitness and its components scores of non champion boxers.
3. To examine the difference of physical fitness and its components scores between champion and non champion boxers.

Hypotheses:

1. There exists a significant difference of physical fitness scores between champion and non champion boxers.
2. There exists a significant difference of muscular strength between champion and non- champion boxers.
3. There exists a significant difference of speed between champion and non- champion boxers.

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4. There exist a significant difference of Grip-strength between champion and non-champion boxers
5. There exists a significant difference of Agility scorer between champion and non champion boxer.
6. There exists a significant difference of Endurance scorer between champion and non- champion.

Methodology:

The present study is considered to be an experimental study. A Total number of 24 male Boxers, out of which 12 champion and 12 non-champion. All the boxers from different weights declared at first position were taken and considered as champions. For non-champion out of 60 boxers, 12 selected through Random sampling technique and used as a subject.

Tolls-used

To find out physical fitness and its components, scores Malthotra et.al (1982) Physical fitness test was used. The test consisted of following SUB-tests.

1. Shuttle Run (6x10m) second
2. 60 Meters Dash second
3. 2.4km. run(second)
4. Standing vertical Jump.
5. Pull-ups (numbers)
6. Bent knee sit-ups (numbers)
7. Handgrip strength (Kg)

Statistical Designed

The mean, standard deviations and T-test were used to find the significance of differences between the group means on all the variables.

Analysis and Interpretation

The Data obtained by using physical fitness test in the investigation were recorded, statistically analyzed and presented in this chapter according to the pursers of the project.

Table- 1

Total physical fitness of champion and non-champion boxers

Statistics group	Mean	SD	N	t-value
Champion Boxers	50.17	2.21	12	26.70
Non-champion Boxers	41.75	4.20	12	

Significant at 0.01 level of confidence

It can be inferred that champion boxers and non-champion boxers are found to differ in their physical fitness. Examination of mean scores indicates that (Table-1.1) the physical fitness level of non-champion boxers is low as compared to champion boxers. When significance of difference was checked by t-test, it was found that t-value is 26.70 which is significant at 0.01 level of confidence.

Table-2

6x10 Meters Shuttle Run Scores of Champion and Non-champion Boxers.

Statistics group	Mean	SD	N	t-value
Champion Boxers	6.92	1.50	12	26.70
Non-champion Boxers	3.46	1.40	12	

Significant at 0.01 level of confidence.

It can be inferred that champion boxers seem to be above average on 6x10 shuttle Run scores than non-champion. Champion boxer possessed more ability to change direction and agility as compared to non-champion. When significance of differences was checked by applying t-test, (table 1.2). It was found that t-value is 5.96 which is significant at 0.01 level of confidence.

Table -3

60 Meters scores champion and non-champion boxers

Statistics group	Mean	SD	N	t-value
Champion Boxers	6.67	1.67	12	5.05
Non-champion Boxers	3.40	1.44	12	

Significant at 0.01 level of confidence.

It can be inferred that champion and non-champion boxers are to differ in their speed level. Examination

of mean scores indicates (that '1.3) that non-champion boxers speed low as compared to champion boxer. When significance of differences was checked by t-test, it was found that t-value is 5.05 which is significant at 0.01 level of confidence

Table -4

2.4 Km run scores of champion and Non-champion boxers

Statistics group	Mean	SD	N	t-value
Champion Boxers	3.08	1.16	12	2.59
Non-champion Boxers	1.94	0.99	12	

Significant at .05 level of confidence.

It can be inferred that champion and non champion boxers are found to differ their Endurance. Examination of mean scores Indicated that (table-1.4) champion boxers possessed more endurance as compared to non-champion boxers. When significance of differences was checked by applying t-test, it was found that T-value in 2.59 which is significant at 0.05 level of confidence.

Table -5

Standing vertical jump scores of champion boxers and Non-Champion Boxers

Statistics group	Mean	SD	N	t-value
Champion Boxers	2.92	1.31	12	1.03
Non-champion Boxers	3.52	1.57	12	

Not Significant

It can be Inferred that champion and Non-champion boxer are not found to differ in their strength of the leg extensors or muscles. When significance of differences was checked by applying t-test, It was found that t-value is 1.03 which is Non-significant at 0.01 and 0.05 level of confidence.

Table -6

Pull ups scores of champion and Non-Champion Boxers along with t-value

Statistics group	Mean	SD	N	t-value
Champion Boxers	5.67	1.81	12	3.06
Non-champion Boxers	4.02	1.22	12	

Significant at .05 level of confidence...

It can be inferred that champion and non champion boxers are found to differ in their Arm and shoulder strength. Examination of mean scores indicates that (Table 1.6) champion boxers possessed more strength of Arm and shoulder muscles as compared to non-champion boxers. When significance of difference was checked by applying t-test, it was found that t-value is 3.06 which is significant at 0.05 level of confidence.

Table -7

Bent knee sit ups score champion and non-Champion Boxers

Statistics group	Mean	SD	N	t-value
Champion Boxers	4.92	1.44	12	4.07
Non-champion Boxers	2.60	1.27	12	

Significant at 0.1 level of confidence...

It can be inferred that champion boxers possessed more strength of the abdominal muscle as compared to non-champion Boxers. Significance of difference was checked by applying t-test, it was found that t-value is 4.07 which is significant at 0.01 level of confidence.

Table -8***Hand Grip strength scores of Champion and Non-Champion boxers***

Statistics group	Mean	SD	N	t-value
Champion Boxers	5.50	1.56	12	3.84
Non-champion Boxers	3.04	1.59	12	

Significant at 0.1 level of confidence...

It can be inferred that champion boxers possessed more hand Grip strength. Forearm strength and hand muscles strength as compared to non-champion Boxer, significance of Difference was checked by applying t-test, it was found that t-value is 3.84 which are significant at 0.01 level of confidence.

Conclusion:

1. There are significant differences champion and nonchampion boxes on the parameter physical fitness and its components.
2. Champion boxers are higher on physical fitness scores as compared to non-champion boxers thus indicating that champion boxers are more physical fit than non champion boxers.
3. As far as variance in physical fitness components is concerned the result indicate that champion boxers are significantly higher on shuttle run, 60 meter dash, 2.4 km Run, pull up and Grip and bent knee set ups as compared to their counter parts non-champion boxes.
4. No difference between champion and non-champion boxers was seen in the components of standing vertical Jump.

REFERENCE

- ⇒ **Bawa, B.S. and Kalpana Debnath,** "Contribution of sports to physical fitness and personality development." Patiala, N.I.S. Scientific Journal. 13(1), January 1990.
- ⇒ **Benard-Gutin,** "Effect of increase in physical fitness on motor ability following physical and mental stress." Research Quarterly, 2(2):211-20, 1966.
- ⇒ **Clarke, H.H.** "Education Physical Fitness." Research Digest 1966.
- ⇒ **Fleishman, E.A.** The Structure and Measurement of Physical Fitness. Englewood Cliff, N.J. Prentice-Hall, Inc. 1964.
- ⇒ **Malhotra, M.S. et al,** "Evaluation of General Physical Fitness of National level Sportsmen." Snips, 4(3): 13-17, 1982.
- ⇒ **Robert, J.A. and June Barr** Physical Fitness for Young Champions, New York, McGraw Hill Book Company, 1962.
- ⇒ **Sharma, S.S. and N.B. Shukal,** "Motor Fitness Test on Rural and Urban Indian Sportsmen." Patiala; N.I.S. Scientific Journal, 14(2):9, April 1991.
- ⇒ **Shephard, R.S.** Endurance Fitness: Toronto, Toronto University, 1968.
- ⇒ **Sodhi, H.S. and Sidhu, L.S.** Physique and Selection of Sportsmen, Patiala, Punjab Publishing House, 1984.
- ⇒ **The Naval Aviation Physical Training Manual.** Boxing: American. United States Naval Institute, 1950.



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MOTIVATION FOR WOMEN IN SPORTS BEHAVIOR

In the context of shrinking world and expanding horizon of Nature, Sports has come to be recognized as Fitness and Relaxation social for integration and entertainment by display of competitive physical prowess with intellectual alertness and emotional catharsis, Ever since independence, various promotional schemes are being experimented towards the fulfilment of the National aspiration to measure. The international standards in sports as a symbol of the vigor and self image of citizens. There is anxiety not to let the progress of women to lag behind men. The biological role of child bearing and consequent marginal variations in body size, essential fatty deposits and rate of maturity, physiology are universal for mankind. But this division of labor in the propagation of human race has made all the differences in the sociology of life style, family and communal responsibilities and motivation for specific cultural behavior which includes sport behavior. Fortunately sociology is normative with the needs and perceptions of a society. Some social dynamics will be examined in this paper to identify motivational factors for appropriate sports behavior in Indian Women.

MOTIVATION

Rene Dubos Identified 'Chance of Action' as one of the two distinguishing characteristic of Humanity, Roger Bannister, after accomplishing the incredible record of breaking the four-minute barrier for a mile, quit athletics to pursue medicine. Jimmy George after getting the prestigious, highly prospective and difficult to get admission in India to medical studies, quit it, in pursuit of excellence in Volleyball. Both had the capability to achieve eminence in athletics, as well as, in medicine. But certain perceptions of philosophy, value for specific activity, perceptions of relevance and available avenues of services, self fulfillment, social recognition, facilities available, extent of information disseminated, support from family and fraternity groups influence the choice of an individual. 'Motivation is willing release of extra energy in the service of accepted goals'.

SPORTS

The second distinguishing characteristic of Humanity, identified by Rene Dobos is 'resort to non-utility behaviour (arts, festival, monuments). All sports, including the purposively designed ones like

Basketball and Volleyball, are organized out of instinctual movements in self indulgence and group interactions in exhibition of human potential of strength, endurance and intellect. Such spontaneous expressions might get suppressed by certain social norms and constraints of opportunities, or encouraged to drive specific benefits identified as its outcome, from time to time, in different societies. The stated objective of majority of participants in a mass sports program in Norway with intended objective of physical Fitness was FUN. A study in West Germany reported that children develop better with a program of games than those scientifically selected sets of physical exercises.

'Sports are physical activities of recreation, character where the individual effort of the participant determines the results.

Competitive sport is a category of such activities where the element of competition is educative and developmentally utilized to exercise freedom of action within set of rules accepted.

The concept of 'Sports for all' encourages not only sports but also, various forms of physical activities,

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from spontaneous unorganized games to a minimum of physical exercise regularly performed.

EDUCATION

Kalpna sharma reports : In a study on women and sports, Padma Prakash points out women's participation is closely linked with access to education. Formal and informal club structure for taking part in sports is almost not available for girls and women. The proportion of girls getting access to education is very limited due to social forces. Even this small percentage is distributed amongst mixed schools, colleges and exclusive schools for girls. In the former sports program for girls low priority being too small in number for forming teams, providing facilities and personal unavailable economically, sports itself being at the bottom of priorities in the educational system; in the case of the latter, they are too few mostly located in urban centers. This seems to provide less opportunities to develop talents in team than in individual events. The biological vulnerability of criminal assaults of girls makes taxing demands for escorts in travel for outstation tournaments.

EXTRINSIC MOTIVATION

Awards of material value, such as, prizes, scholarships, substantial cash payment, jobs etc. has limited value of feed back of achievement especially in children. In top sports it may prove counterproductive as the recipients get interested in getting the awards rather than concentrating on improved performance. A number of popular articles have appeared alleging grabbing of sports scholarship by undeserving by unethical means, and majority of those getting comfortable placement on job quota cease to take further interest in sports. Bob Beamon posed a significant question as to how could cash prize help an athlete who was not assisted by his state in improving his sports skill. So also Ron Hendrik Wryle commented : The government inspired six figure bonus for success from the tax payers money does not seem to provide the anticipated 'motivation' for the Indian Women's Hockey team. However such awards as tokens of appreciation assure supports to achievement in sports.

PROFESSIONALISM

The high input of time the effort needed to enter into the top echelon of sports, and the ever broadening base of competition involving globe trotting makes professionalism inevitable even to pursue the intrinsic motivation of 'Pursuit of excellence.' Ed Moses once observed that the money under professionalism was welcome but the real satisfaction comes from breaking a record or outperforming other competitors. The principle behind this may be understood by an analogy in our ancient culture. Begging was sanctioned and even sanctified for a spiritual aspirant to free him from the necessity of devoting time and effort in earning his daily living. Professionalism is a universal profession with long preparatory period, short productive period with wisdom needed to make provision for another long period under retirement. It becomes difficult for one to enter this 'profession' if his nation does not actively promote professional circuits. It is thrown open cautiously in India only in the disciplines of Tennis, Track and Field and perhaps, in football even for men and women, even in western countries, it is available only in Tennis, Track and Field and perhaps in some winter sports.

SOCIAL CONSTRAINTS MARRIAGE

In our society Marriage is almost mandatory of women. Perhaps the genesis of many forms of social injustice to women like dowry may be traced to social security provided by marriage. Even job is sought more to enhance the prospects of marriage than for economic security. Ezekiel states : 'our women have only short time goals of getting a job on the basis of early performance in sports and get married and give up the game at the age of approximately 24 years. In our tradition of arranged marriages on consideration of caste and religion and agreement of horoscopes, sports carrier, instead of providing wider opportunities of getting introduced to eligible bachelors becomes an obstacle of bias of a bold self-willed girl widely traveled with contacts of large circle of men being not suitable for the role of a docile faithful housewife shiny Wilson (Now Abraham) and Mercy Kuttan are lucky few to get sportsmen husbands enhancing their sports career instead of

leading to retirement as in the case of Gita Zutshi and possibly P.T.Usha as speculated in the newspapers. The solution lies in social evaluation with spread of education and international interaction in men and programs.

SOCIAL CONSTRAINTS, SOCIAL NORMS

A graduate seminar in Shivaji University a couple of years ago discussed the problem of girls with potential for scoring high grades in sports being reluctant even to take tests of physical fitness. The identified reaction for their parents not permitting them to take part in sports are; Failure to find relevance of sports in the life of girls, present and future, sports uniform being considered immodest, reluctance to send girls to school out of normal theory hours on account of need to attend to domestic chores and apprehension if social insecurity, fear of losing personnel vigilance of the behaviour of and treatment to their girls while on tour.

CURRICULAM

A study of the programme of Physical Education for girls showed that considerable changes in it rate needed to not only to arouse current interest in it but also impart understanding of the relevance of Physical Education for the health, recreation and rearing children as well as, appropriate skills of specific needs and lifelong application.

Even sportsmen representing university were found to be ignorant of concepts of Physical Fitness and its assessment by the individual, strategies for competitions and other essential cognitive learning of motor behaviour in a recent study done by us.

Motivation arises from knowledge and self mastery. The syllabi in Physical Education, teaching methods and evaluation procedure, and techniques of coaching adopted are to be reviewed with this principle in view.

CONCLUSION

In India also it is estimated that women's performance in athletics is only 10% inferior to men and even this gap is getting narrower. With patronage of commercial establishments, some progress is being made in team games as well. But in Mass sports there remains much leeway to be made up.

Social evolution lagging behind social needs makes

for ready changes in social norms, marriage choices patterns of leisure and recreation etc. Influencing negatively and motivation for progressive sports behaviour in women. Inclusion of sports awareness in the programs of Functional literacy, Family (Social) Welfare. Women's welfare etc and community improvement campaigns by service and women's clubs will accelerate and the social evaluation. The ultimate curricular reforms to bring about needed improvements in cognitive learning, motor skills and attitude towards sports in enjoying life with fuller expression of human potential and self actualization.

REFERENCES

- ⇒ Bhardwaj, Dr.S.B.L., The Hindu, Aug 13, 1979.
- Cratty, Bryant J, Psychology of contemporary Sports, Englewood cliffs, N.J.: Prentice Hall, Inc., 1973
- ⇒ De Souza, Marry. A survey of Physical Education Programmes of the Girls
- ⇒ Secondary Schools of Amilmadu, M.P.E. Thesis Jiwaji University, 1969.
- ⇒ Dubos, Rene, Beast or Anole ? New York : Charles Scribner's Sons.
- ⇒ Ezekiel, Gul-faraz M, 'Your slip is showing', Express Magazine, Feb 5, 1987, P-7
- ⇒ Mo Intosh, Peter. Sports for all Programmes Throughout the world, paris : UNBSCO.
- ⇒ Raju, D.R; and Rao, Dr.V.S., S.M.Perceptions of Sports Psychology of University Sportspersons. Paper submitted to the 7th world Congress in sports psychology, Singapore.
- ⇒ Sharma, Kalpana, 'Running to freedom', Express Magazine.
- ⇒ 'The Bob Beamon of Polevault' the Hindu Dec.10, 1989, P-7.
- ⇒ Indian Express, Sept.28 1986, P-16
- ⇒ The Hindu Sept.20, 1981.

गनेशन द्वारा निर्मित सामाजिक बुद्धि परीक्षण का प्रयोग किया गया है।

सांख्यिकी विधि:-आंकड़ों के परीक्षण हेतु मध्यमान, मानक विचलन एवं टी-मूल्य का प्रयोग किया गया है।

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H₀ शासकीय एवं अशासकीय विद्यालय के विद्यार्थियों के सामाजिक बुद्धि में कोई सार्थक अंतर नहीं पाया जायेगा।

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क्रमांक	विद्यालय के प्रकार	N	M	SD	T-मूल्य
1	शासकीय	60	105.06	8.36	
2	अशासकीय	60	104.23	8.99	

df = 118 p>0.05 v|kfkdk eku

तालिका क्रमांक-1 में शासकीय उच्चतर माध्यमिक विद्यालय के विद्यार्थियों का मध्यमान 105.06 एवं मानक विचलन 8.36 प्राप्त हुआ तथा अशासकीय उच्चतर माध्यमिक के विद्यार्थियों 104.23 एवं मानक विचलन 8.99 प्राप्त हुआ परिकलित T-मूल्य का मान 0.52 है। जो कि तालिका मान 0.05 स्तर पर 1.96 से कम है, अतः मान असार्थक है। परिकल्पना स्वीकृत की गई।

H₀₁ शासकीय विद्यालय के छात्रों एवं छात्राओं के सामाजिक बुद्धि में कोई सार्थक अंतर नहीं पाया जायेगा।

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क्रमांक	लिंग	N	M	SD	T-मूल्य
1	छात्र	30	50.34	4.00	
2	छात्रा	30	52.11	4.95	

df = 58 p>0.05 v|kfkdk eku

तालिका क्रमांक-2 में शासकीय उच्चतर माध्यमिक विद्यालय के कक्षा 11वीं के छात्रों का मध्यमान 50.34 एवं मानक विचलन 4.00 है तथा छात्राओं का मध्यमान 52.11 एवं मानक विचलन 4.95 प्राप्त हुआ है। परिकलित T-मूल्य का मान 1.52 प्राप्त हुआ है जो कि तालिका मान 0.05 स्तर प्राप्त हुआ है जो कि तालिका मान 0.05 स्तर पर 1.96से कम है अतः मान असार्थक है।

परिकल्पना स्वीकृत की गई।

H₀₂ अशासकीय विद्यालय के छात्रों एवं छात्राओं के सामाजिक बुद्धि में कोई सार्थक अंतर नहीं पाया जायेगा।

rkfydk diekd &3

v"kkldh; fo|ky; d| fo|kfk;k dk el;eku jekud&fopyu]T-eY;

क्रमांक	अशासकीय विद्यालय के विद्यार्थी	N	M	SD	T-मूल्य
1	छात्र	30	54.72	4.31	
2	छात्रा	30	54.94	4.04	

df = 58 p>0.05 v|kfkdk eku

तालिका क्रमांक-3 में अशासकीय विद्यालय के कक्षा 11वीं के छात्रों का मध्यमान 54.72 एवं मानक विचलन 4.31 है तथा छात्राओं का मध्यमान 52.94 एवं मानक विचलन 4.04 प्राप्त हुआ है। परिकलित T-मूल्य का मान 1.66 प्राप्त हुआ है जो कि तालिका मान 0.05 स्तर पर 1.96से कम है अतः मान असार्थक है। परिकल्पना स्वीकृत की गई।

ifj.lke %&

शासकीय एवं अशासकीय विद्यालय के विद्यार्थियों के सामाजिक बुद्धि में कोई अंतर नहीं पाया गया। शासकीय विद्यालय के विद्यार्थियों के सामाजिक बुद्धि में अंतर नहीं पाया गया। अशासकीय विद्यालय के विद्यार्थियों में छात्र एवं छात्राओं के सामाजिक बुद्धि में कोई अंतर नहीं पाया गया।

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निष्कर्षतः विद्यार्थियों की सामाजिक बुद्धि पर लिंग का प्रभाव नहीं पाया गया क्योंकि लिंग के आधार पर वर्तमान परिक्षेप्य में दोनों को सामान वातावरण प्रदान किया जाता है, अतः सामाजिक बुद्धि का विकास छात्र एवं छात्राओं में उच्च स्तर का है वही शाला के प्रकार का भी प्रभाव नहीं पाया जाता क्योंकि दानों ही विद्यालय एक ही सामाजिक वातावरण में है जिससे बुद्धि पर कोई प्रभाव नहीं पड़ता

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⇒ गाखर, एस.सी एवं बी. ऐम्स (2009) विज्ञान एवं कला संकाय के छात्रों के उपलब्धि अभिप्रेरणा एवं सामाजिक बुद्धि पर एक अध्ययन जनेनस ऑफ ऐजुकेशन स्टडीज ,7(2) 56-59 पाणीग्रह ,एम.आर (2005) उ.मा. विद्यालय के विद्यार्थियों का सामाजिक आर्थिक स्तर एवं बुद्धि का शैक्षिक उपलब्धि में संबंध एड्युटुक्स , 5(2),26.27



*** Dr. V Chauhan**

Education

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TO STUDY THE EFFECT OF FAMILY ENVIRONMENT ON ACADEMIC ACHIEVEMENT OF HIGHER SECONDARY STUDENTS

The present paper summaries the study conducted on 240 students of Rajnandgaon district of Chhattisgarh chosen from Eleventh grade students of Higher Secondary School. The result indicated that Healthy Family Environment significant effected Academic Achievement of students. Whereas Moderate and Non-healthy family Environment is not significant effected Academic Achievement of students.

INTRODUCTION:

Parents positive attitude towards child's education is important in determining academic achievement. Favorable attitude towards schooling & education enhances parental involvement in children present & future studies. Parental attitude is a measure or an index of parental involvement. Adolescence is a time of rapid range. In adolescence ages (11-17) youth experiences puberty, develop abstract thinking abilities & transition into higher secondary school. Students desire autonomy independence & time with peers but at the same time they continue to rely on guidance from parents & other adults. To be in school & in life students need trusting & caring relationship from parents. They also need opportunities to form their own identity. Family environment in academics & learning remains important in adolescent years. Unfortunately family environment tends to decrease across higher secondary education. Yet family environment remains a powerful predictor of various adolescence outcomes.

STATEMENT OF THE PROBLEM :

“To study the effect of Family Environment on Academic Achievement of Higher Secondary Students “

OBJECTIVES OF THE STUDY :

- To study the effect of healthy family environment on academic achievement of boys & girls.
- To study the effect of non healthy family

environment on academic achievement of boys & girls.

■ To study the effect of moderate family environment on academic achievement of boys & girls.

■ To study the difference between healthy family environment & non healthy family environment on academic achievement of higher secondary students.

■ To study the difference between healthy family environment & moderate family environment on academic achievement of higher secondary students.

■ To study the difference between Non- healthy family environment & Moderate family environment on academic achievement of higher secondary students.

HYPOTHESIS :

Following null hypothesis were drawn for the research -

$H_{0.0}$ - There will be a significant effect of healthy family environment on Academic achievement of boys & girls.

$H_{0.1}$ - There will be a significant effect of non healthy family environment on academic achievement of boys & girls.

$H_{0.2}$ - There will be a significant effect of moderate family environment on academic achievement of boys & girls.

$H_{0.3}$ - There will be a significant difference between healthy family environment & non healthy family

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environment on academic achievement of higher secondary students.

$H_{0.4}$ - There will be a significant difference between healthy family environment & moderate family environment on academic achievement of higher secondary students.

$H_{0.5}$ - There will be a significant difference between Non- healthy family environment & Moderate family environment on academic achievement of higher secondary students.

METHODOLOGY-

In this research survey method will be used.

POPULATION-

A population of total Higher Secondary Students eleventh grade of Rajnandgaon will be selected for the research.

SAMPLE

A sample of 240 11th grade students of higher secondary schools of Rajnandgaon district will be selected by random sampling technique.

TOOLS:

The following standardized tool will be used by research -

Family Environment Scale of **Harpreet Bhatia & N.K. Chanda's**

Academic Achievement of student's is measured by half-yearly marks in science subject.

STATISTICAL TECHNIQUE :Mean, Standard Deviation, t- test will be used.

Data Analysis And Interpretation

Obtained data of the mean of students are presented in the table. t- value has been employed to access the significance of difference and computed to test the hypothesis.

H_0 - There will be a significant effect of healthy family environment on academic achievement of boys & girls.

Table .1 Showing 't' value, Mean and SD scores of boys and girls of healthy family environment.

Sex	N	M	SD	t - value	Level
Boys	40	45.42	2.70	4.1366	Significant
Girls	40	41.97	3.47		

df = 78 P < at 0.05 level (1.96)

It is evident from the above table that the mean of healthy environment boys is 45.42 while that of girls is 41.97 and the SD of boys is 2.70 and that of girls is 3.47. The calculated t-value is 4.1366 which is more than the tabulated value 1.96 at 0.05 levels, so the hypothesis H_0 is accepted. As the mean scores favors boys 45.42 which reveals that boys are paid more attention as compared to girls.

Result:- By seeing the table it depicts that there is a significant effect of boys and girls in healthy family environment on their academic achievement.

$H_{0.1}$ -There will be a significant effect of non healthy family environment on academic achievement of boys and girls.

Table .2 Showing 't' value, Mean and SD scores of boys and girls of non healthy family environment

Sex	N	M	SD	t - value	Level
Boys	40	28.32	4.36	0.6528	Non-Significant
Girls	40	29.125	3.71		

df = 78 P > at 0.05 level (1.96)

It is evident that the observed mean of non healthy family environment boys is 28.32 while that of girls is 29.125 and SD of boys is 4.36 and girls is 3.71. The calculated t-value is 0.6528 which is less than the tabulated value 1.96 at 0.05 levels so the hypothesis $H_{0.1}$ is rejected.

Result:- By seeing the table it depicts that there is no significant effect of non healthy family environment on academic achievement of both boys & girls.

$H_{0.2}$ - There will be a significant effect of moderate family environment on academic achievement of boys & girls.

Table .3 Showing 't' value , Mean and SD scores of boys and girls of moderate family environment

Sex	N	M	SD	t - value	Level
Boys	40	35.05	7.51	0.268	Non-Significant
Girls	40	36.72	5.82		
df = 78 P> at 0.05 level (1.96)					

It is evident from the above table that mean of moderate family environment boys is 35.05 and that of girls is 36.72. SD of boys is 7.51 and girls are 5.82. The calculated t – value is 0.268 which is less than the tabulated t-value 1.96 at 0.05 levels so the hypothesis $H_{0.2}$ is rejected.

Result:- By seeing the table it depicts that there is a significant difference is found out in between both boys and girls of moderate family environment which shows that equal importance is not given to both.

$H_{0.3}$ - There will be a significant difference between healthy family environment and non healthy family environment on academic achievement of higher secondary students.

Table .4 Showing 't' value , Mean and SD scores of differences between healthy family environment and non healthy family environment on academic achievement of students.

Families	N	M	SD	t - value	Level
Healthy Family Environment	80	43.7	3.54	2.836	Significant
Non Healthy Family Environment	80	28.72	4.081		
df = 158 P > at 0.05 level (1.96)					

It is evident from the above table that mean of differences of healthy family environment is 43.7 and non healthy family environment is 28.72. SD of healthy family environment is 3.54 and non healthy family environment is 4.081. The calculated t – value is 2.836 which is more than the tabulated t-value is 1.96 at 0.05 significant level so the hypothesis is accepted. As the mean scores favors healthy family environment 43.7 which reveals that healthy families are better responsible and able to focus more on task at hand & pay attention to their children as compared to non healthy families.

Result:- By seeing the table it depicts that there is a significant difference between healthy family environment and non healthy family environment on academic achievement of higher secondary students.

$H_{0.4}$ - There will be a significant difference between healthy family environment & moderate family environment on academic achievement of higher secondary students.

Table .5 Showing 't' value , Mean and SD scores of differences between healthy family environment and moderate family environment on academic achievement.

achievement.					
Families	N	M	SD	t – value	Level
Healthy Family Environment	80	43.7	3.54	2.31	Significant
Moderate Family Environment	80	35.88	6.73		
df = 158 P > at 0.05 level (1.96)					

It is evident from the above table that means of differences of non healthy family environment is 28.72 while that of family environment is 35.88. SD of non healthy family environment is 4.081 and moderate family environment is 6.735. The calculated t – value is 1.14 which is less than the tabulated t-value at 0.05 significant levels which shows that the hypothesis is accepted. As the mean scores favors moderate family environment 35.88 which reveals that moderate family focuses and pays less attention on children academic achievement as similar to non healthy families.

Result:- By seeing the table it depicts that there is a no significant difference between non healthy family environment and moderate family environment on academic achievement of higher secondary students.

CONCLUSION

On the basis of analysis, interpretation and discussion of the results presented in the above all, certain meaningful conclusions have been drawn which are reported as under:

It was found that of healthy family students of 11th grade fall in the high category of academic achievement. The students who come from these families perform better and nice. They have more supportive environment and also get positive academic achievement for both boys and girls. Results also showed that good quality of home environment had more significant positive relation with 'high' level of academic achievement in boys than among the girls. It was found out that students who come from non healthy families that is from humble background, however, due to lack of suitable family environment students can't concentrate in their academic activities. They have to offer their helping hand in their household works. This is basically because families generally play major roles in the provision of essential services to the families. Therefore, there was need to conduct a study to establish the relationship of family environment on academic achievement of higher secondary students. It was found out students who come from moderate families. A parent with a normal family will not only find it easy to provide for the physical needs of the child, but will also be in a position to give him attention, encouragement, stimulation and support with his school work. This could have a motivating effect on a child from the normal family in comparison with a child from a high family where the parents are always busy trying to find ways of meeting the basic needs of the family.



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HR PRACTICES IN RETAIL INDUSTRY

Introduction

The world of retail merchandising has come a long way. There is a movement now from the unorganized sector. The whole concept of shopping has altered in terms of format and consumer buying behavior, ushering in a revolution in shopping in India. Retailing is India's largest industry, accounting for over 10 percent of the country's GDP and around 8 percent of the employment, that is about 25 million people. Organized retailing was worth Rs.23,000 crore in 2003 and is growing at a rate of 25-30 per cent annually (KSA Techno park Report), the foods and groceries category constitutes 14 per cent of the total share of organized retailing in India. In food & grocery retailing, the traditional method of shopping is changing. The Indian customer, who was used to shopping at the neighborhood kirana, has a choice of going to a supermarket.

There are too many food and grocery outlets, which are close to each other. So, there is no differentiation, which could make it hard to build loyalty. The function of human resources has special significance in retail, as the employees operate in a unique environment. In being a part of the service industry, it is the people within the organization that can become the source of competitive advantage. In any retail organization, the people who deal with the customers at a one to one level, are considered to be the face of the organization. Thus, people who work at the store level are important.

Availability of trained personnel and retaining the human resources is a major challenge for these food & grocery retailers. Given that experienced retail professionals in India are still a scarce commodity, and also the fact that they play a significant role in the entire retailing process of value creation and brand

building. Only better HR practices can retain experienced personnel in the outlets. HR practices of organized Food & Grocery retailing are in a nascent stage. This empirical study makes an effort in studying the current HR practices prevailing in organized food and grocery retailing which include recruiting, selection, training, compensation and evaluation.

Review of Literature

Katherine L. Hughes (1999) concluded that the super market industry hires youth, pays entry-level workers around minimum wage, and does not require much in the way of skills. In contrast to fast food, however, many supermarket companies are interested in retaining these young people and providing them with further training so that they will become knowledgeable long-term employees.

According to Annette Bernhardt (1991), beyond the poor quality of most retail jobs, there is also the deeper question of opportunities for upward mobility. Workers who hold retail and other low-wage service jobs tend to be the least educated in the labor force and so depend on training for career mobility. Moreover, the industry has one of the flattest job hierarchies in the economy-sales and service occupations make up more than two-thirds of the jobs. Firms are also increasingly hiring young college graduates for managerial slots and bypassing workers with years of tenure. In this context there is a severe constraint on upward mobility, no matter how talented or hard-working the individual. Shishir Kumar (2006) felt that, retailing as a career was considered to be at the bottom end of the bottom end of the social strata. Graduates from reputed universities did not want to work in retailing because of given wage levels and social status associated with

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a front line retail position.

Objective and Methodology

The article studies the Human Resource practices prevailing in organized food and grocery retailing. Statistical approach, “factor analysis” has been used for the study.

The study is based on primary data collected from the employees working in organized food and grocery retail outlets in Bangalore, with the help of a well-drafted and structured questionnaire. The universe of the study consists of the 30 employees from Food world, Fabmall and Foodbazaar outlets. Gupta (1979) emphasizes that specific area study has the advantage of overcoming the regional differences in natural and geographical endowment. The questions inquiring HR practices were implemented with 38 statements for different functional aspects of HR. The respondents had to rate it according to the importance, on the five-point Likert Scales.

Data Analysis

The demographic characteristics of the respondents (Table 1) depict that the majority of employees belong to the age group 20-30 years, followed by the age group under 20 years. This reveals that the employees in organized food and grocery retail outlets are relatively young. Further, majority of them are unmarried and the number of female employees are significantly more than that of the male employees. 73% of the employees are under graduates, out of which 33% have done metric and 40% higher secondary. Majority (77%) of employees were earning Rs.5000 and below as their monthly salary.

The explanatory factor analysis is used in order to identify the various factors prevailing in HR practices in organized food and grocery retailing. Principal Components Analysis is employed for extracting factor. Orthogonal rotation with Varimax was applied. The Latent root criterion is used extraction of factors. As per it, only the factors having latent roots of Eigen values greater than one are considered significant: all the factors with latent roots less than one are considered insignificant and disregarded. In interpreting factors, a decision must be made regarding the consideration of the factor loadings,

which are worthwhile. A factor loading represents the correlation between an original variable and its factor.

After a factor solution has been obtained, in which all variables have a significant loading on a factor, then some more meaning to the pattern of factor loadings is assigned. Variables with higher loadings are considered more important and have greater influence on the name and label selected to represent a factor. Hence, the authors examined all the underlined variables for a particular factor and placed greater emphasis on those variables with higher loadings attempted to assign a name or label to a factor that accurately reflected the variables loading on that factor. The names of label is not derived or assigned by the factor analysis computer program; rather, the label is intuitively developed by the factor analyst based on its appropriateness for representing the underlying dimension to a particular factor. All the factors have been given appropriate names on the statement, the label and factor loading have been summarized in tables 3 and 5.

Recruitment & Selection

Walk-in-interview and employee reference were the sources of recruitment (100%). The selection of candidates was purely based on the personal interview. Other selection tools like written / psychological tests were not at all used.

Training Programmes

There were five factors each having Eigen value exceeding one for training programmes. The Eigen values for four factors were 3.187, 2.285, 1.671, 1.522 and 1.410 respectively. The index for the present solution accounts for 67.165% of the total variations for the training programmes. It is pretty good extraction, because we are able to economize on the number of choice factors (from 15 to five underlying factors). and we lost 32.835% of information content for choice of variables. The percentage of variance explained by factors one to five are 21.246, 15.231, 11.140, 10.149, and 9.399 respectively.

Large communalities indicate that a large number of variance has been accounted for by the factor solution. Varimax rotated factor analytic results for

training programmes are shown in table I which indicate that after five factors are extracted and retained, the communality is 0.666 for variable 1, 0.690 for variable 2 and so on. It means that approximately 66% of the variance of variable 1 is being captured by five extracted factors together. The proportion of variance in any one of the original variables, which is being captured by the extracted factor, is known as communality (Nargundkar, 2002).

In Table 3, the employees considered content and method as the most dominating factor. The employees felt that the content of the training programmes were usually good. Trainings were done using on the job methods and lectures. Training through discussions has negative loading. The second significant factor was trainer and the timing of the training programmes. Usually, their own staff does training. External agencies have not been employed so far. Timing has negative loading, as it is not conducted when it is required. Place. Duration and frequency is the third significant factor. Trainings are held at places convenient for the employees. The negative loadings for duration and frequency reveals that the duration of training programmes are short and frequency is also less.

Motivation

The most significant motivating factor (Table 5) is nature of job and growth opportunities. The employees are motivated to do the job as it gives them more learning opportunities as the work interests them. They feel that growth and promotion opportunities are more in the company. They get motivation to do the work because of above factors. Working condition and management support is the second significant motivating factor. And

Compensation

The first significant factor is expenses and bonus (Table 7). The management recognizes good performers. The company reimburses the expenses on the job. Employees also receive bonus regularly. Allowances and salary is the second significant factor. Employees receive allowances for telephone petrol etc. As the loading for salary is very less, employees are not satisfied with their current salary. They feel

company does not have good reward system.

Evaluation

From Table 9 the first factor reveals that performance appraisal is done in the company. Employees are evaluated regularly of their jobs. Complexity of the job does not have importance in the appraisal. Skills is the second important factor for performance appraisal. This includes skills on the job and interpersonal skills. The last significant factor is the overall performance/ Experience on the job.

Conclusion

Organized retailing is still in its nascent stage. The education level of the employees in organized food and grocery retailing is very less. Most of the employees are below graduates. The age group of the employees is between 20 to 30 years who are mostly unmarried. The income level is below Rs.5,000 for majority of them. As study reveals, the HR practices in the industry are at the rudimentary level. Recruitment is very simple i.e. walk in interviews. The selection criteria are limited to personal interview only. The training programmes are just through on the job methods, as and when it is felt by the management. Training programs are meant for improving the productivity on the job. Most of the employees are self-motivated. The source of motivation is because of more learning opportunities and nature of the job. Salary is the least motivating factor for them. The wage level of the industry is at the minimum. Future days will see the implementation of more technology in the industry. To cope up with the changes, it will lead to increased skill level of the employees and also better HR practices.

REFERENCE

- ⇒ Katherine L.Hughs, working paper, April-1999- Super market employment , good jobs at good wages?
- ⇒ Annette Bernhardt, Case study, March 1999. The future of flow-wage jobs.
- ⇒ Malhotra N.K 2005 Marketing research : an applied orientation. Pearson edu. (India Branch) New Delhi.



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IMPACT OF GLOBALIZATION ON MERGERS AND ACQUISITION

The rise of globalization has exponentially increased the market for cross border Mergers and Acquisition (M&A). This rapid increase has taken many M&A firms as surprise because the majority of them never had to consider acquiring the capabilities or skills required to effectively handle this kind of transaction. In the past, the market's lack of significance and a more strictly national mindset prevented the vast majority of small and mid-sized companies from considering cross border intermediation as an option which left M&A firms inexperienced in this field.

Scope of Merger & Acquisition

Merger & Acquisition has become a daily transaction nowadays. Mergers and acquisition are an important area of capital market activity in restricting a corporation and had lately become one of the favored routes for growth and consolidation. The reason to merge, amalgamate and acquire are varied, ranging from acquiring market share to restructuring the corporation to meet global competition. One of the largest and most difficult part of business mergers partners. The main objective of each firm is to gain profits. M&A has a great scope in sectors like steel, aluminium, cement, auto, banking & finance, Computer software, pharmaceuticals, consumer durable food products, textiles etc. It is an indispensable strategic tool for expanding product portfolio's, entering into new market, acquiring new technologies and building new generation organization with power and resources to compete in global basis.

Motive behind M&A

The dominant rationale used to explain M&A activity is that acquiring firms seek improved financial performance. The following motives are considered

to improve financial performance:

1. Synergies: the refers to the fact that the combined company can often reduce its fixed costs by removing duplicate departments or operations, lowering the costs of the company relative to the same revenue stream, thus increasing profit margins.

2. Increased Revenue/Increase Market Share: This assumes that the buyer will be absorbing a major competitor and thus increase its market power (by capturing increased market share) to set prices.

3. Cross selling: For example, a bank buying a stocker could then sell its banking products to the stock broker's customer's, while the broker can sign up the bank's customer's for brokerage accounts or, a manufacturer can acquire and sell complementary products.

4. Economics of Scale: For example, managerial economics such as a increased opportunity of managerial specialization. Another example are purchasing economies due to increased order size and associated bulk-buying discounts.

5. Taxes: A profitable company can buy a loss maker to use the target's loss as their advantage by reducing their tax liability to profitable companies to "shop" for loss making companies, limiting the tax motive of an acquiring company.

6. Geographical or other Diversification: This is designed to smooth the earning results of a company, which over the long term smoothens the stock price of a company, giving conservative investors more confidence while investing in the company. However, this does not always deliver value to shareholders.

7. Resource Transfer: resource are unevenly distributed across firms (berney,1991) and the

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interaction of target and acquiring firm resources can create value through either overcoming information asymmetry or by combining scarce resources.

8. Vertical Integration: Vertical Integration occurs when an upstream and downstream firm merge (or one acquire the other). There are several reasons for this to occur. One reason is to internalize an externality problem. A common example of such an externality is double marginalization. By merging, the vertically integrated firm can collect one deadweight loss by setting the upstream firm's output to the competitive level. This increases profits and consumer surplus. A merger that creates a vertically integrated firm can be profitable.

However, on average and across the most commonly studied variables, acquiring firm's financial performance does not positively change as a function of their acquisition activity. Therefore, includes additional motives for merger and acquisition that may not add value of shareholders.

9. Diversification: While this may hedge a company against a downturn in an individual industry, it fails to deliver value, since it is possible for individual shareholders to achieve the same hedge by diversifying their portfolio's at a much lower cost than those associated with a merger.

10. Manager's Confidence: It increase confidence of managers, but manager's overconfidence about expected synergies from M&A may result in overpayment for the target company.

11. Empire Building: Managers have larger companies to manage and hence more power.

12. Manager's Compensation: In the past, certain executive management teams had their payout based on the total amount of profit of the company, instead of the profit per share, which would give the team a perverse incentive to buy companies to increase the total profit while decreasing the profit per share (which hurts the owners of the company-the shareholders); although some empirical studies show that compensation is linked to profitability rather than more profit of the company.

· The economics of scale can be gained with a larger base.

· To reduce competition and product diversification.
· To expand by establishing their presence in the host country.

· To adopt the technologies from other companies rather than spending time and money in developing it themselves.

· To reduce foreign exchange.

13. Other objectives: In addition to above, M&A serves following purpose:

Classification of M&A:

Accounting standard 14 classifies amalgamations (also referred as business combination) into two categories for the purpose of accounting:

- (a) Amalgamation in the nature of merger and
- (b) Amalgamation in the nature of purchase.

AS 14 provides that in case of Amalgamation in the nature of merger, pooling of interest method is to be applied, whereas for other cases purchase method is to be applied. This standard is applicable only if two or more entities are merged to form a new entity. In case of takeover of majority interest which does not yield to formation of a new merged entity, AS 14 is not applicable.

Prerequisites of M&A

- (a) Transfer of all assets and liabilities to transfer company
- (b) 90% of shareholders of transferor company should become shareholders of transferee company
- (c) Consideration for purchase should be paid by issue of equity share of transferee company
- (d) Continuation of business of the acquired company and
- (e) No adjustment to be made for assets and liabilities taken over.

Human Resources Issues

The investors analyses the average salary of the employees, ratio of outsourced employee to total employees, salary range vis a vis Industry trend and chances of salary increase to be made. The investors also tries to find out whether any Golden parachute has been issued to senior management which has to be borne by the merged entity. The results of due diligence exercise help to unearth startling facts and assist the investment banker to revise the valuation. From the acquire's perspective, some change

management problems can be avoided by solving them before the deal closes. For example, if the due diligence reveals that the workforce of the target company is inflated, then he may insist for its rationalization as a precondition to deal closure.

M&A by Indian Multinationals at Foreign Turf surpass Domestic Takeovers

The first nine months of 2010-11 (April-December) have witnessed more than threefold increase in value terms in the Merger & Acquisitions growing from US\$ 13.54 billion in the corresponding period to US\$58.73 billion. The study undertaken by the Associated Chambers of Commerce and Industry of India (ASSOCHAM) says the number of deals also rose to 222 from 129 during the same period last year.

The major merger and acquisitions occurred in telecom followed by energy, metal & mining, pharmaceutical and BFSI sectors. During the first nine months of FY 2010-11 eleven telecom sectors topped the list with 28.26 per cent share of the total valuation of M&A deals that took place in India, followed by energy sector accounted for 23.59 per cent, metal & mining sector accounted for 23.19 per cent while pharmaceutical and BFSI sector accounted for 8.20 per cent and 5.74 per cent respectively.

The number of M&A activities in the past nine months shows that the Indian telecom sector is all set to take on the global markets. There were 10 inbound, outbound and domestic M&A deals which took place in telecom sector during April-December 2010, Valuing to US\$ 16.60 billion; representing 28.26 per cent share in total valuation of the M&A deals that occurred during the period.

Others sectors like IT/ITES, Auto components, hospitality, steel, consumer durable, real estate, media & entertainment, logistics, consumer non durable and healthcare which witnessed 146 M&A deals for an amount totaling to US\$6.48 billion, contributing only 11.04 per cent share in total M&A deals.

The cross border inbound, outbound and domestic M&A deals occupied 16.63 per cent, 41.96 per cent and 41.41 per cent share in total deals with 21, 98

and 103 number of deals respectively, during the period April-December, 2010

Telecom Sector

The major merger and acquisition outbound deal in telecom sector was India's leading telecommunications service provider Bharti Airtel acquire Zain's African mobile service operations in 15 countries. The deal involved a transaction of US\$ 10700 million. In another one deal Bharti Airtel acquired 100 per cent stake of Telecom Seychelles Ltd for US\$ 62 million.

Energy Sector

The biggest domestic M&A deal in energy sector was Anil Dhirubhai Ambani Group's (ADAG's) gas transportation company, Reliance Natural Resources Ltd (RNRL), merged with its sister firm Reliance Power (R-Power) for US\$10686 million. Switzerland based ABB Ltd, the leading power and automation technology, increase the stake in its Indian subsidiary from 52.11 per cent for the US\$ 965 million.

There was only 6 deals that took place during April-December, 2009 in energy sector for a value of US\$ 40.69 million, which increased to 13 outbound and domestic deals for US\$ 13847.94 million, representing 23.59 per cent share of the total deals occurred during April-December, 2010.

Other major deal in energy sector India's most valuable company Reliance Industries (RIL) picked up 45 per cent stake in taxes, US-based Pioneer Natural Resources co. for US\$ 1320 million and 60 per cent stake in the Marcellus Shale Acreage in the US for US\$392 million. India's major Power producer JSW Energy agreed to buy Canada's CIC Energy Corp for C\$422 million (US\$414.5 million) In another deal India's SBI Macquarie Infrastructure Fund acquired 12 per cent stake in Adhunik Power and Natural Resources for US\$26.93 million. Oil and gas logistic provider Aegis logistic acquired Shell Gas (LPG) India for an undisclosed amount and Simplex Realty Ltd buys 100 per cent shares in Simplex Renewable Resources Pvt. Ltd.

Metal & Mining

A total of 7 deals occurred during April-December, 2009 in the metal & mining sector that valued

US\$832.86 million, which increased 11 deals for US\$13618.29 million, representing 23.19 per cent share of the total deals that took place during April-December 2010.

The major M&A deal that took place in metal & mining sector India's largest nonferrous metals and mining company Vedanta Resources Plc acquires 62.4 per cent stake in Cairn Energy's Indian subsidiary for US\$8480 million and in other one deal Vedanta Resources Plc agreed to pay Anglo American Plc US\$1338 million for zinc mines in Africa and Ireland.

Pharmaceutical Sector

A total of 5 deals occurred during April-December, 2009 in the pharmaceutical sector that valued US\$949.6 million, which increased to 16 deals for US\$4815.07 million, representing 8.20 per cent share of the total deals that took place during April-December, 2010

The major M&A deal that took place in pharmaceutical sector was USA based drug maker Abbot Laboratories (ABT) made major push into the Indian healthcare market and acquired the generics drug unit of Piramal healthcare for US\$3720 million.

BFSI Sector

In Banking, Financial Service and Insurance (BFSI) there were 26 M&A deals that took place during April-December, 2010 for US\$3273.14 million, contributing a share of 5.74 per cent.

The major M&A deal that occurred in the BFSI sector was India's Hinduja Group acquired Luxembourg-based KBL European Private Bankers SA for US\$1690 million (US\$1.69) billion) to expand its wealth-management business in Europe. Other deal in BFSI sector India's largest private bank ICICI Bank of Rajasthan for US\$ 648 million.

Conclusion

With the increasing number of Indian companies opting for mergers and acquisitions, India is now one of the leading nation in the world in terms of mergers and acquisitions. Till few years ago, rarely did Indian companies bid for American-European entities. Today, because of the buoyant Indian economy, supportive government policies and

dynamic leadership of Indian organization, the world has witnessed a new trend in acquisition. Indian companies are now aggressively looking at North American and European markets to spread their wings and become global players. Almost 85 per cent of Indian firms are using Mergers and Acquisitions as a core growth strategy. Thus, we can say that M&A has become a day to day transaction nowadays.

REFERENCE

- ⇒ Bhanu, V., "Merged Companies-Their Profitability Performance", Indian Journal of Accounting', Vol.xxx(2), June 2005, pp.11-19
- ⇒ Bhattacharyya, H.K., "Amalgamation and Takeovers, Company News and Notes", pp.1-11.
- ⇒ Biswas, Jaydeep, "Corporate Mergers & Acquisitions in India", 'Indian Journal of Accounting', Vol.xxxv (1), pp.67-72.
- ⇒ Byotra Anuja, "Merger & Acquisition Global Dreams", Business World, January 19, 2004, pp.22.
- ⇒ Chandra prasanna, "Financial Management, Theory and Practice", New Delhi, Tata McGraw Hill publishing Company Limited, Vol.9, 2004, pp.
- ⇒ Hudson Darren and Herndon Cary W., "Merger, Acquisition, Joint Ventures and Strategic Alliances in Agricultural Cooperatives", The Indian Journal of management Research, September, 2004, pp.78,79.
- ⇒ Shrimali, Vijay and Saxena, Kaarunesh; 'Mergers & Acquisition – Sun is Shining Brightly', 'Indian Journal of Accounting', Vol.xxxV (1), Dec., 2004, pp 48-54.



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UNIVERSITY INDUSTRY INTERFACE-WITH REFERENCE TO COMMERCE EDUCATION

Introduction:-

Extremely dynamic business world and the rapidly developing knowledge based service economy have put in an increased demand for professionals to manage the business effectively and this is precisely the reason why the desire for acquiring required qualifications is growing. Employers today, as a result have to operate in an environment that demands new and constantly developing skills to retain the global competitiveness. Resurgent India sees wealth creation as a great equalizer amongst all sections of the society. In such a scenario a knowledge worker who can work at the cutting edge of technology, add value to the bottom-line, and provide competitive advantage to industry has become a hot commodity to acquire. Commerce Education was intended to provide skilled and trained manpower to meet changing needs of the business/industry. Though the very advent of commerce education in India was to the demands of the industry, the two entities have traditionally been operating in separate and as more or less isolated islands. The partnership between the two is only episodic and accidental and without any strategic intent. Universities and industry, which for long have been operating in separate domains, are rapidly inching closer to each other to create synergies. The constantly changing management paradigms, in response to growing complexity of the business environment today have necessitated these two to come closer. Higher education institutions not only contribute skilled human resources to business, but also in various. Intangible ways.

Need for University-Industry Convergence

University-industry interface could be as interactive

and collaborative arrangement between academic institutions and corporations for the achievement of certain mutually inclusive goals and objectives. Traditionally, business schools were looking for placements and internships for their students and the industry for fresh recruits who are well trained and equipped with the right KSA (knowledge, skills and attitude) to be able to contribute to organization's growth. Bisoux (2003) has explored the relationship between academics and industry as saying that corporations are placing growing emphasis on finding the "right person" It forces the business schools to think more carefully on whom they hire, and therefore the role of industry in the entire business school model becomes important. President A.P.J. Abdul Kalam has pointed out the large gap in the availability of employable skill, requirement of skilled manpower. The IT, Health care and other service sector need of large number of talented youth with relevant higher education for the task of knowledge creation, Knowledge acquisition, knowledge imparting, and knowledge sharing. Vijay Thadani, chairman of national committee on education states that business professional bodies should focus on all the dimension of education for relevance, excellence access. Today, the universities have realized the importance of working close with employers due to the following conditions.

Increasing complexity in academic and business world and constantly changing needs of the industry.

Growing competition for student placements and industry mind-share, with rapid increase in the number of business schools and hence the commerce graduates.

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Growing pressure from industry to make their inductees productive from day one to reduce the subsequent training costs.

Organizations today are looking for trained professionals and students capable of taking decisions. Some of the training in formative years comes out from business corporations, via collaborative internships with corporations to enhance learning opportunities to students.

Increasing interdependence between academia and industry to satisfy the mutual need for sustenance and innovation in their respective area.

Modes of Interface :

Corporations seek to play increasingly important role in activities of academic institutions to incubate the talent they need. The shift towards the short-Term performance metrics and shareholders interest has led to a number of changes in conduct of business, which has translated its effect on business schools. There are a number of avenues, through which business schools and industry interface each other. They have taken innovative steps towards strengthening this relationship.

The major objective of academia-industry partnership and initiatives taken this direction revolves around getting lucrative and better placements to students. Today companies demand more relevance commerce education. commerce education of today provide less relevance with the job and insufficiently flexible. To improve the quality of output, business corporations are looking to collaborate in more detail with business schools to create programmes, which can be customized according to company's individual need and requirements.

According to Rizvi (2003), academia-industry collaboration is a must if industry has to benefit from research a development activity at business schools, and such a relationship should be encouraged across country for the benefit of global business competitiveness. More opportunities need to be provided to the faculty through applied research and case writing to keep them abreast of changes in the business world and enhance the overall teaching-learning experience. The following are the modes of

interface between commerce institutions and business corporations.

Guest Lectures : Guest lectures by corporate executives in the field of accounting, taxation, insurance and banking are the most popular mode of industry interface. Guest lectures delivered by the executives in addition to classes taken up by professional teachers will expose the students to the practical aspects of contemporary business. The objective of this is to give students an overview of industry practices and help them relate the theory to real life application.

Training and internship of students : Partnership through training and internships of students is a self-feeding method. Thus industry gets a first hand feed of students in a business school thus increasing their placement opportunities and strengthening long term relationship between the two entities and strengthening long term relationship between the two entities. project work should be allotted preferably in private sectors.

Executives in BOS and Governing Councils : The inclusion of executives in the governing councils and Board of studies in business schools offering Commerce education is yet another preferred mode of collaborations. The objective of having industry representation in BOS and Governing councils of business schools is to include their views in governance of business schools and designing of courses to suit their needs. This will not only attract prospective students, donor and other stake holders but also work in favour of business schools during ratings and rankings.

Industry Inputs in Curriculum Design : The faculty is slowly integrating the industry views into their curriculum. revisions are taking place in the curriculum of business schools for the sustenance of commerce education. Business schools are inviting suggestions from industry to update their curriculum and include the topics of present day relevance.

Case Writing : Case writing and case analysis is the most important part of curriculum of business schools, which not only adds to current knowledge pool but also enhances the analytical experience of students. It serves as a benchmark study for business

corporations. Formal relationship between industry and academia can definitely add to the research and knowledge generation. Industry therefore has to initiate to generate knowledge by funding for the research in business schools.

Management Development Programme : The Management Development Programmes (MDP) is perceived to be among the top five most effective modes of interface. MDPs, though quite similar to executive education programmes are short-duration capsule courses, which focus on a particular area or topic. Some Institutions are taking the necessary steps to develop the MDP network, benefiting both academia and the industry. MDI conducts more than hundred MDPs very regularly for executives either as open programs or customized company programmes. It has formal contracts with organizations, which invest in their human capital through continuous or formal training.

Interaction between University CEOs and Industry Leaders : Regular Interaction between Vice-Chancellors of Universities across India Industry leaders from CII, ASSOCHAM, and FAPCI is suggested to set the stage for the launch of University-Industry Council, initiative of a platform for a fruitful correlation between academia and industry to strengthen the human capital of India. Some of the key areas identified to work together were Quality of faculty, accreditation, evaluation system, developing performance appraisal system, proposing solution to the problems of industry, marketing survey, customer satisfaction etc. The interaction is very essential in formulation of need based syllabus in association with industry, support of industry to develop quality institutions, exchange of resource persons between industry and University for training and development, funding of research, internship of student etc.

The Synergy of University-Industry Interface : University-Industry interface has multiple objectives like work force development and sharing of expertise. Links between university and industry may create new agenda; provide value added resources to both parties. Continuous interaction of universities and industries is the need of the day to identify mutual

needs and areas of collaboration. From the university view point the purpose of interface is to develop relevant and value added courses for better placements students. From the industry point of view, it can easily find out the right person for the right job.

There is a need for effective intervention to understand employer needs, sector specific skills, training and development that improves business performance. The platform of University-Industry Convergence endeavours to bring together higher education institutions and employers to evolve modalities for collaboration with the aim to provide required human capital and to meet the business needs for the 21st century. In the light of contemporary, competitive business scenario the horizons and scope of commerce education is changing very fast. Commerce education needs to focus on some special areas of business. Universities have to develop an attitude by which students will be treated as clients and provide them the value added commerce education. The educational programme should be carefully tailored to meet basic purpose of education. Universities need to have greater degree of interface with the industry in order to provide value added and job oriented commerce education. The areas of collaboration should be identified for the mutual benefit. The following are the main areas of commerce education where and industry should interact continuously.

Expanding the Horizons of Commerce Education : The present structure and the syllabus of commerce courses are old and obsolete. In the subjects of financial accounting and cost accounting definite gap has been identified. Updated knowledge on Indian GAAP. (Generally Accepted Accounting Principles) and international accounting practicals have also seem to be lacking. For Example, the syllabus of Accountancy has failed to meet the contemporary needs of the business. The accounting practicals in the modern business underwent accounting software packages like Tally. suggested to include International Accounting Practices as a part of they

Syllabus. Universities should involve chartered accounting firms in this process and live projects are suggested to be given to the students. which would enable the students to expose to practical aspects of the course and help them employed immediately after studies. This would also help their industry to bridge the skill gap. In this regard universities Should collaborate with MNCs, EOUS and make necessary arrangements for training the students. In the Context of huge demand for international accounts, this would help the commerce students to get better placements.

Banking Sector: Financial sector reforms in India, resulted in liberalization and privatization of banking sector. Due to the entry of foreign banks and financial institution the traditional banking has undergone to sea changes which resulted in the proliferation of financial innovations. The modern banks now operate with a variety of value added financial products in the specialized financial market spectrum. To deal with the present banking scenario there is a need for redesigning the commerce education consultation with the bankers and professional bodies to meet the needs the client. Towards this end Andhra University in collaboration with HSB is offering restricted B.Com course for the mutual benefit.

Insurance Sector : Indian insurance sector has been liberalized to tap the huge potential market. Global players along with Indian players in insurance sector expected to provide efficient services at competitive price insurance companies customized to the needs of the specific customers launching range of new products. To take advantage from the situation skilled manpower with adequate knowledge in insurance business required. Universities in collaboration with insurance companies should design degree course in commerce with special emphasis on insurance business which is expected to meet the needs of the client. Short term diploma or certificate courses can also be planned to meet the needs of the mark.

Stock Market : The boom in Indian stock market is yet another important promising field which offers number of opportunities to the commerce students. The new trends in the stock market operations

particularly in the stock market needs people with innovative knowledge and skills in tradition stock market participants like investment bankers, asset management companies and broaking companies eagerly looking for people with second specific skills. This is another important sector where the universities association with investment bankers, stock broaking firms and concerned agencies to design degree or diploma courses short and medium term training programmes for commerce students which are expected provide placements immediately. In this regard Andhra University has closely interacting with steel city share firm to expose the students in the specific area of stock market operations.

Conclusion : Business school need to identify the areas where they can build an effective academia industry relationship. They have to revise their mission and academic model to be able to identify the right mix of interface. Academia and industry need to build organic relationships, with sustainable and and stratttegiic intent contributing to the development of both the entities. industry inputs are to be included as part of curriculum of commerce education for improving the quality of output, which is perceived quite beneficial to both arties.

REFERENCES

- ⇒ Drian S & Matheson R.A.1996. Management training-are business schools out of touch with their market ? Journal of Europen Industrial Training, MCB University Press.
- ⇒ batch philip G, Higher education and WTO : globalization among International higher education no.3, the boston college center for international higher education.
- ⇒ berned C., 1994. Educating the star fleet captin-making business schools more relevent to their stakeholders, welinkars Research Journal, Volume II, Issue-4, pp2-31,
- ⇒ S.L.& Bowondor B.2004. Management education in Indi, its evolution and some contemporary issues, Research paper published by All India Management Education.



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Science

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USEFULLNESS OF ORGANIC CHEMISTRY IN PRESENT CINERIO WHAT IS ORGANIC CHEMISTRY

The other Subjects of Science are deep, like physics, Math etc, but only chemistry is a wide subject. The Subject Chemistry related to the chemicals, some of them are mild, some of them are strong, some of them are hazards and some of them are useful for human life.

When we wake up at that time to when sleep on bed, we are using a many more products of organic chemistry. As per example, Tooth brush. Tooth brush is made from plastic is a one kind of polymer, which consider as a organic chemistry.

The range of chemicals studied in organic chemistry include hydrocarbon ,compounds containing only carbon and hydrogen as well as Composition based on carbon but containing other elements organic chemistry ,overlaps with many including medicinal chemistry ,bio-chemistry ,organometalic chemistry, and polymer chemistry as well as many aspects of materials science.

ADVANTAGE OF ORGANIC CHEMISTRY:-

- Chemistry is important because it explains anything and everything around you in some way chemistry isn't just about experiments .it is how everything works.
- Chemistry helps us understand the composition of vitamins, supplements and drugs.
- It also helps us decide what cleaner is best for dishes, laundry and home.
- Most of the all fertilizers are made from the combination of carbon, hydrogen and one or two inorganic metals.
- Now a days the growth of pharmaceutical companies are very high of that's because of only and only organic chemistry. Most of the all disease

are cured by organic chemistry named drugs and medicines like aspirin.

- Chemistry explains how food changes as you cook it, how it rots, how to preserve food, how your body used the food you eat, and ingredients interact to make food.

DISADVANTAGES OF ORGANIC CHEMISTRY:-

- Some chemical are very hazards only it's smell can kill the human life.
- Some chemicals are very concentrated ,that burn the skin and other organs of human body
- The melting point and boiling point of some organic chemicals are very low that's why they catch the fire very rapidly, so the chance of fire is very high.
- The earth became unfertilized when some acids or other chemicals fallen down on it

*** M.Sc. B.Ed.**



* R.N. Thadesar

Science

Research Zone India

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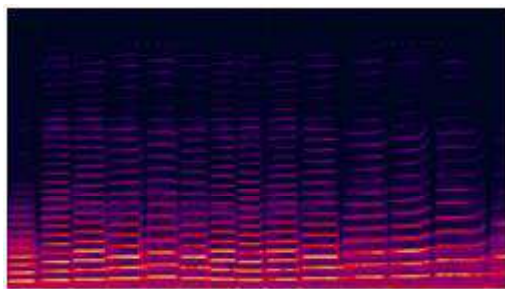
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MATHEMATICAS AND MUSIC

INTRODUCTION :



A spectrogram of a violin waveform, with linear frequency on the vertical axis and time on the horizontal axis. The bright lines show how the spectral components change over time. The intensity coloring is logarithmic (black is “120 dBFS”). Music theorists sometimes use mathematics to understand music, and although music has no axiomatic foundation in modern mathematics, mathematics is “the basis of sound” and sound itself “in its musical aspects... exhibits a remarkable array of number properties”, simply because nature itself “is amazingly mathematical”. Though ancient Chinese, Egyptians and Mesopotamians are known to have studied the mathematical principles of sound, the Pythagoreans of ancient Greece were the first researchers known to have investigated the expression of musical scales in terms of numerical ratios, particularly the ratios of small integers. Their central doctrine was that “all nature consists of harmony arising out of numbers”.

From the time of Plato, harmony was considered a fundamental branch of physics, now known as musical acoustics. Early Indian and Chinese theorists show similar approaches: all sought to show that the mathematical laws of harmonics and rhythms were fundamental not only to our understanding of the

world but to human well-being. Confucius, like Pythagoras, regarded the small numbers 1,2,3,4 as the source of all perfection. The attempt to structure and communicate new ways of composing and hearing music has led to musical applications of set theory, abstract algebra and number theory. Some composers have incorporated the golden ratio and Fibonacci numbers into their work.

Time, rhythm and meter :-

Without the boundaries of rhythmic structure – a fundamental equal and regular arrangement of pulse repetition, accent, phrase and duration – music would not be possible. In Old English the word “rhyme”, derived to “rhythm”, became associated and confused with *rim* – “number” and modern musical use of terms like meter and measure also reflects the historical importance of music, along with astronomy, in the development of counting, arithmetic and the exact measurement of time and periodicity that is fundamental to physics.

Tuning systems :-

5-limit tuning, the most common form of just intonation, is a system of tuning using tones that are regular number harmonics of a single fundamental frequency. This was one of the scales Johannes Kepler presented in his *Harmonices Mundi* (1619) in connection with planetary motion. The same scale was given in transposed form by Scottish mathematician and musical theorist, Alexander Malcolm, in 1721 in his ‘*Treatise of Musick: Speculative, Practical and Historical*’, and by theorist Jose Wuerschmidt in the 20th century. A form of it is used in the music of northern India. American composer Terry Riley also made use of the inverted form of it in his “*Harp of New Albion*”. Just intonation

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gives superior results when there is little or no chord progression: voices and other instruments gravitate to just intonation whenever possible. However, as it gives two different whole tone intervals (9:8 and 10:9) a keyboard instrument so tuned cannot change key. To calculate the frequency of a note in a scale given in terms of ratios, the frequency ratio is multiplied by the tonic frequency. For instance, with a tonic of A4 (A natural above middle C), the frequency is 440 Hz, and a justly tuned fifth above it (E5) is simply $440 \times (3:2) = 660$ Hz.

Pythagorean tuning is tuning based only on the perfect consonances, the (perfect) octave, perfect fifth, and perfect fourth. Thus the major third is considered not a third but a ditone, literally “two tones”, and is $(9:8)^2 = 81:64$, rather than the independent and harmonic just $5:4 = 80:64$ directly below. A whole tone is a secondary interval, being derived from two perfect fifths, $(3:2)^2 = 9:8$.

Connections to set theory :-

Musical set theory uses some of the concepts from mathematical set theory to organize musical objects and describe their relationships. To analyze the structure of a piece of (typically atonal) music using musical set theory, one usually starts with a set of tones, which could form motives or chords. By applying simple operations such as transposition and inversion, one can discover deep structures in the music. Operations such as transposition and inversion are called isometries because they preserve the intervals between tones in a set.

Connections to abstract algebra :-

Expanding on the methods of musical set theory, some theorists have used abstract algebra to analyze music. For example, the notes in an equal temperament octave form an abelian group with 12 elements. It is possible to describe just intonation in terms of a free abelian group. Transformational theory is a branch of music theory developed by David Lewin. The theory allows for great generality because it emphasizes transformations between musical objects, rather than the musical objects themselves. Theorists have also proposed musical applications of more sophisticated algebraic concepts. Mathematician Guerino Mazzola has applied topological

theory to music, though the result has been controversial.

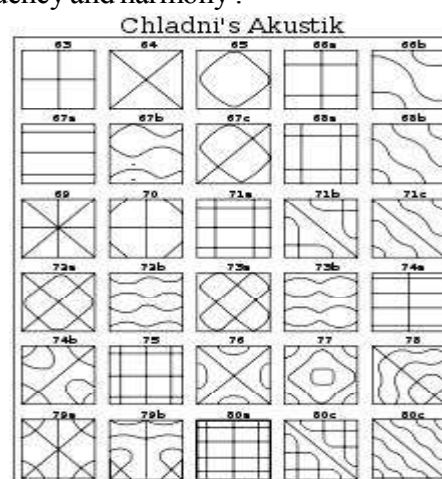
The chromatic scale has a free and transitive action of the cyclic group $\mathbb{Z}/12\mathbb{Z}$ with the action being defined via transposition of notes. So the chromatic scale can be thought of as a torsor for the group $\mathbb{Z}/12\mathbb{Z}$.

Musical form :-

Musical form is the plan by which a short piece of music is extended. The term “plan” is also used in architecture, to which musical form is often compared. Like the architect, the composer must take into account the function for which the work is intended and the means available, practicing economy and making use of repetition and order. The common types of form known as binary and ternary (“twofold” and “threefold”) once again demonstrate the importance of small integral values to the intelligibility and appeal of music.

The word “rhyme” was not derived from “rhythm” but from old English “rime”. The spelling of “rime” was later affected by the spelling of “rhythm”, although the two are totally different

Frequency and harmony :-



(Chladni figures produced by sound vibrations in fine powder on a square Plate [Ernst Chladni, Acoustics](#))

REFERENCE

- ⇒ Reginald Smith Brindle, *The New Music*, Oxford University Press
- ⇒ Reginald Smith Brindle, *The New Music*, Oxford University Press



* Dr. Dalsangbhai F. Chaudhary

Physical Education

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મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલય અને મહાદેવ દેસાઈ ગ્રામ સેવા મહાવિદ્યાલય,
સાદરાના વિદ્યાર્થી ભાઈઓનો માનસિક સ્વાસ્થ્યનો તુલનાત્મક અભ્યાસ

આ સંશોધન અભ્યાસનો હેતુ મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલય અને મહાદેવ દેસાઈ ગ્રામ સેવા મહાવિદ્યાલય સાદરાના વિદ્યાર્થી ભાઈઓનો માનસિક સ્વાસ્થ્યનો તુલનાત્મક અભ્યાસ કરવાનો હતો. વિષયપાત્રોની પસંદગી આ અભ્યાસ માટે મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલય અને મહાદેવ દેસાઈ ગ્રામ સેવા મહાવિદ્યાલય સાદરાના 120 વિદ્યાર્થી ભાઈઓને પસંદ કરવામાં આવ્યા હતા. જેમાં મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલયના 60 વિદ્યાર્થીઓ અને મહાદેવ દેસાઈ ગ્રામ સેવા મહાવિદ્યાલય સાદરાના 60 વિદ્યાર્થી ભાઈઓની પસંદગી કરવામાં આવી હતી. માપનના ધોરણોમા માનસિક સ્વાસ્થ્યની કસોટી માટે ડો. ડી. જી. ભટ્ટ અને જી. આર. ગીડાની પ્રશ્નાવલિને માપન ધોરણ તરીકે પસંદ કરવામાં આવી હતી. આંકડાકીય પ્રક્રિયા મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલય અને મહાદેવ દેસાઈ ગ્રામ સેવા મહાવિદ્યાલય, સાદરાના વિદ્યાર્થી ભાઈઓનો માનસિક સ્વાસ્થ્યની તુલના કરવા માટે માટે 0.05 કક્ષાએ 't' રેશિયો લાગુ પાડવામાં આવ્યો હતો.

વિશ્વના પ્રથમ કક્ષાના રાષ્ટ્રો તરીકે મનાતા અમેરિકામાં લાખોથી વધુ લોકો તીવ્ર મનોવિકૃતિથી પીડાતા હોવાનું જાણવા મળેલ છે. કોલમેન અઢારમી સદીને વિવેકની, ઓગણીસમી સદીને પ્રગતિની તથા વીસમી સદીને ટેકનોલોજીના ઉપયોગની અને હાલની ૨૧મી સદી ટેકનોલોજીના અતિરેકની સદી તરીકે ઓળખાવે છે અને આ સંદર્ભમાં એકવીસમી સદીના માનવીનો જીવન માર્ગ સરળ નથી. આથી માનસિક સ્વાસ્થ્ય ને જાણવું, સમજવું જરૂરી છે. આજે પોતાની જાતને અદ્યતન માનવો વ્યક્તિ ચિંતા, વ્યગ્રતા અને તણાવમાં ચારેતરફથી ઘેરાઈ ગયેલો જોવા મળે છે વર્તમાન યુગમાં માનવીને કુટુંબ, શાળા, કોલેજ, વિભિન્નતા વ્યવસાયો, લગ્નજીવન, વૃદ્ધાવસ્થા વગેરે ક્ષેત્રોમાં સમાયોજન કરવા પડે છે ત્યારે વ્યક્તિને હતાશા અને સંઘર્ષનો ભોગ બનવું પડે છે. સંઘર્ષ અને હતાશાનો વધુને વધુ લાંબા સમયનો ભોગ બનનાર વ્યક્તિ માનસિક રીતે સમતુલા ગુમાવે છેત્યારે જિંદગી કંટકોથી પથરાયેલી છે એવું તેને લાગે છે. આમ જીવનના વિવિધ ક્ષેત્રે કામ કરતી વ્યક્તિઓ માનસિક સ્વાસ્થ્ય, જીવન સંતોષ અને સમાયોજના પ્રશ્નો ઉભા કરે છે. સંશોધકની દૃષ્ટિ આવા પ્રશ્નો એ આધુનિક યુગના સળગતા પ્રશ્નો છે વિષયપાત્રોની પસંદગી અને માપનના ધોરણ:

આ સંશોધન અભ્યાસનો હેતુ મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલય અને મહાદેવ દેસાઈ ગ્રામ સેવા મહાવિદ્યાલય, સાદરાના વિદ્યાર્થી ભાઈઓનો માનસિક સ્વાસ્થ્યનો તુલનાત્મક અભ્યાસ કરવાનો હતો.

આ અભ્યાસ માટે મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલય અને મહાદેવ દેસાઈ ગ્રામ સેવા મહાવિદ્યાલય સાદરાના 120 વિદ્યાર્થી ભાઈઓને પસંદ કરવામાં આવ્યા હતા. જેમાં મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલયના 60 વિદ્યાર્થીઓ અને મહાદેવ દેસાઈ ગ્રામ સેવા મહાવિદ્યાલય સાદરાના 60 વિદ્યાર્થી ભાઈઓની પસંદગી કરવામાં આવી હતી. માનસિક સ્વાસ્થ્યની કસોટી માટે ડો. ડી. જી. ભટ્ટ અને જી. આર. ગીડાની પ્રશ્નાવલિને માપન ધોરણ તરીકે પસંદ કરવામાં આવી હતી. આંકડાકીય પ્રક્રિયા:

મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલય અને મહાદેવ દેસાઈ ગ્રામ સેવા મહાવિદ્યાલય, સાદરાના વિદ્યાર્થી ભાઈઓનો માનસિક સ્વાસ્થ્યની તુલનાકરવા માટે માટે 0.05 કક્ષાએ 't' રેશિયો લાગુ પાડવામાં આવ્યો હતો.

અભ્યાસના પરિણામો:

*Asso.Pro.Faculty of Phy.Edu.&Spo.Sci.,Gujarat vidyapith,At.Sadra,Gandhinagr.

સારણી-1

મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલયના બી.પી.ઈ. F.Y. ના વિદ્યાર્થી ભાઈઓને અને મહાદેવ દેસાઈ ગ્રામસેવા મહાવિદ્યાલયના, સાદરાના બી.એ. F.Y. ના વિદ્યાર્થી ભાઈઓના માનસિક સ્વાસ્થ્યની કસોટીનો મધ્યક, મધ્યક તફાવત અને 't' રેશિયો

ક્રમ	કસોટી	જૂથ	મધ્યક	મધ્યક તફાવત	પ્રમાણિત વિચલન	't'
1	માનસિક સ્વાસ્થ્ય	બી.પી.ઈ. (F.Y.)	26.95	0.05	1.22	0.04
		બી.એ. (F.Y.)	27			

*સાર્થકતાનું ધોરણ 0.05 't' (22) = 2.07

સારણી-1 પરથી માલુમ પડે છે કે, બી.પી.ઈ. F.Y.ના વિદ્યાર્થી ભાઈઓનો માનસિક સ્વાસ્થ્યની કસોટીમાં મધ્યક 26.95 હતો અને બી.એ. F.Y. ના વિદ્યાર્થી ભાઈઓનો માનસિક સ્વાસ્થ્યની કસોટીમાં મધ્યક 27 હતો. જેનો મધ્યક તફાવત 0.05 હતો. પ્રમાણિત વિચલન 1.22 હતું. તેમજ પ્રાપ્ત થયેલ 't' રેશિયો 0.04 હતો. જે 0.05 કક્ષાએ સાર્થક નથી.

સારણી-2

મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલયના બી.પી.ઈ. S.Y. ના વિદ્યાર્થી ભાઈઓને અને મહાદેવ દેસાઈ ગ્રામસેવા મહાવિદ્યાલયના, સાદરાના બી.એ. S.Y. ના વિદ્યાર્થી ભાઈઓના માનસિક સ્વાસ્થ્યની કસોટીનો મધ્યક, મધ્યક તફાવત અને 't' રેશિયો

ક્રમ	કસોટી	જૂથ	મધ્યક	મધ્યક તફાવત	પ્રમાણિત વિચલન	't'
1	માનસિક સ્વાસ્થ્ય	બી.પી.ઈ.(S.Y.)	26.85	1.05	1.15	0.91
		બી.એ.(S.Y.)	27.9			

*સાર્થકતાનું ધોરણ 0.05 't' (22) = 2.07

સારણી-2 પરથી માલુમ પડે છે કે, બી.પી.ઈ. S.Y.ના વિદ્યાર્થી ભાઈઓનો માનસિક સ્વાસ્થ્યની કસોટીમાં મધ્યક 26.85 હતો અને બી.એ. S.Y. ના વિદ્યાર્થી ભાઈઓનો માનસિક સ્વાસ્થ્યની કસોટીમાં મધ્યક 27.9 હતો. જેનો મધ્યક તફાવત 1.05 હતો. પ્રમાણિત વિચલન 1.15 હતું. તેમજ પ્રાપ્ત થયેલ 't' રેશિયો 0.91 હતો. જે 0.05 કક્ષાએ સાર્થક નથી.

સારણી-3

મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલયના બી.પી.ઈ. T.Y. ના વિદ્યાર્થી ભાઈઓને અને મહાદેવ દેસાઈ ગ્રામસેવા મહાવિદ્યાલયના, સાદરાના બી.એ. T.Y. ના વિદ્યાર્થી ભાઈઓના માનસિક સ્વાસ્થ્યની કસોટીનો મધ્યક, મધ્યક તફાવત અને 't' રેશિયો

ક્રમ	કસોટી	જૂથ	મધ્યક	મધ્યક તફાવત	પ્રમાણિત વિચલન	't'
1	માનસિક સ્વાસ્થ્ય	બી.પી.ઈ.(T.Y.)	27.30	0.75	1.46	0.51
		બી.એ.(T.Y.)	26.55			

*સાર્થકતાનું ધોરણ 0.05 't' (22) = 2.07

સારણી-3 પરથી માલુમ પડે છે કે, બી.પી.ઈ. T.Y.ના વિદ્યાર્થી ભાઈઓનો માનસિક સ્વાસ્થ્યની કસોટીમાં મધ્યક 27.30 હતો અને બી.એ. T.Y. ના વિદ્યાર્થી ભાઈઓનો માનસિક સ્વાસ્થ્યની કસોટીમાં મધ્યક 26.55 હતો. જેનો મધ્યક તફાવત 0.75 હતો. પ્રમાણિત વિચલન 1.46 હતું. તેમજ પ્રાપ્ત થયેલ 't' રેશિયો 0.51 હતો. જે 0.05 કક્ષાએ સાર્થક નથી.

સારણી-4

મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલયના બી.પી.ઈ. ના વિદ્યાર્થી ભાઈઓને અને મહાદેવ દેસાઈ ગ્રામસેવા મહાવિદ્યાલયના, સાદરાના બી.એ. ના વિદ્યાર્થી ભાઈઓના માનસિક સ્વાસ્થ્યની કસોટીનો મધ્યક,

મધ્યક તફાવત અને 't' રેશિયો

ક્રમ	કસોટી	જૂથ	મધ્યક	મધ્યક તફાવત	પ્રમાણિત વિચલન	't'
1	માનસિક સ્વાસ્થ્ય	બી.પી.ઈ. વિદ્યાર્થી ભાઈઓ	27.03	0.12	0.67	0.18
		બી.એ. વિદ્યાર્થી ભાઈઓ	27.15			

*સાર્થકતાનું ધોરણ $0.05 \text{ 't' } (22) = 2.07$

સારણી-4 પરથી માલુમ પડે છે કે, બી.પી.ઈ. ના વિદ્યાર્થી ભાઈઓનો માનસિક સ્વાસ્થ્યની કસોટીમાં મધ્યક 27.03 હતો અને બી.એ.ના વિદ્યાર્થી ભાઈઓનો માનસિક સ્વાસ્થ્યની કસોટીમાં મધ્યક 27.15 હતો. જેનો મધ્યક તફાવત 0.12 હતો. પ્રમાણિત વિચલન 0.67 હતું. તેમજ પ્રાપ્ત થયેલ 't' રેશિયો 0.18 હતો. જે 0.05 કક્ષાએ સાર્થક નથી.

તારણો:

- મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલય બી .પી.ઈ. F.Y.ના વિદ્યાર્થી ભાઈઓનું માનસિક સ્વાસ્થ્ય કરતા મહાદેવ દેસાઈ ગ્રામસેવા મહાવિદ્યાલય બી.એ. F.Y.ના વિદ્યાર્થીભાઈઓ માનસિક સ્વાસ્થ્યમાં ચઢિયાતા જોવા મળ્યા હતા.
- મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલય બી .પી.ઈ. S.Y.ના વિદ્યાર્થી ભાઈઓનું માનસિક સ્વાસ્થ્ય કરતા મહાદેવ દેસાઈ ગ્રામસેવા મહાવિદ્યાલય બી.એ. S.Y.ના વિદ્યાર્થીભાઈઓ માનસિક સ્વાસ્થ્યમાં ચઢિયાતા જોવા મળ્યા હતા.
- મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલય બી .પી.ઈ. T.Y.ના વિદ્યાર્થી ભાઈઓનું માનસિક સ્વાસ્થ્ય કરતા મહાદેવ દેસાઈ ગ્રામસેવા મહાવિદ્યાલય બી.એ. T.Y.ના વિદ્યાર્થીભાઈઓ માનસિક સ્વાસ્થ્યમાં નીચા જોવા મળ્યા હતા.
- મહાદેવ દેસાઈ શારીરિક શિક્ષણ મહાવિદ્યાલય બી .પી.ઈ.ના વિદ્યાર્થી ભાઈઓનું માનસિક સ્વાસ્થ્ય કરતા મહાદેવ દેસાઈ ગ્રામસેવા મહાવિદ્યાલય બી.એ.ના વિદ્યાર્થીભાઈઓ માનસિક સ્વાસ્થ્યમાં ચઢિયાતા જોવા મળ્યા હતા.

સંદર્ભસૂચિ:

- અગ્યજીતસિંગ, સ્પોર્ટ્સ સાયકોલોજી, એ સ્ટડી ઓફ ઇન્ડિયન સ્પોર્ટ્સમેન, પતિયાલા: ફ્રેન્ડ્સ પબ્લિકેશન્સ, 1992.
- પેસ્તનજી, ડી. એમ., તારુણ્યનું મનોવિજ્ઞાન, અમદાવાદ : યુનિવર્સિટી ગ્રંથ નિર્માણ બોર્ડ, 1986.
- બક્ષી, મધુસુદનવી. અને અન્ય, સામાન્ય મનોવિજ્ઞાન, (અમદાવાદ : ત્રિપુરા, પ્રિન્ટિંગ પ્રેસ, અડવાડી માર્કેટ દીલ્હી દરવાજા બહાર, 1979.
- વર્મા, પ્રકાશ જે., એ ટેક્ષબુક ઓન સ્પોર્ટ્સ સ્ટેટેસ્ટીક્સ, ગ્વાલિયર: વિનસ પબ્લિકેશન, 2000.
- મદન કમલેશ, શારીરિક શિક્ષા એક ઐતિહાસિક વાડમય, દિલ્હી : મેટ્રોપોલિટીન બુક કંપન, ૧૯૯૩.
- પટેલ ચન્દ્રકાન્ત પ્રભુભાઈ, સામાન્ય મનોવિજ્ઞાન, પ્રથમ આવૃત્તિ અમદાવાદ: યુનિવર્સિટી ગ્રંથ નિર્માણ બોર્ડ, ગુજરાત રાજ્ય, 1991.



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Use of Information and Communication Technology in Education

21st century throughout the world is known as the age of information technology. E-commerce, E-mail, E-business, E-education are some popularly known concepts of the information technology. Technological improvements in the process of the transfer of information have made a great demand on strategies of teaching learning process. Use of modern subjects and the resultant "Communication Revolution" have the world smaller in its dimension from the point of view of access to knowledge. There is an equal and urgent need for newer strategies to be introduced in the scholastic learning systems of a classroom.

The impact of ICT is bringing gradual but often radicals charge to working, to learning and more generally to on way of life. In order to capitalize on the potential of new technology and particularly digital technology as a teaching tool there is an urgent need of the professional development that allows teachers to construct professional knowledge about pedagogy, content, as well as strategies for managing the classroom environments brought about with the creation of constructivist learning environments supported by technology.

THE COMMUNICATION:

Communication is the transfer of information from a sender to a receiver, with the information being understood by the receiver. Simply stated, the communication process involves the sender, the transmission of a message through a selected channel, the receiver of the message and feedback by the receiver. The communication process beings with the sender, who encodes an idea that is sent in oral, written, visual or some other form to receiver. The receiver decodes the message and gains an understanding of what the sender want to communicate. This in turn may results in change or action. Electronic media can improve communication, as illustrate by application of computers, TV, radio, teleconferencing and many other approaches to handling the increasing amount of information in learning process.

OBJECTIVE OF THE STUDY

- To develop the skills among the students to grasp the subject matter easily.
- To develop the students to match or follow the views of the teacher based on past experiences.
- To develop the skills in the students to brake from the traditional methods of education.
- To develop a positive attitude towards the distant education.

❖ IMPORTANCE OF THE STUDY:

- * Teacher does have technology enables to invent their own materials, which is immensely attractive.
the learner because of the direct perception through the audio visual aids.
experience using advanced technology.
- * Telecommunication system is helping teachers to break out from their traditional isolation & to connect with colleagues & professional in distant location.
- * The Technology enhances the motivation of the teacher.
- * Technology can support the assessment of student work in ways that are useful for guiding instruction.
- * Distance education has been making positive strives in this direction. Teacher educators and trainees in ICT aided instruction as well as in the use of application software packages goes along way in improving quality in teacher education.
- * Skill of learning through internet, accessing information from different websites, creating own website to contribute and share one's own experience are some of the most essential things to be acquired by all teachers to really meet the challenges posed to teacher education.
- * The subject matter is very easily grasped by Teacher provides authentic active learning

Lecturer, J & R College of Education, Zalod Road, Dahod.

★ There are great benefits of networks include collaborative learning and greater exposure to global perspectives. Also various networks for education have been established.

★ Computer networking increasingly is being used in classroom across the nation. These networks allow computers to send and receive information to and from different sites and hence encouraging active participation to learners.

❖ **ICT LABORATORIES:**

Information and communication based laboratories are the tools that teacher can bring in to the classroom to expand the range of students learning. Tools are designed to facilitate educational and work related tasks and they are flexible. Whether technology tools are applied in ways that promote traditional instruction or educational reform is depend on the perspective, skill and practices of classroom teacher. Here some of the following information and communication based equipments that can make the teaching learning process more effective and interesting.

❖ **MODERN TEACHING:**

How to make use of IT as educational means in modern teaching?

- ◆ Record a lecture, take it any institute in a CD and show it to students.
- ◆ Prepare a transparency and project it on a wall or board.
- ◆ Prepare a power point presentation and project it on a wall or board.
- ◆ Subject like science and others also can be taught by means of an internet, searching latest advancement in the particular area.
- ◆ Online teaching and virtual universities.
- ◆ Students should be taught about hardware stated above. They should know how to operate it.

❖ **E- COMMUNICATION:**

E-Communication means electronic media in communication. Let us we look,

Telecommunication: Telecommunication is now widely used. Educational institutions have already effectively used the new technology in a variety of ways, as shown by the following examples.

- ★ Fax service transmits information within minutes to countries on the opposite side of the globe.
- ★ Telecommunication provides an important link for just in time inventory systems.
- ★ Telecommunication provides an important link for supply hardware and software.

★ Many institutions now have details personnel information including performance appraisals and career development plans in a data bank

★ Television is very powerful medium for educational messages because there is an integration of speech, motion and music, due to its ability of transmitting clear and easily understandable messages it brings us very close to personal experience.

★ Radio covers a wide spectrum of formal and non-formal programme beautifully woven with narration, music, drama, interview, poetry and sound effect. Enrichment programme are also developed for teachers.

Let us now turn to a specific application of the new technology:

Teleconferencing:

In general, most people think of a “teleconference” as a group of people interacting with each other by means of audio and video media with moving or still pictures. For some time now multinational institutions have used teleconferencing. Full-motion video is frequently used to hold classroom instruction process. Now only do they hear each other, but they can also see each other’s expressions or discuss some visual display. This kind of communication is, of course, rather expensive and audio in combination with still video may be used instead. This method of communicating may be useful for showing charts or illustrations during a new concept of educational discussion.

❖ **E- LEARNING:**

CONCEPT:

E-Learning can be defined as “The use of processes and technologies to create, distribute, manage and enable Learning via an electronic network.” Our definition of E-Learning is the use of information and communication technology, including the internet to Learn and teach. The Learner must always be the centre of E-Learning system as we design E-Learning classes; we should always keep the Learner’s need and interests in mind as we create all the supporting elements. It also designated an initiative to:

- ◆ Encourage the development and the acquisition of digital literacy;
- ◆ Improve everyone’s capacity to use new technologies for Learning and working;
- ◆ Adopt our education and training systems to meet the challenge of the information society.

DISTANCE LEARNING: THE ACQUISITION OF

KNOWLEDGE & SKILLS

Open and distance learning is fast becoming an accepted and indispensable part of the mainstream of educational systems in both developed and developing countries, in spite of the fact the world still suffers from intolerable inequalities not only at the international levels but also within nations. There is a definite separation of teachers and students during teaching process, where use of educational media to unite teachers and students and carry educational course content is accomplished and provision of two-way communication between teachers and students (two way- interactions) through information and communication technologies are used.

CLASSROOM E- LEARNING TECHNOLOGIES:

The changes have not all been happening on the Internet or with students sitting in computer labs using CAL package. Out in the classrooms and Lecture theatres, data projectors have been introduced and package like Powerpoint or being used to present directly through a computer rather than to create and print overhead Projector transparencies. Other presentation technologies such electronic whiteboards, audience, feedback systems and video – conferencing facilities are beginning to appear in teaching space and these will all require careful thought in integrating them into teaching practice.

E- LEARNING: DISTANCE EDUCATION

Correspondence systems originated at the end of the 19th century, and are still the most widely used form of distance education. Educational TV and radio systems use various delivery technologies; terrestrial, satellite and cable TV and radio to deliver live or recorded lectures to both individual home-based learners and group of learners in remote classrooms where some face to face support might be provided.

Multimedia systems encompass text, audio, video and computer based materials, and usually some face to face learner support delivered to both individuals and group. Programmes are prepared for distribution over large numbers of learners, usually located across a whole country.

Internet based system in which multimedia materials in electronic format are delivered to individuals through computers, along with access to databases and electronic libraries, which enable one to one, one to many and many to many

interactions, synchronously or asynchronously, through e-mail, computer conferences, bulletin board etc. Spread of broadband Internet

❖ MULTIMEDIA COMPUTER:

CONCEPT:

Multimedia computer is a powerful tool for information which has influenced the process of education and training significantly. It is the incorporation of sound animation, skill images, hyper text and video integrated under the control of the computer programme. In multimedia, computer can talk, play music and show music, animated images etc. Multimedia may use all or a few of these aspects of communication. The essence of multimedia is to make computers more interesting. It is needed to provide varieties and higher quality of information.

The minimum configuration required for any multimedia system is a Pentium- 1 with at least 32 MB of RAM, color VGA monitor, digital subsystem and around 1.2 GB Hard disk.

FEATURES OF MULTIMEDIA COMPUTER:

☉ Text:

As the text can be displayed in more than one format, the information displayed can be more intelligible. Computerized form of a book allows the user to look up information quickly with the help of Hyper-text which is important element of multimedia computing.

☉ Sound effect:

Information can be conveyed effectively with sound effect. Audio sound can also be given as reinforcement to students' understanding.

☉ Images effect:

Static representation of an idea or concept on a screen is called an image which includes drawings, scanned photographs or live art, charts, maps and graphs. The use of images became popular with the development of desktop publishing and the use of graphs to represent spreadsheet data.

☉ Animation effect:

Moving graphics images are named Animation which is highly useful for illustrating concept that involves movement. Series of images are displayed in rapid succession giving the illusion of movement. Flash-5 is the most useful software for animation effect.

☉ Video effect:

Video displays images of real events stored in a digital form. Video includes video images, display of full motion video from a VCD, and a digital storage and retrieval of compressed video signals.

Multimedia encyclopedias can be used to give detailed information about a subject. The use of sound, color images, moving video, rapid references in the form of glossaries and background details can be used to enhance this valuable teaching – reference tool.

Now a day some special educational CDs, specially designed for the students studying in Gujarat State Examination Board are available by some special agencies like Info technologies and Safal Education etc. The matter of the CDs is written and tested by experienced teachers and recommended schools and educational institutions.

The educational CDs of standards 10th and 12th covered major topics of each subject using multimedia models, study contents, chapter notes, animated experiments, figures, diagrams, colored images etc. It also covers an exhaustive question bank for the different subject. It generates unlimited test papers, automatically chapter wise as well as unit wise and their ideal solutions to check the student's progress.

CONCLUSION:

Education is a teaching learning process which involves communication and communication is the transfer of information from sender to receiver. Electronic media can improve communication, as illustrate by teleconferencing, the application of computer, TV and radio. The impact of information and communication technology is bringing gradual but often radical change to working, to learning and more generally to the way of life. In order to capitalize on the potential of new technology and particularly digital technology as a teaching tool there is an urgent need of the professional development that allows teachers to construct professional knowledge about pedagogy, content, as well as strategies for managing the classroom environments brought about with the creation of constructivist learning environments supported by technology. No doubt there is a pressing need for taking a fresh look at effective teaching through new strategies, methods, techniques and action plan. Multimedia encyclopedias can be used to give detailed information about a subject. Multimedia is not a product but a combination of technologies. Finding through classroom discussion or inform student conversation in small group they learn to set high goal with the benefit of experience and knowledge of their educators

especially when it is available most easily in the pretext of educational technology.

REFERENCES:

- ♦ Aggrawal J.C. (2003), "Educational Technology and Management", Vinod Pustak Mandir, Agra-2.
- ♦ Chatterji, Pable (1997), "Multimedia what's that?" The Catalyst; Lab Journal by the students of Visual Communication, SVC Batch, Madras.
- ♦ Dhama, O. P. Bharatnagar (1987), "Education & Communication for Development", Oxford & IBH Publishing, New Delhi.
- ♦ M.C.Narwaloah (2004), "Information technology and development", Discovery Publishing House.
- ♦ Patel Ashok D. & R.S.Patel (2001), "IT in Education", Nirav Prakashan, Ahmedabad.
- ♦ Gulati & Gulati, "Technology-to-Technology", Mahindra Capital Pub., Chandigadh.
- ♦ Vasu Deva (2003), "E-Learning Search for Excellence", Common Wealth Publishers, NewDelhi.
- ♦ Venkataiah N. (1996), "Educational Technology", APH Publishing Corporation, New Delhi.
- ♦ Yoakam G.A. (1986), "Modern Methods of Techniques of Teaching" Mac-Millan Co., London.



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Importance & Significance of Home Science Education

Home science education is worth life education. From time immemorial down the ages of civilization, "Home and Family" has been the core of all human development and the society at large. By catering to the physical, emotional and spiritual needs of the members, the home gives meaning to life and refines the life of citizen leading to better living and thus building a healthy and developed country. Home science can be defined as "Education for better living". It explores the plausibility of the establishment of the perfections in the social orders starting from the home life to the community level. On the whole, the goals of Home science can be spell out as "for prosperous living and achieving the highest happiness". Home science is a dynamic and ever growing field of education. It is an applied field built upon both the discipline of science and humanities for the purpose of achieving the welfare and wellbeing of the family in an ever changing society. It is the education for "better living" and the core of this education is the "family ecosystem". It is the study of reciprocal relations between the family and its natural and manmade environments. Home Science works at a basic level by improving your outlook towards others. It inculcates values that help you become responsible for your family and society

Importance & Significance of Home Science Education:

Home Science education deals with all aspects of home and family management. It is both an art and science. It's an 'art' because it helps you manage your resources in a skilful manner, and it's a 'science' because it helps you improve your family life by offering you knowledge in the field. To give you a simple example, when you present a dish in an aesthetic manner it becomes an art. When you ensure that the meal offers a balanced nutritive diet, it becomes a science. Home Science education empowers you with the skills to improve every facet of your home life – food, clothing, health, childcare, personal finance, religion, culture, arts, home beautification, etc. It enables you to take better care of your family while helping you lead a more enriched life.

Responsible Person:

It moulds you into a responsible person who can handle day to day challenges. It teaches you your rights and duties as a consumer. In this fast-paced world, lifestyle and environmental factors are diluting personal relationships. Children are growing up in an ever-changing environment that can affect their

psychology. Home Science equips you with the ability to tackle these difficult life situations.

Improve Living Style:

The development of Home science education reflects social pressures that are evident around the turn of the century. It is a need-based, professionally oriented education to assist family and community towards improved living. In the context of growing pressures in the work environment and external world, the family assumes a significant role in shaping the citizens of tomorrow. The family is the main factor which protects the individuals from all external forces and provides the right type of atmosphere for children to grow into strong and independent personalities. Home science, then becomes the key subject in shaping the future course of our lives, as it equips the future citizens with relevant knowledge, competencies and prepares them to become efficient custodians of the nation's future. Thus, the importance and significance of Home science education can be discussed as follows:

Helps to manage Home life:

Great advances have been made in the areas of health, nutrition, textile, psychology, housing and managerial skills, which the home

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maker requires in her day-to-day life of managing and maintaining the household. Hence, it is essential that such knowledge and skills are made available to every home maker for creating a healthy, happy and enriched family life.

Use of available services and facilities:

Modern day society has changed a great deal in terms of availability of various services to each and every household. Therefore, a formal and systematic approach of understanding and utilizing these services has become necessary as a preparation for home making. Moreover, use of modern technologies, its maintenance and management also is of great importance, which Home science education tries to fulfill.

Economic necessities:

More and more women are working outside the home due to basically economic necessities. In this context, managing and balancing both household and professional life is essential. Home science education tries to train and educate one to make a perfect interface between these two spheres of women's life.

Managing day to day family affairs:

Human relations are undergoing sea-change during the last few decades. Family values, ethos are severely affected. People are becoming more and more individualistic in nature, contrary to our Indian collectivism. Thus children are growing up in a very complex psychological environment and thus leading to very many problems found among children in general and the problems of working women, elderly people in particular. Today family problems are in rise, leading to various types of domestic violence, abuse, crimes etc. Home Science education tries to educate and acquire the ability to manage this crisis at right time with proper emphasis.

Preparing for a healthier and purposeful life:

Happiness and Peace in the family are the goals of purposeful family life. Home science education tries to create an environment and outlook, which will enable people to live richer and more purposeful lives. It tries to provide a wholesome knowledge and attitudes towards family health (both physical and psychological), nutrition, child care, home decoration, use of clothing's, elderly care and management during

risk and eventualities. It tries further to enrich the lives of each and every members of the family through better understanding of the human relationships.

Family Life Education:

Home science education helps in preparing for home making, in the development of right values, appreciation, and understanding for better family life. It enables the pupils to understand the functions of parenthood, responsibilities of family membership and management of one's resources. It helps them to develop a sound philosophy of personal and family living. Understanding oneself (in terms of strengths and weaknesses) and others is the basic essence of family life. Moreover, it helps us in careful weighing of and balancing competing demands and making intelligent selections and decisions.

Conclusion:

Thus, the objective of Home science education is to foster the growth, development and wellbeing of individual's families and communities, utilising the findings and advances of science and technology. The main aim of home science is to foster the growth, development and well-being of individuals, families and communities in utilizing the findings and advances of science and technology.

References:

- Antia F.P. (1989) Clinical Dietetics and Nutrition, Oxford University Press, Mumbai.
- Corinee (1989) "Nutrition and Diet Therapy Principle and Practice" 2nd Edition, West Publishing Company, St. Paul.
- Jay MJ (1986) Modern Food Microbiology, 3rd edition, Van Nostrand Reinhold, New York.
- Banwart JG (1987) Basic Food Microbiology, 1st edition, CBS publishers and Distributors.
- Kothari C. R. (2014) Research Methodology – methods and techniques, 3rd edition, New age International Publishers, New Delhi.
- Norman N. Potter and Joseph H. Hotchkiss (2014) Food Science: Fifth Edition (Food Science Text Series).



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ખેલાડીના શરીરમાં થતી રાસાયણિક પ્રક્રિયા દ્વારા મળતી શક્તિ અને સ્ફૂર્તિ નો અભ્યાસ

વિષય ખરેખર તો ગણિતનો નહિ, પણ શરીરના રસાયણશાસ્ત્રનો છે. ઓલિમ્પિકના સરેરાશ ખેલાડી માટે શક્તિના બે મુખ્ય સ્ત્રોત અનુક્રમે કાર્બોહાઈડ્રેટ અને ચરબી છે. આ તેમનાં પ્રચલિત નામો છે. પારિભાષિક નામો તો અનુક્રમે ગ્લાઈકોજેન અને ટ્રાઈગ્લિસિરાઈડ છે. ઓલિમ્પિકનો કોઈ પણ ખેલાડી નવો વિક્રમ નોંધાવે ત્યારે એટલું નક્કી માનવું પડે કે તેના શરીરમાં ગ્લાઈકોજેનનો અને ટ્રાઈગ્લિસિરાઈડનો ભંડાર છલોછલ ભર્યો હોવો જોઈએ. વળી તે ભંડાર પણ સ્ટોરેજ ટેન્કને બદલે સ્નાયુરૂપી એન્જિનમાં હોવો જોઈએ, કેમ કે નવા સમયમાં એન્જિનનું જ બળતણ દહન પામી શકે છે. ટેન્કના પુરવઠાને એન્જિન સુધી પહોંચવામાં પૂરતો સમય મળતો નથી. ગ્લાઈકોજેનની વાત કરો તો સામાન્ય વ્યક્તિના સ્નાયુમાં તે ઘટકનું પ્રમાણ કુલ ૩૫૦ ગ્રામ જેટલું હોય છે. આ રસાયણના રેણુનો આકાર નેકલેસ જેવો છે, જેના દરેક મણકાને ગ્લુકોઝ કહે છે. ઊર્જાનો સંચય કુદરતે ગ્લુકોઝમાં કર્યો છે, એટલે ગ્લુકોઝના દરેક મણકાને છૂટા પાડવા માટે ખેલાડીના શરીરમાં ગ્લાઈકોજેનનો દરેક નેકલેસ વારાફરતી તૂટવો રહ્યો છે. નેકલેસ અકબંધ હોય ત્યાં સુધી ગ્લુકોઝરૂપી શક્તિ મુક્ત થતી નથી.

નેકલેસને તોડવાનું કામ શરીરનાં કોષોનું છે. દરેક કોષ ગ્લાઈકોજેનનું ગ્લુકોઝમાં સ્વરૂપાંતર કરી છેવટે ગ્લુકોઝ વડે એડેનોસાઈન ટ્રાઈફોસ્ફેટ (ટૂંકમાં, ATP) નામનું રસાયણ બનાવે છે. આ રસાયણ શરીરના કોષોને (અને કોષોના બનેલા સ્નાયુઓને) શક્તિ આપતું મુખ્ય બળતણ છે. ઊર્જાનો સંગ્રહ કરવાનો અને તેને રીલીસ કરવાનો બેવડો ગુણધર્મ તે ધરાવે છે. ATP રસાયણ ફોસ્ફેટના ત્રણ રેણુઓનું બનેલું છે, જેના બીજા અને ત્રીજા રેણુ વચ્ચે ભરપૂર ઊર્જા સ્ટોર થયેલી હોય છે. (ફોસ્ફેટનો દરેક રેણુ ફોસ્ફરસનો ૧ અણુ + ઓક્સિજનના ૪ અણુ વડે બનેલો હોય છે.) શરીરના સ્નાયુઓને હલનચલન માટે એનર્જીની જરૂરિયાત જણાય ત્યારે ફોસ્ફેટના બીજા અને ત્રીજા રેણુ વચ્ચેનું ગઠબંધન આપમેળે તૂટે છે અને રાસાયણિક ઊર્જા રીલીસ થાય છે. સ્નાયુઓ થકી તે ઊર્જાનું ત્યારબાદ ગતિ ઊર્જામાં રૂપાંતર થાય, એટલે શરીરના જે તે અંગોની મૂવમેન્ટ શક્ય બને.

આ પ્રક્રિયા છે તો સ્વયંભૂ, છતાં તાલીમબાજો પોતાનું તબીબી જ્ઞાન વાપરીને તેમાં જરૂરી ફેરફારો આણે છે. ચોક્કસ જાતના ખોરાક તથા ચોક્કસ જાતની કસરત વડે સ્નાયુનું માળખું એ રીતે ગોઠવે છે કે જેને કારણે તેમાં વધુ ગ્લાઈકોજેનનો સંચય થવા પામે. એથલેટિક્સના ઘણા રમતવીરો હવે પોતાના શરીરમાં ૩૫૦ ગ્રામને બદલે ૪૦૦ ગ્રામ જેટલું ગ્લાઈકોજેન ધરાવતા થયા છે, એટલે તેમના માટે ‘ફટીગ’નો તબક્કો આપોઆપ પાછળ ઠેલાય છે. મતલબ કે ગ્લાઈકોજેનનો પુરવઠો તેમને નોર્મલ કરતાં સહેજ લાંબો સમય મળ્યા કરે છે. આમ છતાં બધા રમતવીરો માટે સમયનું મહત્વ સરખું નથી, કારણ કે ૧૦૦ અથવા ૨૦૦ મીટરની દોડ જેવા મુકાબલામાં હરીફને ગણતરીની ચંદ સેકન્ડો જ મળે છે. આ દોડ પૂરી થયા પછી શરીરના સ્નાયુમાં ગ્લાઈકોજેનનો પચાસ કે પોણોસો ગ્રામ જેટલો પુરવઠો જેમનો તેમ બચવા પામ્યો હોય તો તેનો મતલબ એ થાય કે ખેલાડીએ તેના ‘હોર્સપાવર’ને સંપૂર્ણ રીતે કામે ન લગાડ્યો. અવાંચીન દ્રોણાચાર્યો એટલે જ આવા ખેલાડીઓના શરીરને જુદી રીતે કસે છે. જુદા પ્રકારનો પ્રોગ્રામ તેમના માટે બનાવે છે, જેથી શરીરમાં શક્તિનું મંદ ઝરણું વહેવાને બદલે પ્રચંડ ધોધ છૂટે જુદી રીતે કહો તો ગ્લાઈકોજેનના નેકલેસને સપાટબંધ તોડવા માટે ખેલાડીના શરીરનું ખાસ રીતે ટ્યુનિંગ કરાય છે. આ ઝડપી વિસર્જનના ફળસ્વરૂપે ખેલાડીને બધી જ શક્તિ અલપઝલપમાં મળી રહે છે અને શક્તિ ખેલાડીના સ્નાયુમાં ગજબનાક સ્ફૂર્તિનો સંચાર કરે છે.

ગ્લાઈકોજેન-ટુ-ATP સુધીની રાસાયણિક પ્રક્રિયા કુલ બાર તબક્કામાં થતી હોય છે, પરંતુ અહીં તે દરેક તબક્કાનું વર્ણન તાણા-વાણા છૂટા પાડીને કર્યું નથી. નાહકનો ગૂંચવાડો પેદા ન થાય એ માટે ટૂંકી સમજૂતી આપી છે. સ્નાયુકોષના cytoplasm/કોષરસમાં ગ્લુકોઝનો રેણુ (C6H12O6) દાખલ થાય કે તરત એ રેણુનું વિભાજન થવા લાગે છે. હાઈડ્રોજનના બે પોઝિટીવ આયનો સૌ પહેલાં છૂટા પડે છે અને બાકી રહેલા કાર્બન, હાઈડ્રોજન અને ઓક્સિજન બે સરખા જૂથમાં વહેંચાય છે. આ નવા રચાયેલા રેણુ પાયરુવિક એસિડ (CH3COCOOH) તરીકે ઓળખાય છે. ઊર્જાનો મબલખ ભંડાર તેમાં ઓતપ્રોત હોવા છતાં કોષરસમાં ઓક્સિજનની ગેરહાજરી વચ્ચે થતી કેમિકલ પડોસેસ દરમ્યાન તેમાંથી મામૂલી ઊર્જા છૂટી પડે છે. મતલબ કે એડેનોસાઈન ટ્રાઈફોસ્ફેટ/ATP ના ફક્ત બે રેણુઓ રચાય છે. આ રેણુઓના ફોસ્ફેટ પોતાનું ગઠબંધન તોડતા જાય તેમ ઊર્જા રીલીસ થવા કરે છે અને દોડવીર તે ઊર્જાને તત્કાળ ઉપયોગમાં લઈ શકે છે. ડાકોરના ગોટાનો ઘાણ ઊતરતો જાય અને ગરમાગરમ ગોટા ખવાતા જાય એ રીતે ATP ના બબ્બે રેણુઓનો ‘ઘાણ’ તૈયાર થતો જાય તેમ ખેલાડી તેને લગભગ ‘ઈન્સ્ટન્ટ’ ધોરણે વાપરી નાખે છે. દરમ્યાન ગ્લુકોઝના નવા રેણુ કોષરસમાં દાખલ થાય, એટલે અગાઉ થયેલી ક્રિયાનું પુનરાવર્તન આ જાતનો સિલસિલો લગાતાર ચાલતો રહે, એટલે જોશપૂર્વક દોડતા ખેલાડીના હૃદયને, ફેફસાંને, સ્નાયુઓને તથા મગજને એનર્જીનો ડોઝ મળતો રહે છે. ‘ફટીગ’નો યાને કે થકાવટનો અનુભવ થતો નથી.

*પ્રોફેસર-ગ્લોરીયસ કોલેજ ઓફ કમ્પ્યુટર સાયન્સ, રાજકોટ. ગુજરાત

અલબત્ત, ક્યાં સુધી ? માત્ર ૯૦ સેકન્ડ લગી એ પછી તેનું શરીર ભારે થકાવટ અનુભવે છે. કારણ કે એ ગ્લુકોઝરૂપી બળતણના ઈનપુટ સામે મળતી ATP રૂપી ઊર્જાનું આઉટપુટ સાવ કંગાળ છે. ઓક્સિજનના અભાવે કોષરસમાં પાયરુવિક એસિડનું પૂરેપૂરું દહન થતું નથી એટલું જ નહિ, પણ રાસાયણિક પ્રક્રિયા દરમ્યાન તે રસાયણનું લેક્ટિક એસિડમાં (C₂H₄(OH)COO⁻) રૂપાંતર થઈ ચૂક્યું હોય છે. પાયરુવિક એસિડનું તે બદલાયેલું સ્વરૂપ છે. ઊર્જાના ‘ઉત્પાદન’માં તેનો કશો સક્રિય રોલ નથી. આમ, એક તરફ ગ્લુકોઝના રેણુઓ સપાટાબંધ ‘બવાતા’ જાય છે અને બાયોપ્રોડક્ટ તરીકે લેક્ટિક એસિડ સતત બનતું જાય છે. કોષરસમાં તે રસાયણનો એકધારો ભરાવો થયા કરે—અને છેવટે તે ભરાવો જ શરીરને ‘ફટીગ’નો અનુભવ જલદી કરાવે છે.

દોઢેક મિનિટની ચીલવેગી દોટના અંતે ખેલાડીમાં સહેજ પણ જોમ રહેતું નથી. અલબત્ત, ૧૦૦, ૨૦૦ કે ૪૦૦ મીટરની દોડસ્પર્ધા હોય ત્યારે ખેલાડીને ઈન્સ્ટન્ટ એનર્જી મળે એ વધુ મહત્વનું છે—અને તે એનર્જી તેને રેસમાં વિજેતા બનાવવામાં ચાવીરૂપ પાઠ ભજવે છે.

ગ્લાઈકોજેનના કુદરતી દહનનું આવું નિયંત્રણ સામાન્ય વ્યક્તિ કદી સ્વેચ્છાએ કરી ન શકે, છતાં મહિનાઓ લાંબી તાલીમને અંતે શરીરનું ટ્યુનિંગ બદલવું મુશ્કેલ નથી. અમુક ઢાંચામાં શરીર એક વાર ઢળી જાય, એટલે પછી ઊર્જાના દહનની પ્રક્રિયા મનચાહી રીતે તેની પાસે કરાવી શકાય છે. ગ્લાઈકોજેન એકાએક મોટા ભડકામાં દહન પામવાને બદલે ફાનસની રૂએ એકધારું બળતું રહે છે. આ પ્રક્રિયાના તબક્કા ત્રણ ડગ્ગન જેટલા છે, એટલે સરળતા ખાતર મુખ્ય તબક્કાની જ ચર્ચા કરી છે. કોષરસમાં દાખલ થતો ગ્લુકોઝનો રેણુ પાયરુવિક એસિડમાં ફેરવાય ત્યારે ATPના બે રેણુઓ ત્વરિત બને છે. એ પછી તે રસાયણ કોષના mitochondria/કણાભસૂત્ર કહેવાતા આંતરિક હિસ્સામાં પ્રવેશે છે, જ્યાં ઓક્સિજનની હાજરીમાં કાર્બનના કુલ ત્રણ રેણુ પૈકી એક રેણુ સૌ પહેલાં છૂટો પડે છે. ઓક્સિજનના રેણુઓ તેની સાથે ભળે છે અને તેમના ગઠબંધન થકી રચાતો કાર્બન ડાયોક્સાઈડ બાયપ્રોડક્ટ તરીકે મક્ત થાય છે. ઉચ્છ્વાસ દ્વારા તેનો નિકાલ થઈ જાય છે. એ જ રીતે હાઈડ્રોજનનું ગઠબંધન ઓક્સિજન સાથે થતાં બાયપ્રોડક્ટ તરીકે જે પાણી છૂટું પડે તે પરીના વાટે બહાર નીકળી આવે છે. ટૂંકમાં, બેમાંથી એકેય બાયપ્રોડક્ટનો શરીરના કોષોમાં ભરાવો થતો નથી. પાયરુવિક એસિડનો નવો સપ્લાય કણાભસૂત્રમાં ઉમેરાતો જાય અને બીજી તરફ ઓક્સિજનનો પુરવઠો પણ અવિરત મળતો રહે, એટલે કિબ્બલ સાયકલ તરીકે ઓળખાતી ઘટમાળ વણઅટકી ચાલું રહે છે.

આ ધીમી ઘટમાળમાં પાયરુવિક એસિડના પ્રત્યેક વિઘટન દરમ્યાન ATP ના ૩૬ રેણુઓ રચાય છે. ATP નો કુલ જુમલો એ રીતે ૨ + ૩૬ = ૩૮ નો થયો કહેવાય ગ્લુકોઝરૂપી ઈનપુટ સામે ATP રૂપી ઊર્જાનું સંતોષકારક આઉટપુટ ATP ના રેણુઓ તૈયાર થતા રહે એમ તેમના ફોસ્ફેટનો એકેક મણકો જરૂરિયાત મુજબ વારાફરતી ‘બરતો’ જાય છે અને ઊર્જા રીલીસ કરતો રહે છે આ પ્રક્રિયા ધીમી છે, પણ કલાકો સુધી એકધારી કાર્યરત રહે છે. પરિણામે મેરેથોન દોડવીરને ‘ફટીગ’નો અનુભવ ત્રણ—ચાર કલાક સુધી થતો નથી. ચાલીસ કિલોમીટરનું અંતર તે કાપી શકે છે.

શરીરનાં કાર્બોહાઈડ્રેટને (દા.ત. ખાંડને) ગ્લાઈકોજેન તરીકે ઓળખ્યા પછી ચરબીનો યાને ટ્રાઈગ્લિસિરાઈડનો પણ અછડતો પરિચય કરવા જેવો છે, કેમ કે ઓલિમ્પિકના રમતવીરો માટે શક્તિનો એ બીજો ફુવારો છે. નામ ભલે અટપટું હોય, છતાં એટલું યાદ રાખો કે ટ્રાઈગ્લિસિરાઈડ વાસ્તવમાં ચરબી સિવાય કશું નથી. શરીરમાં તેનું પ્રમાણ ગ્લાઈકોજેન કરતાં અનેક ગણું વધારે છે. સિત્તેર કિલોગ્રામનો ખેલાડી ૮ કિલોગ્રામ જેટલું ટ્રાઈગ્લિસિરાઈડ ધરાવતો હોય છે, છતાં એ રસાયણના ચરબીયકત રેણુ જ્યાં સુધી અકબંધ પડયા હોય ત્યાં સુધી તેમનો કશો ઉપયોગ નથી. ઊર્જાને મુક્ત કરવા માટે દરેક રેણુ તૂટવો જોઈએ. આ કામ બહુ ધીમી ગતિએ થાય છે. પરિણામે જેવેલિન થ્રો, ડિસ્કસ થ્રો તથા શોટ પુટ જેવા ટૂંકા ખેલમાં ભાગ લેતા પહેલાં ખેલાડીઓ બે કલાક સુધી હળવો શરીરશ્રમ કરીને ટ્રાઈગ્લિસિરાઈડના શક્ય એટલા રેણુને તોડે છે અને તેમનો ‘અર્ક’ લોહી દ્વારા સ્નાયુમાં પહોંચાડે છે.

સંદર્ભ સૂચિ :-

- જોન રેપનર, એનાટોમી એન્ડ ફિઝિયોલોજી, ન્યુયોર્ક, હારપર એન્ડ રો પબ્લિકેશન્સ, ૧૯૭૭.
- વી.ડી. ચોરસિયા, હેડબુક ઓફ જનરલ એનાટોમી, ન્યુ દિલ્લી, સી.એ.એસ. પબ્લિકેશન્સ, ૧૯૮૧.
- હોઈઝર, વાર્નર ડબ્લ્યુ.કે., લાઈફ ટાઈમ ફિઝિકલ ફિટનેશ એન્ડ વેલનેશ, કોલોરાડો, મોરટોન પબ્લિકેશન, ૧૯૮૮
- હરદયાલસિંહ, સાયન્સ ઓફ સ્પોર્ટ્સ ટ્રેનિંગ, ન્યુ દિલ્લી, ડી.વી.એસ. પબ્લિકેશન્સ, ૧૯૮૧.



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Basic Concepts and Features of Good and Service Tax In India

The Goods and Services Tax (GST) is a value added tax to be implemented in India. GST is the only indirect tax that directly affects all sectors and sections of our economy. The goods and services tax (GST) is aimed at creating a single, unified market that will benefit both corporate and the economy. The changed indirect tax system GST-Goods and service tax is planned to execute in India. Several countries implemented this tax system. Goods and service tax is a new story of VAT which gives a widespread setoff for input tax credit and subsuming many indirect taxes from state and national level. The GST Implementation is declared by government and a clear picture is available after announcement GST will be implemented parallel by the central and state governments as CGST and SGST respectively. The objective will be to maintain a commonality between the basic structure and design of the CGST, SGST and SGST between states. In this article, I have started with the introduction, in general of GST and have tried to highlight the objectives the GST is trying to achieve. Thereafter, I have discussed the possible challenges and threats; and then, opportunities that GST brings before us to strengthen our free market economy.

Key Words: GST, CGST, SGST, VAT, INPUT CREDIT

History of Taxation

What is Tax?

The word tax is derived from the Latin word 'taxare' meaning to estimate. A tax is not a voluntary payment or donation, but an enforced contribution, exacted pursuant to legislative authority" and is any contribution imposed by government whether under the name of toll, tribute, impost, duty, custom, excise, subsidy, aid, supply, or other name." The first known system of taxation was in Ancient Egypt around 3000 BC - 2800 BC in the first dynasty of the Old Kingdom. Records from that time show that the pharaoh would conduct a biennial tour of the kingdom, collecting tax revenues from the people. Other records are granary receipts on limestone flakes and papyrus. Early taxation is also described in the Bible. In Genesis, it states "But when the crop comes in, gives a fifth of it to Pharaoh. The other four-fifths you may keep as seed for the fields and as food for yourselves and your households and your children." Joseph was telling the people of Egypt how to divide their crop, providing a portion to the Pharaoh. A share of the crop was the tax. In India, the tradition of taxation has been in force from ancient times. It finds its references in many ancient books like 'Manu Smriti' and

'Arthashastra'. The Islamic rulers imposed jizya. It was later on abolished by Akbar. However, Aurangzeb, the last prominent Mughal Emperor, levied jizya on his mostly Hindu subjects in 1679. Reasons for this are cited to be financial stringency and personal inclination on the part of the emperor, and a petition by the ulema. The period of British rule in India witnessed some remarkable change in the whole taxation system of India. Although, it was highly in favour of the British government and its exchequer but it incorporated modern and scientific method of taxation tools and systems. In 1922, the country witnessed a paradigm shift in the overall Indian taxation system. Setting up of administrative system and taxation system was first done by the Britishers. Broadly, there are two types of Taxes viz. Direct and Indirect taxes. Taxes in India are levied by the Central Government and the State Governments. Some minor taxes are also levied by the local authorities such as Municipality or Local Council. The authority to levy tax is derived from the Constitution of India which allocates the power to levy various taxes between Centre and State.

OBJECTIVES OF GST:

One of the main objectives of GST would be to eliminate the cascading impact of taxes on

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production and distribution cost of goods and services. The exclusion of cascading effects i.e. tax on tax will significantly improve the competitiveness of original goods and services which leads to beneficial impact to the GDP growth. It is felt that the GST would serve a superior reason to achieve the objective of streamlining indirect tax regime in India which can remove cascading effects in supply chain till the level of final consumers only when all such above mentioned indirect taxes are completely included in GST. It is understood that alcohol, tobacco and petroleum products will not be enclosed by GST as alcohol and tobacco are considered as Sin Goods, and governments do not like to allow free trade on these property.

CHALLENGES:

With respect to Tax Threshold: The threshold limit for turnover above which GST would be levied will be one area which would have to be strictly looked at. First of all, the threshold limit should not be so low to bother small scale traders and service providers. It also increases the allocation of government resources for such a petty amount of revenue which may be much more costly than the amount of revenue collected. The first impact of setting higher tax threshold would naturally lead to less revenue to the government as the margin of tax base shrinks; second it may have on such small and not so developed states which have set low threshold limit under current VAT regime.

With respect to nature of taxes: The taxes that are generally included in GST would be excise duty, countervailing duty, cess, service tax, and state level VATs among others. Interestingly, there are numerous other states and union taxes that would be still out of GST.

With respect to number of enactments of statutes: There will be two types of GST laws, one at a centre level called 'Central GST (CGST)' and the other one at the state level - 'State GST (SGST)'. As there seems to have different tax rates for goods and services at the Central Level and at the State Level, and further division based on necessary and other property based on the need, location, geography and resources of each state.

With respect to Rates of taxation: It is true that a tax rate should be devised in accordance with the state's necessity of funds. Whenever states feel that they need to raise greater revenues to fund the

increased expenditure, then, ideally, they should have power to decide how to increase the revenue.

With respect to tax management and Infrastructure: It depends on the states and the union how they are going to make GST a simple one. Success of any tax reform policy or managerial measures depends on the inherent simplifications of the system, which leads to the high conformity with the administrative measures and policies.

OPPORTUNITIES:

An end to cascading effects: This will be the major contribution of GST for the business and commerce. At present, there are different state level and centre level indirect tax levies that are compulsory one after another on the supply chain till the time of its utilization.

Growth of Revenue in States and Union: It is expected that the introduction of GST will increase the tax base but lowers down the tax rates and also removes the multiple point. This will lead to higher amount of revenue to both the states and the union.

Reduces transaction costs and unnecessary wastages: If government works in an efficient mode, it may be also possible that a single registration and single compliance will suffice for both SGST and CGST provided government produces effective IT infrastructure and integration of such infrastructure of states level with the union.

Eliminates the multiplicity of taxation: One of the great advantages that a taxpayer can expect from GST is elimination of multiplicity of taxation. The reduction in the number of taxation applicable in a chain of transaction will help to clean up the current mess that is brought by existing indirect tax laws.

One Point Single Tax: Another feature that GST must hold is it should be 'one point single taxation'. This also gives a lot of comforts and confidence to business community that they would focus on business rather than worrying about other taxation that may crop at later stage. This will help the business community to decide their supply chain, pricing modalities and in the long run helps the consumers being goods competitive as price will no longer be the function of tax components but function of sheer business intelligence and innovation.

Reduces average tax burdens: Under GST mechanism, the cost of tax that consumers have

to bear will be certain, and GST would reduce the average tax burdens on the consumers.

Reduces the corruption: It is one of the major problems that India is overwhelmed with. We cannot expect anything substantial unless there exists a political will to root it out. This will be a step towards corruption free Indian Revenue Service.

Salient features of the GST model:

Salient features of the proposed model are as follows:

1. The GST shall have two components: one levied by the Centre (referred to as Central GST), and the other levied by the States (referred to as State GST). Rates for Central GST and State GST would be approved appropriately, reflecting revenue considerations and acceptability.
2. The Central GST and the State GST would be applicable to all transactions of goods and services made for a consideration except the exempted goods and services.
3. The Central GST and State GST are to be paid to the accounts of the Centre and the States individually.
4. Since the Central GST and State GST are to be treated individually, taxes paid against the Central GST shall be allowed to be taken as input tax credit (ITC) for the Central GST and could be utilized only against the payment of Central GST.
5. Cross utilization of ITC between the Central GST and the State GST would not be permitted except in the case of inter-State supply of goods and services.
6. Ideally, the problem related to credit accumulation on account of refund of GST should be avoided by both the Centre and the States except in the cases such as exports, purchase of capital goods, input tax at higher rate than output tax etc.
7. To the extent feasible, uniform procedure for collection of both Central GST and State GST would be prescribed\ in the respective legislation for Central GST and State GST.
8. The States are also of the view that Composition/Compounding Scheme for the purpose of GST should have an upper ceiling on gross annual turnover and a floor tax rate with respect to gross annual turnover.
9. The taxpayer would need to submit periodical returns, in common format as far as possible, to both the Central GST authority and to the concerned State GST authorities.

10. Each taxpayer would be allotted a PAN-linked taxpayer identification number with a total of 14/15 digits. This would bring the GST PAN-linked system in line with the prevailing PAN-based system for Income tax, facilitating data exchange and taxpayer compliance.

Benefits of GST

1. GST provide comprehensive and wider coverage of input credit setoff, you can use service tax credit for the payment of tax on sale of goods etc.
2. CST will be removed and need not pay. At present there is no input tax credit available for CST.
3. Many indirect taxes in state and central level included by GST, You need to pay a single GST instead of all.
4. Uniformity of tax rates across the states
5. Ensure better compliance due to aggregate tax rate reduces.
6. By reducing the tax burden the competitiveness of Indian products in international market is expected to increase and there by development of the nation.
7. Prices of goods are expected to reduce in the long run as the benefits of less tax burden would be passed on to the consumer.

Applicability of CGST and SGST:

The applicability of taxes is as usual there would be a prescribed limit of annual turnover, also some goods and services are exempted under GST. Threshold for annual turnover for goods and services would be 10 lakh for SGST and threshold of CGST for goods may be 1.5 crore and service would have a separate threshold that too will be appropriately high. It is assumed that aggregate total of CGST & SGST would be 20%.

Impact of Goods and Service Tax:

1. Food Industry: The application of GST to food items will have a significant impact on those who are living under subsistence level. But at the same time, a complete exemption for food items would drastically shrink the tax base. Food includes grains and cereals, meat, fish and poultry, milk and dairy products, fruits and vegetables, candy and confectionary, snacks, prepared meals for home consumption, restaurant meals and beverages. Even if the food is within the scope of GST, such sales would largely remain exempt due to small business registration threshold. Given the exemption of food from CENVAT and 4% VAT on

food item, the GST under a single rate would lead to a doubling of tax burden on food.

2. **Housing and Construction Industry:** In India, construction and Housing sector need to be included in the GST tax base because construction sector is a significant contributor to the national economy.

3. **FMCG Sector:** Despite of the economic slowdown, India's Fast Moving Consumer Goods (FMCG) has grown consistently during the past three – four years reaching to \$25 billion at retail sales in 2008. Implementation of proposed GST and opening of Foreign Direct Investment (F.D.I.) are expected to fuel the growth and raise industry's size to \$95 Billion by 2018.

4. **Rail Sector:** There have been suggestions for including the rail sector under the GST umbrella to bring about significant tax gains and widen the tax net so as to keep overall GST rate low. This will have the added benefit of ensuring that all inter – state transportation of goods can be tracked through the proposed Information technology (IT) network.

5. **Financial Services:** In most of the countries GST is not charged on the financial services. Example, In New Zealand most of the services covered except financial services as GST. Under the service tax, India has followed the approach of bringing virtually all financial services within the ambit of tax where consideration for them is in the form of an explicit fee. GST also include financial services on the above grounds only.

6. **Information Technology enabled services:** To be in sync with the best International practices, domestic supply of software should also attract G.S.T. on the basis of mode of transaction. Hence if the software is transferred through electronic form, it should be considered as Intellectual Property and regarded as a service. And if the software is transmitted on media or any other tangible property, then it should be treated as goods and subject to G.S.T. Implementation of GST will also help in uniform, simplified and single point Taxation and thereby reduced prices.

7. **Impact on Small Enterprises** There will be three categories of Small Enterprises in the GST regime.

- Those below threshold need not register for the GST
- Those between the threshold and composition turnovers will have the option to pay a turnover based tax or opt to join the GST regime.

- Those above threshold limit will need to be within framework of GST Possible downward changes in the threshold in some States consequent to the introduction of GST may result in obligation being created for some dealers. In this case considerable assistance is desired. In respect of Central GST, the position is slightly more complex. Small scale units manufacturing specified goods are allowed exemptions of excise up to Rs. 1.5 Crores. These units may be required to register for payment of GST, may see this as an additional cost.

CONCLUSION:

GST is the most logical steps towards the comprehensive indirect tax reform in our country since independence. GST is leviable on all supply of goods and provision of services as well combination thereof. All sectors of economy whether the industry, business including Govt. departments and service sector shall have to bear impact of GST. All sections of economy viz., big, medium, small scale units, intermediaries, importers, exporters, traders, professionals and consumers shall be directly affected by GST... One of the biggest taxation reforms in India – the Goods and Service Tax (GST) — is all set to integrate State economies and boost overall growth. GST will create a single, unified Indian market to make the economy stronger. Experts say that GST is likely to improve tax collections and Boost India's economic development by breaking tax barriers between States and integrating India through a uniform tax rate. Under GST, the taxation burden will be divided equitably between manufacturing and services, through a lower tax rate by increasing the tax base and minimizing exemptions.

References:

1. <http://goodsandservicetax.com>
2. <http://en.wikipedia.org>
3. <http://www.taxmanagementindia.com>
4. <http://www.gstindia.com>
5. <http://www.thehindubusinessline.com>
6. <http://finmin.nic.in>
7. <http://economictimes.indiatimes.com>
8. <http://www.moneycontrol.com>
9. <http://www.businessstandard.com>
10. <http://www.ficci.com>



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A Study of Effects on Flexibility and Lungs Capacity by Yogasana Training

Abstract: The aim of the research is to study the A Study of Effects on Flexibility and Lungs Capacity by Yogasana Training. Total 30 students from Gajera International School, Uttran were selected at the subject. These students were divided into Two groups i.e. 15 students in Yogasana training group and 15 students in control group. Flexibility and Lungs were tested by Sit and Reach Box and Spirometer, respectively twice i.e. before and after the particular Four weeks training. Analysis of Covariance (ANCOVA) was applied at 0.05 level of significance to test the hypothesis. It was observed from the result of the study that the experimental group improved significantly in Flexibility and Lungs Capacity due to the particular of Yogasana Training.

Introduction:

The term 'yoga' has been derived from Sanskrit root word 'Yuj'. Yuj means to join, to apply, to use, to unite or to co-ordinate. The coordination of our desire with the God's wish is the real unity. Shri Mahadevbhai Desai writes in the preface of "Gandhiji's Thoughts on Gita" that "Yoga means to fasten the entire force of mind, body and soul in God. Yoga means to mortify on mind, intelligence, feelings and desires. It is the primary need for yoga. Yoga means stability of soul, by which anyone can see all sides of life."

Objectives of Research:

1. To study effects on Flexibility by Yogasana Training Exercises.
2. To study effects on Lungs Capacity by Yogasana Training Exercises.

Criterion Measures:

Hypothesis for selected measuring standards given below:

NO	Test	Measuring standards
1	Flexibility	Sit and Reach Box
2	Lungs Capacity	Spirometer

Method and Material:

Total 30 students from Gajera International School, Uttran were selected at the subject. These students were divided into Two groups i.e. 15 students in Yogasana training

group and 15 students in control group. Flexibility and Lungs Capacity, were tested by Sit and Reach Box and Spirometer, Respectively twice i.e. before and after the particular six weeks training.

Statistical Analysis:

Analysis of Covariance (ANCOVA) was applied at 0.05 level of significance.

Result of the Study:

The result of the study is presented in following tables.

Table 1
Means and Analysis of Covariance of Flexibility Test for Yogasana and Control Group

Test	GROUP		ANALYSIS OF COVARIANCE TABLE			
	Yogasana	Control	Sum of Square	Degree of Freedom	Mean Sum of Square	'F'
Pretest Mean	5.066	4.733	0.833	1	0.833	0.403
			57.866	28	2.066	
Posttest Mean	7.066	5	32.033	1	32.033	16.944*
			52.933	28	1.890	
Adjusted Mean	6.954	5.112	25.096	1	25.096	25.342*
			26.738	27	0.990	

* Sig. Level at 0.05 (1,28) = 4.196 & (1,27) = 4.210
 It is observed from table – 1 that the means of Yogasana Training Group; Pre-test is 5.066, post-

* Teacher - Podar international school - Gandhinagar.

**H.O.D - Phy.Edu-H.N.G.U - Patan

test mean is 7.066 and adjusted mean is 6.954. Control Group; Pre-test is 4.733, post-test mean is 5 and adjusted mean is 5.112. The calculated 'F' value of pre-test means of all the groups is not significant, calculated 'F' value of post-test means of all the groups is insignificant and calculated 'F' value of adjusted means of all the groups is significant.

Table 2

Means and Analysis of Covariance of Lungs

Capacity Test for Yogasana and Control Group						
Test	Yogasana	Control	Square	Degree of Freedom	Mean Sum of Square	'F'
Pretest Mean	42.933	42.066	5.633	1	5.633	0.166
			945.866	28	33.780	
Posttest Mean	49.6	45.6	120	1	120	3.376
			995.2	28	35.542	
Adjusted Mean	49.202	45.997	76.612	1	76.612	10.317*
			200.490	27	7.425	

* Sig. Level at 0.05 (1,28) = 4.196 & (1,27) = 4.210

It is observed from table – 2 that the means of Yogasana Training Group; Pre-test is 42.933, post-test mean is 49.6 and adjusted mean is 49.202. Control Group; Pre-test is 42.066, post-test mean is 45.6 and adjusted mean is 45.997. The calculated 'F' value of pre-test means of all the groups is not significant, calculated 'F' value of post-test means of all the groups is not significant and calculated 'F' value of adjusted means of all the groups is significant.

Conclusion:

It was observed from the result of the study that the experimental group improved significantly in Flexibility and Lungs Capacity due to the particular of Yogasana Training Exercise.

Bibliography:

- ⇒ Aayangar, B.K.S., Yogdeepika, First Addition: Mumbai: Light on Yoga Research Trust Part-1, 1984.
- ⇒ Varma Prakash J., A Test Book on Sports Statistics, Gwalior: Vinus Publication, 2002.



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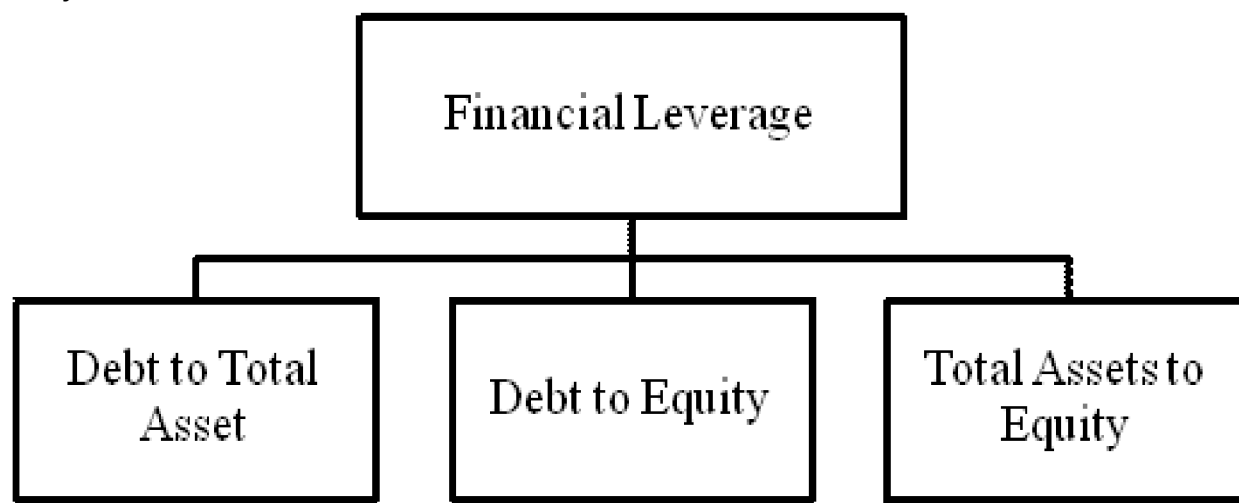
IMPACT OF FINANCIAL LEVERAGE ON VALUE OF SHARE OF SELECTED COMPANIES IN INDIA

The impact of financial leverage on the value of stocks was explored in this research. The main goal is to estimate the value of the shares of the top fifty firms listed on the National Stock Exchange utilizing financial leverage. Secondary sources are used to gather the relevant information. From 2011 through 2020, a sample of the top fifty NSE-listed firms was studied. The hypothesis was tested using financial ratios and statistical methods such as Pearson's correlation, descriptive analysis of variance, and regression analysis. The study's findings revealed that Debt to Total Assets and Debt to Equity had a significant impact on share price. The link between Total Assets to Equity and Share Price has been shown to be insignificant. **Keywords:** Debt to Equity, Debt to Total Assets, Total Assets to Equity, Share price, correlation, regression analysis.

A company's financial leverage is the ratio of its equity to its financial debt. It is a key component of a company's financial policy. The level to which fixed-income instruments and preferred shares are utilized in a company's capital structure is referred to as financial leverage. When the assets acquired with debt capital generate more than the cost of the debt used to fund them, the use of financial leverage has value. It denotes the link between a company's earnings before interest and taxes, also known as operating profit, and earnings accessible to equity shareholders. Long-term debt bonds and debentures are included in these types of sources, where long-term loans or debentures include a set rate of interest, which is a larger risk for the corporation or share company. In general, financial leverage is produced by fixed financial costs, such as interest.

CONCEPTUAL FRAMEWORK OF VARIABLES

Financial Leverage: Financial leverage is a tool for determining a firm's risk. Financial leverage is calculated by dividing a company's operating profit by its earnings before taxes. It meant that the company's earnings would be subject to a fixed interest rate. (Maheshwari, 2010). For computation of financial leverage three solvency ratios are considered in the study.



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Debt to Total Asset: This ratio calculates the fraction of the firm's total assets provided by its debtors. The firm is considered solvent if its overall assets exceed its external obligations. (Agrawal M. R., Ratio Analysis, 2015). The formula for the study is shown below:

$$\text{Debt To Total Assets} = \frac{\text{Debt long term loans}}{\text{total Asset}}$$

Debt to Equity: This figure depicts the percentage of debt and equity used to fund a company's assets. It reflects the business's ability to pay long-term obligations, get more loans, and whether the firm follows a trading-on-equity policy. (Agrawal M. R., Financial Management and Control, 2015) The formula for the study is shown below:

$$\text{Debt to Equity} = \frac{\text{Debt}}{\text{Shareholder fund}}$$

Total Assets to Equity: The Total Assets to Equity ratio displays how much of a company's assets are supported by shareholders. When a firm has a lengthy history of continuous cash flows that are projected to continue, a greater ratio is reasonable. (Assets to equity ratio, n.d.) The following formula is shown below:

$$\text{Total Assets to Equity} = \frac{\text{Total Assets}}{\text{Shareholder fund}}$$

Share price

The share price is a key indicator that benefits the company, its shareholders, and investors. It shows the share market's opening, closing, high, and low prices on a daily basis. The closing price of the stock at the conclusion of the fiscal year was employed in certain studies. On the other hand, other study suggests that averaging high and low market prices is the optimum approach for establishing a share's market price, which has been investigated. Some studies looked at the average of a stock's yearly opening and closing prices. The average closing price of each financial year is the most important and desirable aspect. As a consequence, this value has been chosen as the final pricing by the researcher.

REVIEW OF LITERATURE

Ali, 2020 focused on the impact of the degree of financial leverage, degree of operating leverage and degree of combined

leverage on profitability. 20 listed companies are taken as the sample size for the time period of 2008-2015. The result of this study reveals that the degree of financial leverage and combined leverage have not significant impact on the financial performance measured by return on assets but the degree of operating leverage has a negative significant impact on return on asset. Abdullah & Karim, 2019 investigated that operating and financial leverage have a solid impact on RNOA and ROCEs measure stability and quality. This study also shows that leverage has a significant impact on stockholder return and the valuation of equity. Aharon & Yagil, 2019 investigated the relationship between the variance of stock return and financial leverage were considered as corporate tax and personal tax. The finding of the study is the variance of stock return on financial leverage has a positive impact on the selected firms. Ogola & Ali, 2018 examined an effect of financial leverage on financial performance of supermarket chains in Kenya. The study is based on primary data and primary survey with the sample of population is 700 out of which 255 samples size are selected. It concluded from the study that highly leverage firm affected the financial performance of supermarket in Kenya and it is also concluded that high interest rate is also affected the financial performance of supermarket in Kenya. Dutta, Sen, & Mukherjee, 2018 had observed the impact of financial leverage on firm value. For this study, the sample was selected 31 NSE-listed companies from different sectors. The study concluded a significant negative relationship between financial leverage and the value of a firm.

RESEARCH METHODOLOGY

Objective of the Study

This study aims to determine the effect of Financial Leverage on the share price of selected companies listed on the National Stock Exchange.

Hypothesis of the study

H0: There is no significant impact of financial leverage on share market price.

Sources of Data

The study is based on secondary data using the annual reports collected for ten years from the websites of selected

companies during the period of 2010-11 to 2019-20.

Sampling Technique

The sampling method of this study is a non-probability purposive convenience sampling technique.

Model of the study

$$\text{Share price} = \beta_0 + \beta_1 (\text{DE}) + \beta_2 (\text{DTA}) + \beta_3 (\text{TAE}) + \varepsilon$$

The researcher has transformed response variable i.e., share price in natural logarithm form to fulfill the assumption of normality. So, natural logarithm of share price is considered as dependent variable for multiple linear regression analysis.

Study Variable Measurement

Table 1 Study Variables Measurement

Variables		Parameter	Symbols	Method of computation
Independent variables	Financial Leverage	Debt to total asset	D/TA	Debt/Total asset
		Debt to Equity	D/E	Debt / Equity
		Total asset to Equity	TA/E	Total asset /Equity
Dependent variables	Share price	Closing price (April to march)	SP	Share price (April to march) /12

DATA ANALYSIS

Descriptive Statistics of Share Price and Financial Leverage

Table 2 Descriptive Statistics of share price and financial leverage

	Mean	Std. Deviation
Logarithm of Share Price	6.2208	0.93224
Debt to Total Assets Ratio	.1583825	0.14702135
Debt to Equity Ratio	.6147374	0.81989735
Total Assets to Equity Ratio	3.1901119	3.19489245

Table no.2 shows the descriptive statistics of the regression analysis of selected NSE listed companies in India from the years 2010-11 to 2019-20. The share price has a mean value of 6.2208 means 622.8% with 0.93 values of standard deviation. While the mean values of Debt to Total Assets, Debt to Equity ratio, and Total Assets to Equity ratio are 0.158, 0.614 and 3.19 respectively. This suggested that the rise in the share price was more than offset by the increase in total assets to equity ratio. The TAE has the highest standard deviation.

Correlation between Financial Leverage and Share Price

Table 3 Correlation between financial leverage and share price

		Logarithm of Share Price	Debt to Total Assets Ratio	Debt to Equity Ratio	Total Assets to Equity
Pearson Correlation	Logarithm of Share Price	1.000	-.306	-.128	-.077
	Debt to Total Assets Ratio	-.306	1.000	.761	.195
	Debt to Equity Ratio	-.128	.761	1.000	.675
	Total Assets to Equity Ratio	-.077	.195	.675	1.000
Sig. (1-tailed)	Logarithm of Share Price	1	.017	.194	.301
	Debt to Total Assets Ratio	.017	1	.000	.092
	Debt to Equity Ratio	.194	.000	1	.000
	Total Assets to Equity Ratio	.301	.092	.000	1

It can be deduced from the above correlation matrix, that among the variables pertaining to financial leverage, only the Debt to Total Assets Ratio has a near – linear, inverse relation with the logarithm of the Share Price. So, we can say that there is an inverse relationship, although non-linear, between the actual share price and the Debt to Total Assets Ratio. None of the other variables show a similar tendency.

Regression Analysis

Table 4 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.439 ^a	.193	.138	.86548

- Predictors: (Constant), Total Assets to Equity Ratio, Debt to Total Assets Ratio, Debt to Equity Ratio
- Dependent Variable: Logarithm of Share Price

Table 4 shows the model summary of linear regressions for selected NSE listed companies in India throughout the study period. The R, R-square, and adjusted R-square values are 0.439, 0.193, and 0.138, respectively. According to R Square value, predictor variables have 19.3% of the dependent variable's prediction power.

Table 5 ANOVA

Model	Sum of Squares	df	Mean Squares	F	Sig.
Regression	7.888	3	2.629	3.510	.023 ^b
Residual	32.959	44	.749		
Total	40.846	47			

- Dependent Variable: Logarithm of Share Price
- Predictors: (Constant), Total Assets to Equity Ratio, Debt to Total Assets Ratio, Debt to Equity Ratio

Table no. 5 displays the ANOVA result of linear regression analysis of selected listed companies. The F- value and p – value is 3.510 and 0.023 respectively. Hence, p – value is less than significant value, it means there is significant impact of determinants of financial leverage and share price among companies. The model used is significant

Table 6 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	6.945	.273		25.446	.000
Debt to Total Assets Ratio	-5.501	1.772	-.868	-3.104	.003
Debt to Equity Ratio	.982	.422	.864	2.326	.025
Total Assets to Equity Ratio	-.143	.072	-.491	-1.998	.052

Table no. 6 presents the co-efficient statistics of linear regression of selected companies during the study period. The co-efficient value of Debt to Total Assets and Total Assets to Equity expression have negative values of (-5.5501) and (-0.143) respectively. Although the Debt to Equity ratio has a positive value of 0.982, The p-values of all selected variables are less than the significant level. As a result, we conclude that Debt to Total Assets and Total Assets to Equity ratios have a negative relationship with share price, whereas Debt to Equity ratio has a positive relationship. The Debt to Total Assets ratio, Debt to Equity ratio, Total Assets to Equity ratio, and share price are used to create the following model.

$$\text{Share price} = \beta_0 + \beta_1 (\text{DTA}) + \beta_2 (\text{DE}) + \beta_3 (\text{TAE}) + \epsilon_1$$

$$\text{Log of Share price} = 6.945 - 5.501 + 0.982 - 0.143 + 0$$

When DTA, DE and TAE held to 0.000 then share price remains at constant 6.945. The above equation shows that 1% increase in DE and will increase by the share price by 6.945%. but DTA and TAE will be decreased by the share price by 5.501%.and 0.143%.

FINDINGS OF THE STUDY

- ⇒ It has been found that p- value of Debt to Total Assets and Debt to Equity ratio is

less than significance level at 0.05. It can be said that financial leverage has partially affected to share price.

- ⇒ According to the correlation matrix it can be revealed that there is an inverse relationship although non-linear between share price and the Debt to Total Asset ratio.
- ⇒ It has been found from coefficient model that 1% increase in DE and will increased by the share price by 6.945% but DTA and TAE will be decreased by the share price by 5.501% and 0.143%.

SUGGESTIONS

- ⇒ Management of the companies should pay attention to the Debt to Total Assets as the results show a negative significant effect on share price suggesting if we maintain companies' debt funds it will improve the value of companies in long run.
- ⇒ Similarly, companies should also observe their total assets against equity as it is also found to have an insignificant negative effect
- ⇒ Overall, it is suggested that companies should maintain their financial leverage as it is negatively affecting share price which can lead to the decreased value of a firm in long run.

CONCLUSION

This study focused basically on the relationship pattern of financial leverage and share price that in turn affect the wealth maximization goal of a firm. However, an inverse relationship exists between financial leverage and share price. The research proves that the financial leverage not higher impact on the share price, it can be understood by the values taken by the analysis. Furthermore, in the long term the relationship between Debt Equity ratio and Debt to Total Assets was statistically significant ($P < 0.05$). Regression analysis between financial leverage (Debt to Total Assets and Total Assets to Equity) and share price revealed negative relationship. By evaluating these results researcher could understand that listed manufacturing companies in India have not focus their attention on debt financing for the purpose of the company growth. Hence the management should contribute their attention

how they can use debt financing for the company's growth.

FURTHER SCOPE FOR FURTHER RESEARCH

- ⇒ Although only ten years of data were used in this study, broad research can be conducted to make use of data from a longer period.
- ⇒ The study examined the top fifty NSE-listed companies in India, so researchers can opt for sector-wise or case studies.
- ⇒ Further investigation can be carried out by incorporating additional variables to determine the impact on the stock price.
- ⇒ The study employs three ratios to represent the relevant data, but further research can be carried out with the help of other ratios as well.

References

- ⇒ Aharon, y. D., & Yagil, Y. (2019, march). "The Impact of Financial Leverage on the Variance of stock Return". *International journals of finance studies*, 07(14), 1 - 18.
- ⇒ Ali, M. (2020). IMPACT OF LEVERAGE ON FINANCIAL PERFORMANCE (EVIDENCE FROM PAKISTAN. *Journal of Critical Reviews*, 07(13), 447-456.
- ⇒ Dutta, S. R., Sen, D., & Mukherjee, T. (2018, july). Impact of financial leverage on the value of firm: evidence from some NSE listed Companies. *The BESC Journals of commerce and management*, 04(01), 42-52.
- ⇒ Maheshwari, S. (2010). *Management Accounting and Financial Control* (2006 ed.). New Delhi: Sultan Chand and Sons. Retrieved 2021
- ⇒ Ogola, B. L., & Ali, D. I. (2018, August). Effect of financial leverage on financial performance of supermarket chains in Kenya: A case study of Tuskey's Super market in cast Region''. *International Journals of Academic and Research*, 01(01), 107-121.
- ⇒ Agrawal , M. R. (2015). Finacial Management and control. In M. R. Agrawal, *Finacial Management and control* (p. 29.37). Garima Publications. Retrieved 2021
- ⇒ Agrawal, M. R. (2015). Financial Management and Control. Jairpu: Garima Publication.
- ⇒ *Assets to equity ratio*. (n.d.). Retrieved from Accountingtool: <https://www.accountingtools.com/articles/the-asset-to-equity-ratio.html>
- ⇒ Maheshwari, S. (2010). *Management Accounting and Finincial Control* (2006 ed.). New Delhi: Sultan Chand and Sons. Retrieved 2021
- ⇒ Pandey, I. M. (2015). Financial Management. In I. M. Pandey, *Financial Management* (pp. 319-320). New Delhi: Vikas publishing house pvt. ltd.
- ⇒ Abdullah, B. M., & Karim, Z. (2019, January). Operating and financial leverage and their effects on equity valuation,. *international journal of business and management inventions*, 08(01), 01-08.



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A Study of Self – Regulation Ability of Std. XI Students of Gujarati and English Medium Schools

Students are facing extreme stress in the current situation. In the competitive age, students are constantly under stress to get admission in a good institution and to achieve good results and etc. Students of Std. 11th are being teenagers, many questions are also confusing in their minds regarding career. Considering this, students who have more self-regulation, the more likely they are to succeed in a career. Considering the above, the researcher chooses the above research problem. The main objective of the presented research paper was to know the self-regulation ability of the students. The survey method was used for research. 100 students from Daman area were selected in the sample for research. The researcher used a self constructed tool for data collection. The information obtained was analyzed by t-test. The main findings of this research showed that students studying in Gujarati and English medium have similar self-regulation ability. Boys who have Commerce stream of Gujarati medium School have more self-regulation ability. Result also shows that Arts stream students of English medium have more self-regulation ability.

Key words: Self – Regulation, students of std. 11th

Introduction:

Children develop physically and mentally as well as emotionally. We find that young children are more likely to express their emotions but as a person matures, he gains control over the intensity of his emotions. Children's social development is related to their mental development. As children's intelligence and reasoning power increases, so does their interaction with members of society. In addition, due to the increase in intelligence, logic and memory, the expressions of emotion also changes. Therefore, when child becomes mature then his emotional, social and mental development takes place in a certain direction.

In a real sense, emotions are more important as a root of our relationships, dealings and success. That's why we must develop the ability to recognize and express our feelings by recognizing them. In support of this, Stein and Book says that "the ability to recognize emotional self-awareness, to distinguish between them, to know why we are experiencing those feelings, and to know how they affect the people around them, is also very important for self-regulation." Knowing how emotions and relationships are affected by expressing emotions gives an idea of how to deal with each person in the society and gives direction to change it. The

founder of Arvind Ashram says, "Learn to know yourself first and then self regulate." Regulating emotions is essential for peace of mind in life. It can be called self-awareness. The environment of family, school and society also plays an important role in self-regulation. The researcher decided to do research on this subject as there was a constant question in the mind of the researcher as to how much he could regulate the expression of his emotions. Apart from this students of Std. 11th are teenagers, their impulses change moment by moment due to hormonal changes. The researcher also wanted to study the self-regulation abilities of children in this age group. In addition, a number of factors affecting self-regulation were considered by the researcher. So the researcher undertook the task keeping in view certain factors such as the medium of study of the student and the gender.

Statement of the Problem:

A Study of Self – Regulation Ability of Std. XI Students in Reference to Some Variables

Importance of the research:

The present research will show the ability of students to self-regulate. In this research, researcher wants to know whether the medium of study and gender of the students may be affects their self-regulation ability or not. On the basis of the

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research findings teachers and parents may be plan for the future.

Objectives of the Research:

Present research was conducted with the following objectives in mind:

1. To comparative study of self-regulation ability of Gujarati and English medium students of STD XI.
2. To comparative study of self-regulation ability of Gujarati and English medium students of STD XI in the context of Gender.
3. To comparative study of self-regulation ability of Gujarati and English medium students of STD XI in the context of stream.

Variables of the Research:

The variables covered in the present research are as follows:

Table - 1
Variables of the research

Sr. No.	Name of the variables	Types of the variables	Level of the Variables
1	Standard	Independent	-
2	Medium	Independent	Gujarati, English
3	Subject	Independent	Arts, commerce

Hypothesis:

The following null hypothesis was formulated in the presented research:

1. There will be no significant difference between the mean score of students on self regulation inventory of Gujarati and English medium schools students of std 11th.
2. There will be no significant difference between the mean score of Boys on self regulation inventory of Gujarati and English medium schools students of std 11th.
3. There will be no significant difference between the mean score of Girls on self regulation inventory of Gujarati and English medium schools students of std 11th.
4. There will be no significant difference between the mean score of commerce stream students on self regulation inventory of Gujarati and English medium schools students of std 11th.
5. There will be no significant difference between the mean score of Arts stream students on self regulation inventory of Gujarati and English medium schools students of std 11th.

Population and Sampling:

The Population for the present research was students of std. 11th of Dadra Nagar Haveli area. Daman's Gujarati and English medium schools were selected as samples. A total of

100 students were randomly selected from these schools.

Tools:

In this research, researcher studied all the reference material and the available research tool in context to self-regulation. After that the researcher developed self-regulation inventory for present study. In this inventory, there were 64 statements. Each statements has five responses: 1) Totally agree 2) agree, 3) Not decided\sure, 4) Disagree and 5) Totally Disagree. Out of these five responses, the students were allowed to tick only one response.

Data collection:

The Google form was created to collect the data for research. Apart from this, the students also filled up the forms in personal.

Data Analysis:

Based on the tool in the presented research, the scores obtained by the students on self-regulation Inventory were analyzed and interpreted by t-ratio.

Testing of Hypothesis:

1. There will be no significant difference between the mean score of students on self regulation inventory of Gujarati and English medium schools students of std. 11th.

Table -1

A Table shows mean, SD and t-value of self regulation score of Gujarati and English medium school students

Medium	N		SD	SED	t-value	significance
Gujarati	50	220.96	20.53	3.28	0.53	NS
English	50	223.28	23.21			

As mentioned in the table-1, mean of Gujarati and English medium school students are 220.96 and 223.28 respectively. The standard deviations are 20.53 and 23.21. The calculated t value was 0.53 and it is less than the table value. There being no significant difference between the mean scores of the Gujarati and English medium school students on self regulation inventory, the hypothesis no. 1 is not rejected.

Therefore, it is revealed that the students who studying in Gujarati and English medium school have the same self-regulation ability.

2. There will be no significant difference between the mean score of Boys on self regulation inventory of Gujarati and English medium schools students of std. 11th.

Table -2

A Table shows mean, SD and t-value of self regulation score of boys of Gujarati and English medium school

Boys	N	Mean	STD	SED	t-value	Level of significance
Gujarati	24	221.17	15.43	5.88	0.35	NS
English	24	223.54	28.81			

As mentioned in the table-2, mean of boys of Gujarati and English medium school are 221.17 and 223.54 respectively. The standard deviations are 15.43 and 28.81. The calculated t value was 0.35 and it is less than the table value. There being no significant difference between the mean scores of boys of Gujarati and English medium school on self regulation inventory, the hypothesis no. 2 is not rejected.

Therefore, it is revealed that the boys who studying in Gujarati and English medium school have the same self-regulation ability.

3 There will be no significant difference between the mean score of Girls on self regulation inventory of Gujarati and English medium schools students of std. 11th.

Table-3

A Table shows mean, SD and t-value of self regulation score of Girls of Gujarati and English medium school

Girls	N	Mean	STD	SED	t-value	Level of significance
Gujarati	26	220.77	24.63	5.88	0.36	NS
English	26	223.04	17.09			

As mentioned in the table-3, mean of girls of Gujarati and English medium school are 220.77 and 223.04 respectively. The standard deviations are 24.63 and 17.09. The calculated t value was 0.36 and it is less than the table value. There being no significant difference between the mean scores of girls of Gujarati and English medium school on self regulation inventory, the hypothesis no. 3 is not rejected.

Therefore, it is revealed that the girls who studying in Gujarati and English medium school have the same self-regulation ability.

4 There will be no significant difference between the mean score of commerce stream students on self regulation inventory of Gujarati and English medium schools students of std. 11th.

Table -4

A Table shows mean, SD and t-value of self regulation score of commerce stream students of Gujarati and English medium school

Commerce stream	N	Mean	STD	SED	t-value	Level of significance
Gujarati	25	229.84	17.23	3.43	2.13	0.05
English	25	219.44	17.13			

As mentioned in the table-4, mean of commerce stream of Gujarati and English medium school students are 229.84 and 219.44 respectively. The standard deviations are 17.23 and 17.13. The calculated t value was 2.13 and it is more than the table value. There is significant difference between the mean scores of commerce stream of Gujarati and English medium school students on self regulation inventory; the hypothesis no. 4 is rejected.

Therefore, it is revealed that the students who have commerce stream and studying in Gujarati medium school have more self-regulation ability.

5 There will be no significant difference between the mean score of Arts stream students on self regulation inventory of Gujarati and English medium schools students of std. 11th.

Table -5

A Table shows mean, SD and t-value of self regulation score of arts stream students of Gujarati and English medium school

Arts stream	N	Mean	STD	SED	t-value	Level of significance
Gujarati	25	212.08	19.98316	5.57	2.19	0.05
English	25	227.12	27.85277			

As mentioned in the table-4, mean of arts stream of Gujarati and English medium school students are 212.08 and 227.12 respectively. The standard deviations are 19.98 and 27.85. The calculated t value was 2.19 and it is more than the table value. There is significant difference between the mean scores of arts stream of Gujarati and English medium school students on self regulation inventory; the hypothesis no. 5 is rejected.

Therefore, it is revealed that the students who have arts stream and studying in Gujarati medium school have more self-regulation ability.

Findings:

- 1 Students studying in standard 11th in Gujarati and English medium schools have similar self-regulation ability.
- 2 The self-regulatory ability of boys studying in standard 11th in Gujarati and English medium schools is similar.
- 3 The self-regulatory ability of girls studying in standard 11th in Gujarati and English medium schools is similar.

- 4 The self-regulatory ability of commerce students studying in standard 11th in Gujarati medium is higher than that of students studying in English medium school.
- 5 The self-regulatory ability of arts students studying in standard 11th in English medium is higher than that of students studying in Gujarati medium school.

Education implications:

Students of Commerce subject studying in English medium and students of Arts subject studying in Gujarati medium have less self-regulation ability. Families and teachers should guide the students by studying the reasons for their lack of self-regulation. At the same time, co-curricular activities can be organized to enhance the students' self-regulation ability.

Conclusion:

Self-control must be practiced to keep pace with the rapidly changing age. Attempts were made to know the self-regulation ability of the students through the presented study.

References:

- ⇒ Mangal S.K & Mangal S. (2015) Emotional Intelligence: Managing emotions to win in life. Delhi: PHI Learning,.
- ⇒ Aurobindo Ashram Trust. (2001) Our many selves: practical yogic psychology. Selections from the works of Sri Aurobindo and the Mother. Pondicherry: Sri Aurobindo Ashram Publication Department,.
- ⇒ Stein, S. J., & Book, H. E. The EQ edge (2006) The Emotional intelligence and your success, Canada: Jossey-Bass (A Wiley Imprint), John Wiley, (2nd ed.).
- ⇒ शर्मा, सुरेन्द्रकुमार. (2010) बाल अभिवृद्धि एवं विकास. दिल्ली डिस्कवरी. पब्लिशिंग हाउस.
- ⇒ अनिलकुमार(2010) विकासात्मक मनोविज्ञान. दिल्ली डिस्कवरी. पब्लिशिंग हाउस.



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Physical Education

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Physical Activity and Weight Control

Importance of physical activity and weight control can be measured by the fact that all other kinds of facilities provided to players may prove to be futile if they are not provided with efficient physical activity and weight control while planning load and frequency management in physical activity an important place should be provided to the individual factors.

Introduction:

Physical activity helps you control your weight by using excess calories that would otherwise be stored as fat. Most foods you eat contain calories, and everything you do uses calories, including sleeping, breathing, and digesting food. Balancing the calories you eat with the calories you use through physical activity will help you reach and maintain a healthy weight.

Calories in Food > Calories Used = Weight Gain

Calories in Food < Calories Used = Weight Loss

Calories in Food = Calories Used = Weight Control

Becoming Physically Active:

Experts recommend at least 30 minutes of moderate-intensity physical activity on most, if not all, days of the week. To achieve and maintain a healthy weight, particularly after you have lost a large amount of weight, you may need to do 60 minutes or more of moderate-intensity physical activity each day.

Physical activity may include structured activities such as walking, running, basketball, or other sports. It may also include daily activities such as household

chores, yard work, or walking the dog. Pick a combination of structured and daily activities that fit your schedule.

If you have been inactive for a while, start slowly and work up to 30 minutes a day at a pace that is comfortable for you. If you are unable to be active for 30 minutes at one time, accumulate activity over the course of the day in 10- to 15-minute sessions.

Health Benefits of Physical Activity:

Regular physical activity helps control your weight and may help:

- > Reduce your risk of or manage chronic diseases such as type 2 diabetes, high blood pressure and cholesterol, heart disease, osteoporosis, arthritis, and some cancers;
- > Build strong muscles, bones, and joints;
- > Improve flexibility and balance;
- > Ward off depression; and
- > Improve mood and sense of well-being.

Aerobic Activity:

You can meet your goal of at least 30 minutes of moderate-intensity physical activity by participating in aerobic activities. Aerobic exercise includes any activity that makes you breathe harder than when you are resting and increases

your heart rate.

Experts recommend moderate-intensity exercise. At this pace, you may breathe harder and find it more difficult to talk, but you should still be able to carry on a conversation. If you are just beginning, slowly work up to moving at a moderate-intensity pace.

Get Started!

To add more physical activity to your daily life try:

- > Taking a brisk walk around the block with family, friends, or coworkers.
- > Raking the leaves.
- > Walking up the stairs instead of taking the elevator when it is safe to do so.
- > Mowing the lawn.
- > Taking an activity break at work or home. Get up and stretch or walk around.
- > Parking your car further away from entrances of stores, movie theatres, or your home and walk the extra distance when it is safe to do so.

Strength Training:

Strength training is another way for you to meet the recommended minimum of 30 minutes of moderate-intensity physical activity each day. Strength training will also help you burn extra calories and build strong muscles, bones, and joints.

Experts recommend strength training 2 to 3 days each week, with 1 full day of rest between workouts to allow your muscles to recover. If you are new to strength training, or physical activity in general, consider hiring a certified personal trainer who can plan an individualized program to help you work out safely and effectively. A personal

trainer who has a degree in exercise physiology or is certified through a national certification program such as the American College of Sports Medicine or National Strength and Conditioning Association may be able to help you reach your physical activity goals.

ADVERTISEMENT

Get Strong!

Build strong muscles and bones with strengthening exercise. Try:

- > Lifting weights
- > Using resistance bands
- > Using stability or medicine balls
- > Doing push-ups and abdominal crunches

Mind and Body Exercise:

In addition to aerobic activity and strength training, you may wish to include other forms of exercise in your physical activity program. Alternatives to traditional exercise provide variety and fun. They may also help reduce stress, increase muscular strength and flexibility, and increase energy levels. Examples of these exercises include yoga, Pilates, and tai chi.

Keep Moving!

Move at your own pace while you enjoy some of these activities:

- > Brisk walking
- > Jogging
- > Bicycling
- > Swimming
- > Aerobic exercise classes (step aerobics, kickboxing, high/low)
- > Dancing (square dancing, salsa, African dance, swing)
- > Playing sports (basketball, soccer)

Tips to a Safe and Successful Physical Activity Program:

Check with your health care provider. If you have a chronic health problem such as obesity, diabetes, heart disease, or high blood pressure, ask your health care provider about what type and amount of physical activity is right for you.

Start slowly. Incorporate more physical activity into your daily routine and gradually work up to the 30-minute goal to improve health and manage your weight.

Set goals: Set short-term and long-term goals and celebrate every success.

Track progress: Keep an activity log to track your progress. Note when you worked out, what activity you did, how long you did the activity, and how you felt during your workout.

Think variety: Choose a variety of physical activities to help you meet your goals, prevent boredom, and keep your mind and body challenged.

Be comfortable: Wear comfortable shoes and clothes, and ones that are appropriate to the activity you will be doing.

Listen to your body. Stop exercising and consult your health care provider if you experience chest discomfort or pain, dizziness, severe headache, or other unusual symptoms while you work out. If pain does not go away, get medical help right away. If you are feeling fatigued or sick, take time off from your routine to rest. You can ease back into your program when you start feeling better.

Eat nutritious foods: Choose a variety of nutritious foods every day. Remember that your health and weight depend on

both your eating plan and physical activity level.

Get support: Encourage your family and friends to support you and join you in your activity. Form walking groups with coworkers, play with your children outside, or take a dance class with friends. Regular physical activity will help you feel, move, and look better. Whether your goal is to achieve and maintain a healthy weight or improve your health, becoming physically active is a step in the right direction. Take advantage of the health benefits of physical activity and make it a part of your life.

References:

- 1) Reddy R.V.S. sports officiating and weight control , Sports Publication, New Delhi.
- 2) Dr. Majmudar R.M. , Methods in Physical Education, Sports Publication , New Delhi 2009.
- 3) Dr. Mishra S.C. , Physical Education introduction ,Sports Publication New Delhi , 2005.



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LAW

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IMPORTANCE OF INTERNATIONAL LAW

A set of principles and rules of conduct that sovereign states are bound to observe in their relations with each other. It includes the relations of international organizations with each other and their relations with States and individuals, and rules relating to persons and non-state entities having international relations. Today, it has added rules and principles of human rights related to multinational corporations, political parties, pressure groups, international terrorist groups, etc.

International law is primarily a system governing the rights and duties of states 'reciprocally'. Certain rules regarding his rights and duties are binding; While United Nations declarations or International Labor Union recommendations are guidelines. These rules are national or regional. Rules formulated through organizations such as the United Nations are universal, while rules from organizations such as the European Economic Community or the Organization for African Unity are regional.

The main purpose of international law is to create a just and, if not perfect, orderly system of international relations. It emphasizes international peace, reconciliation, arbitration and human rights.

Introduction

Social Perspective of International Law: The formulation of law depends on the social environment. The powerful states of the world shape international law in such a way as to maintain their dominance, existence and system over the world; But organizations of weak states include rules of reciprocity and joint control; E.g., the 1971 Montreal Convention on Civil Aviation and the 1982 United Nations Convention on the Law of the Sea.

Historical Perspective:

Since the beginning of human history,

the ancient civilizations of the world have formulated some rules of international law. The states of India, Egypt and China made laws based on religion, sovereignty, war and protection of ambassadors. In the Middle Ages, Greek city-states and Roman-dominated states developed regulations regarding the declaration of war, prisoners of war, and commerce. In the 15th and 16th centuries, jurists such as Baudin (French), Machiavelli, Baillie and Gentiles (Italian), and Hobbes (English) codified the customary rules of international law. However, the 17th century Dutch scholar Grotius is considered the 'Father of International Law' for his comprehensive book 'The Law of War and Peace'.

Modern international law has developed over the last four centuries. Emergence of new independent states, researches, industrial revolution, development of trade and transport and increase in ferocity of war etc. are its driving forces. The Paris Congress of 1856 attempted to codify the rules of naval warfare. The Hague Conventions of 1899 and 1907 established the Permanent Court of Arbitration. The International Labor Union was established in 1919 and the Permanent Court of International Justice was established in 1920, which was replaced by the

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International Court of Justice in 1946. The International Military Commissions conducted by the Allies, the Nuremberg and Tokyo War Crimes Trials of 1946–47 respectively and the United Nations and other conventions and treaties from 1946 to date on military aggression, arms control, nuclear threats, maritime law, space law, diplomatic and commercial relations, treaty rules, etc. are formulated. These rules are examined from various points of view, social, historical and moral. From a moral perspective, human civilization and international law are mutually linked to subjective moral standards. One of the foundations of international law is the 'principles of law recognized by developed countries'. Culture is an ever-evolving process of inter-species relations. The relationship between culture and international law is currently under a strain due to weapons of mass destruction, expulsion of foreigners, genocide, international terrorism, etc.

Real sources of international law:

These are mainly customs, treaties, general principles of law accepted by developed states, judgments of international and national courts and arbitral tribunals, writings of jurists and resolutions of international organizations and conventions. Customs are evidenced from the practice of States, from recognition by States of them as law, and from their references in treaties. Treaties are global, regional, multi-state or bi-state. The main basis of the principles of law recognized by the reformed states is the law of nature. The Nuremberg and Tokyo trials held belligerents punishable for crimes against humanity and illegal war crimes, invalidating the defense of obedience to superior orders.

International law and state law:

Regarding the relationship between the two, advocates of 'dualism' such as the Italian realist Anzilotti believe that the two laws are distinct. The subjects of state law are individuals and are rooted in the will of the state, while the subjects of international law

are states and are rooted in the universal will of states and in agreements entered into by states voluntarily exercising their sovereignty. According to a 'monist' like Calson, all law is one unit, there is no distinction between the two, and states are made up of individuals, both laws are binding on them. The US Some states treat international law as part of state law, while others recognize international law by transposing it into state laws.

Basis of International Law:

Austin, Hobbes, Writers like Pufendorf and Bentham do not consider international law as true law. According to him law is the command of the sovereign power and its obedience comes from the fear of its punishment. International law has no sovereign authority or punitive backing to enforce it, so it is simply a code of moral conduct. In answer to this it is said that (1) in many nations systems of law not enacted by sovereign legislatures are valid; eg, Hindu and Muslim customary laws; (2) Most rules of international law are derived from treaties concluded by sovereign states and conventions or from resolutions of international organizations. These are called international libraries; (3) questions of international law are questions of law; (4) an international court judges on the basis of international law; (5) Underpinnings of international law are the opinions of states, coercive economic and military measures taken under the auspices of the United Nations and finally war of self-defence.

There are two principles that underpin international law, namely 'naturalism' and 'realism'. Proponents of the law of nature, such as Vattel, believe that all law is dictated by the conscience of mankind and is understood by everyone. The United Nations Declaration of Human Rights (1948), the International Law Commission's Declaration on the Rights and Duties of States (1949) and the judgments of the International Military Commissions (1946–47) are based on naturalism. According to realists such as Hegel and

Anzilotti, international law depends on agreements voluntarily entered into by states. However, these principles do not explain customary rules and international law applicable to emerging states.

Subjects of International Law: The main subject of international law is states. A sovereign state must have a permanent population, a fixed territory and the ability to form government and relations with other states. States have fundamental rights of liberty, equality, territorial sovereignty and self-defence and fundamental duties of ceasing hostilities, conscientious observance of treaties and non-interference with other states. States also have a duty to protect foreigners. The recognition of a foreign state or its government or territorial rights depends on the will of states. The General Assembly of the United Nations or the Union of Territorial States may also give recognition. A state of war or rebellion is also recognized. States acquire international status only after legal recognition and can sue the recognizing country in a national or international court, as well as the rights to appoint, dismiss, etc. ambassadors. New states are initially given de facto recognition, and legal recognition is given by examining their stability and international and mutual relations.

Indeed, much of international law has nothing to do with war or peace. Many treaties and agreements regarding interstate relations, cultural exchange, rights of foreigners, asylum, extradition, international crime, environment, human rights, nuclear energy regulation, etc. are based on international law. It is a method and provides an ideal through principles of coexistence such as the United Nations Bill of Rights and Panchsheel. Even in the matter of world peace, except for minor wars, world wars can be concluded on the basis of international law from 1945 till today.

Conclusion

International law is primarily a collection of binding rules relating to

international relations. In addition, it includes rules on the mutual relations of international organizations, the relations between them and states and the relations between them and individuals, and the rights and duties of individuals and non-state entities in so far as they relate to the international community. . Important sources of international law are ancient customs, treaties, judgments of international courts and tribunals, resolutions of international organizations and standard texts of jurists. Existence of some treaties and rules for the security of ambassadors and conduct of war in India, Egypt etc. in ancient times.

Was In the Middle Ages, the city-states of Greece and the Roman Empire developed this law. It developed rapidly in the twentieth century as transportation increased.

References

1. www.internationalallaw.com
2. www.legalserviceindia.com
3. www.vikaspedia.com
4. www.vikipidia.com
5. www.infointernationalallaw.com



* પટેલ બાબુભાઈ અમરાભાઈ

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રાધનપુર રાજ્યના સ્થાપત્યો

‘રાધનપુર’ શબ્દનું મુળ અને તેના અર્થ વિષે ઘણા અભિપ્રાયો છે. પ્રથમ અભિપ્રાય પ્રમાણે આ શહેર ચાવડા વંશના સમયનું વનરાજ ચાવડાના સરદારો પૈકી ‘રદનદેવ’ ચાવડાએ આ શહેરની સ્થાપના કરી હોવાથી તેના નામ પરથી પ્રારંભમાં તે ‘રદનપુર’ નામે જાણીતું હતું.

ગોતરકા

“મહાબલી પીરશાહ” ના મકબરાને કારણે મુસલિમોનું આ વિખ્યાત ધર્મસ્થળ હતું. આ વિષે માન્યતા છે. કે તે ઈમારતના બજ પર સુવર્ણનું પાત્ર છે. કે જેમાં મેળા સમયે દૂધ ભરવામાં આવે છે. આ જ ગામમાં હિંદુઓનું સ્થાનક “ગોદડનાથની જગ્યા” છે.

પંચાસર

ગુજરાતની પ્રાચીન રાજધાનીનું અવશેષ સમું આ ગામ હાલ મહત્વ વગરનું છે. તેમ છતાં જૈનોનું ધર્મ સ્થળ છે.

ભીલોટ

“વીહરાપીર” ન જગ્યા છે. “બિહારીસૈયદ” નું સૈયદ બુદ્ધશાહ બરા મૃત્યુ થવાથી તે પીર તરીકે કે પૂજાય છે. આ સ્થળે મુસલિમો બહારથી આવે છે.

મુંજપુર

માળવાના રાજવી મુંજે પોતાના ભત્રીજા ભોજને દેશનિકાલ કર્યો. અને તેની હત્યા કરવા મોકલેલ હત્યારાઓએ આ સ્થળ પર ભોજને જીવતદાન આપ્યું હતું અને ભોજનો શ્લોક (જે પૃથ્વીમાં ધાતાની થઈ નથી તે હવે તમારી કે મારી થશે.) વાંચી પસ્તાયેલા મુંજે ભોજને પાછો બોલાવ્યો અને પ્રાયશ્ચિત માટે લોટેશ્વર આવ્યો, ત્યારે તેણે આ ગામ સ્થાપ્યું હોવાનો મત છે. અને ગામમાં એક મંદિરનું નિર્માણ પણ કર્યું હતું કે જે “મુજેશ્વર” ના નામે વિખ્યાત છે.

લોટી

હિંદુઓનું આ પવિત્ર સ્થળ છે, કારણ કે અહીં લોટેશ્વર મહાદેવનું મંદિર, ગેગવા કુંડની વિખ્યાત જગ્યા છે. કે જ્યા ફાગણ વદ ૩૦ તથા શ્રાવણ વદ ૩૦ ના રોજ મેળો યોજાય છે. “કોમિયતે અહેમદી”માં જણાવ્યા મુજબ આગમનો કુંડ “લોટી” ના નામે છે. આ સ્થળ મહાભારત કાળથી વિદ્યમાન છે. માર્કડેય ઋષિનો આશ્રમ પણ અહીં હતો. રામાયણ કાલમ રામે વનવાસ વેળા વિષયોને તેઓના પક્ષની રક્ષા કરવા જે રાક્ષસોનો વધ કર્યો હતો, તેના અવયવો આ સ્થળ પર પડવાથી પાછળથી આ સ્થળ “લોટેશ્વર” ના નામે વિખ્યાત થયું હતું. પછીના વર્ષોમાં આનો વારંવાર જિજ્ઞાસુધાર થતો રહેતો. આ સ્થળ સિવાય અહીં હનુમાનજીનું મંદિર, અન્નપૂર્ણા માતાનું મંદિર વગેરે ધર્મસ્થાનકો હતા.

વરાણા

“ખોડિયાર માતા” ના સ્થાનકના કારણે હિંદુઓનું આ

પવિત્ર સ્થળ હતું આ સ્થાનક “ચારણીયાણી” સતી બનવાથી આ ગામમાં લાવવામાં આવેલ હતું. દર વર્ષે મહાસુદ- ૮ ના રોજ મેળો યોજાય છે. કે જેમાં અનેક લોકો ભાગ લે છે.

વાછડા રણ બેટડો

પ્રાચીન સમયમાં આ સ્થળ આસપાસ પાણી રહેવાથી ટાપુ જેવો હતો. અલબત્ત હોદાઓની વ્યવસ્થા હતી. પાડશી કિનારાની જમીન ઉપસી આવવાથી બારેમાસ પાણી રહેતું નથી. પાટણમાં કાબરી નામક ગામનો મુખી “વચ્છરાજ સોલંકી” કચ્છ લગ્ન કરવા ગયેલો, ત્યારે ચોરીમાં લગ્ન સમયે “ખોસા લોકો” ગાયોને ચોરી ગયાની તેને જાણ થતાં તુર્ત જ ખોસાઓનો પીછો પકડી ગાયો છોડાવી, પણ તે મૃત્યુ પામ્યો અને સ્થાનિક લોકોએ તેનો આ સ્થળે સંસ્કર કર્યો અને ત્યારથી તે કારણે આ સ્થળનું નામ “વાછડા બેટ” તરીકે વિખ્યાત થયું રણમાં હોઈને મીઠા પાણીને કારણે “બપિકલ્પ” સમાન છે.

શ્રીનાથ

લાખણેશ્વર મંદિરમાં કારણે આ સ્થળ વિખ્યાત છે. હાલ “સીમાડ” તરીકે પ્રચલિત છે. નામનો અપભ્રંશ થવાથી આમ બન્યું છે.

શંખેશ્વર

મુંજપુરની જેમ આ ગામ પણ મહાભારતકાળથી છે. જરાસંઘ કૃષ્ણના યુદ્ધ સમયે કૃષ્ણે ઉપવાસથી પ્રાર્થનાથને પ્રગટ કર્યા અને જરાસંઘ સામે શંખ કુંડી જુસ્સાથી યુદ્ધ કર્યું. શંખના પ્રતાપે તેનું નામ શંખપુર હતું. પાછળથી દહેરાસરને કારણે તે “શંખેશ્વર” તરીકે વિખ્યાત થયું. જૈનોનું આ વિખ્યાત સ્થળ છે. દર વર્ષે કાર્તિક પૂર્ણિમાના રોજ લોકો દૂર દૂરથી યાત્રા કરવા આવે છે. અને ચૈત્રી પૂર્ણિમાએ મેળો હોય છે.

દેવ (હિમતપુર)

“હિમજા માતા” ના સ્થાપકના સ્થાપકના કારણે હિંદુઓનું આ વિખ્યાત સ્થળ છે. આ સ્થળે પ્રથમ “જાલોર” નામની નગરી હતી. કે જેનો કાલક્રમે વિઘ્વંશ થવાથી તે સ્થળે “દેવ” નામનું આજનું ગામ છે.

ધાર્મિક વહેમો તથા પાળીયાઓ

“બાબી કાલીન” રાધનપુરમાં દુષ્કાળ, પ્લેગ તથા ધરતીકંપ જેવી આપત્તિઓના કારણે લોકો તેનું વિશ્લેષણ અંધશ્રદ્ધાથી કરતા. રાજ્યમાં પીરના સ્થાનકો પર મુસલિમોની વસ્તી

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ઝાડની ડાળીઓ પર રંગબેરંગી કપડા બાંધતી અને શેતાનોથી બાળકોનું રક્ષણ કરે છે. બ્રાહ્મણો લોકો મંદિરોને દાન નથી આપતા, તેવી વાત ફેલાવીને અને મોલવીઓ લોકો અશ્વોને અન્ન નથી આપતા, તેથી કુદરતનો કોપ ઉતરશે તેવી વાત ફેલાવીને પોતપોતાનો સ્વાર્થ સાધતા. પૂર્વજોના આત્માની શાંતિ માટે ધાર્મિક વિધિવિધાન અનુસાર પાળીઓની પ્રતિષ્ઠા થતી હતી. આવા સ્મારકો રાજ્યમાં “કોલીવાડા” ગામની સીમા પર છે. આ સ્મારકોનું લખાણ સ્પષ્ટ છે. મૃતકોની સ્મૃતિમાં તેઓની યાદમાં નિર્માણ કરવામાં આવેલ છે. તેઓ આ બાબત પાછળનો મૂળ ઉદ્દેશ હતો. પાળીયાઓ મુખ્યત્વે રજપૂતો વીરગતિ પામે ત્યારે બાંધવામાં આવતા હતા.

સંદર્ભસૂચિ

- (૧) આચાર્ય નવિનચંદ્ર આ., “ગુજરાતનો સોલંકીકાલીન ઇતિહાસ”, યુનિવર્સિટી ગ્રંથ નિર્માણ બોર્ડ, અમદાવાદ, ૧૯૭૩
- (૨) ભાટકર પી.બી. અને રાવલ ભરત ડી. (સંપાદકો) :, “પાટણ અસમિતા: ગઈ કાલ, આજ અને આવતી કાલ”, માહિતી ખાતુ, ગુજરાત રાજ્ય, ૨૦૦૩
- (૩) બ્રહ્મક્ષત્રિય મુકુંદભાઈ પી, “યુગે યુગે પાટણની પ્રભુતા”, ગોળશેરી, ગોદડના પાડો, પાટણ, ૨૦૦૮
- (૪) માસ્ટર ફ.સો, ‘પાલનપુર ડીરેક્ટરી’, ખંડ-૧
- (૫) નવાબ તાલે મહંમદખાન પાલનપુર રાજ્યનો ઇતિહાસ, ભાગ-૧ આભાર - નિહારીકા રવિયા



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Effect of Circuit Training and Plyometric Training on Abdominal Muscle Strength and Endurance in Students

The purpose of this research study was to study the effect of circuit training and Plyometric Training on the strength and endurance of the abdominal muscles of students. This research study was limited to schools in Nadiad. In this research study, student brothers were selected as subjects through random method. A total of 90 student brothers were selected in this research study. Student brothers in the age group of 14 to 17 years were selected in this research study. In this research study the subjects were divided into three groups namely 30 students group-A circuit training group and 30 students group-B Plyometric Training group and 30 students group-C controlled group. In this research study 06 weeks of training was provided. Measurements included measurement of abdominal muscle strength and endurance using the band-nee sit ups test. One way analysis of covariance (One Way Analysis of Covariance) test was applied to find out the effects on circuit training group and Plyometric Training group. Differences between means were tested at 0.05 level by Least Significant Difference Post Hoc test. The conclusion of which was seen as follows. A 06-week cycle training and Plyometric Training program of the method significantly improved abdominal muscle strength and endurance in selected subjects.

Circuit training is another important form of sports training that combines strength training with endurance training. Exercises performed in circuit training are usually groups of exercises with no rest or little rest between one group and another group of exercises. Usually there are six to ten stations in a group or circuit. The intensity of the exercises varies depending on the fitness level of the trainees.

Circuit training is gaining popularity because it simultaneously improves strength and endurance. Trainees can experience dramatic improvements in their fitness levels after circuit training.

If you haven't heard of circuit training, it's a combination of six or more exercises performed with short rest periods between them that are performed for either a set number of repetitions or a set amount of time. A circuit is when all the selected exercises have been completed, but a session can include multiple circuits.

The Europeans knew only training of jumping when some limited exercises were existed in Europe. Before 1970, unimaginative influence of Eastern European athletes (players) was found on sports all over the world. At that time, Fedvilt had tossed the first coin in 1975. Only American coaches were predominating in the field of sports and games. The term 'Plyometric' was derived from Latin language, which means 'more tough and burly'. It was believed that aim of plyometric was to provide exercise to athletes (players) and to provide disciplined training. Power is produced by joining force with speed while doing movement. In plyometric training, the important thing was that the player jumped, lifted or threw.

Fred Wilt, a long distance runner in U. S. Olympic had entrusted with tossing up. He added that it was worse time but it was great as he emerged by watching the arming sports of jumps of Russia. He could not understand why Russians take jumping exercises as

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warming exercises, when American takes tighter stretching exercises. There was a reason why they succeeded in so many activities. During plyometric time before starting in 1980, more popularity had achieved and now it is well established.

Rather than using the term plyometrics to indicate exercises utilizing the shock method, it may be preferable to use the term explosive or true plyometrics, which can be considered the same as the plyometrics originally created by Verkhoshansky. The shock method that he created was the result of studying the actions that occur in running and jumping. He found that the landings and takeoffs in these two skills involved high ground reaction forces that were executed in an extremely quick and explosive manner. The effectiveness of a person's adaptability in many different activities depends on the flexibility of his whole body or fixed joints. Good flexibility, i.e. wide range of motion, is important anatomically and physiologically. A high degree of flexibility is required for various skills in stringing activities. A person with low flexibility can rarely acquire the required skill conveniently despite expending more energy. Whereas a person with high

flexibility expends less energy in performing skills. The development of swimming speed and endurance parallels the development of one's flexion strength. It has been proven that some physiologists believe that a person with relatively low body development for age includes, among other physical factors, a high degree of flexibility.

Purpose of the Study :

The purpose of this research study was to study the effect of circuit training and Plyometric Training on the strength and endurance of the abdominal muscles of students.

Selection of the subject :

This research study was limited to schools in Nadiad. In this research study, student brothers were selected as subjects through random method. A total of 90 student brothers were selected in this research study. Student brothers in the age group of 14 to 17 years were selected in this research study. In this research study the subjects were divided into three groups namely 30 students group-A Circuit training group and 30 students group-B Plyometric Training group and 30 students group-C controlled group. In this research study 06 weeks of training was provided.

Criterion Measurement

Sl.	Variable	Test	Measurement
1	Abdominal Muscle Strength and Endurance	Band-nee sit ups	60 Second

Design of the Study :

In this research study, the subjects were selected by random method. 30 subjects were kept in each group. Abdominal muscle strength and endurance were pre-tested on each group. Then group-A was given circuit training and group-B Plyometric Training for 06 weeks and group-C will be kept as control group. After that the answer test of all three groups was taken.

Statistical Process

One way analysis of covariance (One Way Analysis of Covariance) test was applied to find out the effects on circuit training group and Plyometric Training group. Differences between means were tested at 0.05 level by Least Significant Difference Post Hoc test.

Result of the Study :

Table - 1

Means and Analysis of Covariance of Abdominal Bend Nee Situps Test for Circuit Training, Plyometric Training and Controlled Group

Test	Group			Variation covariance analysis			
	Circuit Training	Plyometric Training	Controlled	Sum of square (SS)	Degree freedom (df)	Mean sum of square (MSS)	F
Mean	16.669	16.169	18.491	A	3.755	2	1.877
				W	382.033	87	4.391
t Mean	18.103	18.208	19.1356	A	26.6	2	13.3
				W	363.5	87	4.178
d Mean	18.921	19.368	18.007	A	28.892	2	14.446
				W	179.680	86	2.089

*Significance Level at 'F' = 0.05 (2,87) = 3.101 & (2,86) = 3.103

In the above Table – 1 the 'F' ratio of pre-test medians of abdominal muscle strength and endurance test performance was found to be 0.427. Which compared to the table value (3.101) was not found to be significant at 0.05 level. The 'F' ratio of the final test medians of the three groups was found to be 6.381. Comparing it with the table value (3.101) was found to be significant at 0.05 level. Also the 'F' ratio of corrected medians was found to be 9.329. Comparing it with the table value (3.103) was found to be significant at 0.05 level.

Table – 2

Means and Least Significant Difference of Bend Nee Situps Test for Circuit Training, Plyometric Training and Controlled Group

Means			Mean Different	Critical Different
Circuit Training	Plyometric Training	Controlled		
18.921	19.368		0.447	0.643
18.921		18.007	0.914*	
	19.368	18.007	1.361*	

*Significance Level at 0.05

As per the above table -2, there was a significant improvement (1.361) in the Plyometric Training group. Then the circuit training group showed improvement at (0.914 level). Experimental fitness of the circuit training group and the Plyometric Training group showed a more significant effect of training given to the Plyometric Training group. A significant effect of experimental fitness was observed in both the experimental groups, the circuit training group and the Plyometric Training group, compared to the control group. No significant effect of experimental conditioning was observed between both experimental groups. But the effect of experimental conditioning was observed on both the experimental group as compared to the control group.

Conclusion :

• A 06-week cycle training and Plyometric Training program of the method significantly improved abdominal muscle strength and endurance in selected subjects.

Reference :

- ⇒ Ambubhai Purani Smarak Granthshreni, **Vyayam Vignan Kosh-Granth Panchmo**, Rajpipla :
- ⇒ Gujarat Vyayam Pracharak Mandal, Rajpipla, District Bharuch, 1982.
- ⇒ <https://books.google.co.in>
- ⇒ <http://bodyfitnesshealth.com/circuit-training-benefits-and-advantages>
- ⇒ Verma, Prakash J., **A Textbook on Sports Statistics**, Gwalior: Venus Publication, 2000.
- ⇒ www.en.wikipedia.org/wiki/plyometric.com
- ⇒ www.plyocity.com/plyotraining.com



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“A study of Brand Preference of Consumers towards Smart phone “

Now a days, marketers are faced with an increasing number of tactical options that must be efficiently and effectively applied to an increasing number of product variations for the brand. The concept of brand preference and perception was identified as having the potential to provide guidance to manufacturers, marketers that help them to take some decisions. In Today's market, due to fierce competition, companies have to focus on the brand preference and perception. With the entry of the Apple I-Phone , competitive environment has changed and other competitors face stiff challenges to sustain and grow their businesses. It becomes imperative for manufacturers, marketers and policymakers to judge the preferences and formulate suitable strategies and offering according to the evolving preference towards smart phone in Vadodara city. This study is undertaken with a view to study the brand preference and perception of consumers while choosing a particular smart phone in Vadodara city. A survey of 150 consumers has been conducted and result indicated that majority of the respondents have said that camera, battery, promotional schemes, display, storage(memory), generation & look , processor these attributes are considered while choosing a particular cellular service providers. *Key words* : Brand preference , Smart phone, consumers

1. About Telephone Industry in India:

Telephone was invented in the 1870s, based on earlier work with multi-signal telegraphs. The first commercial telephone services were set up in 1878 and 1879 on both sides of the Atlantic in the cities of New Haven and London. Telephone was the creation of Alexander Graham Bell, who got patent in March, 1876. Alexander Graham Bell held the master patent for the telephone which needed for services in both countries. The technology grew quickly from this point, with inter-city lines being built and telephone exchanges in every major city of the United States by the mid-1880s.

The construction of 6,400 km of telegraph lines was started in November 1853. These connected to Calcutta and Peshawar in the north; Agra, Bombay through Sindwa Ghats and Madras in the south; Ootacamund and Bangalore. William O'Shaughnessy, who pioneered the telegraph and telephone in India, belonged to the Public Works Department . In 1954, telegraph facilities were opened to the public and a separate department was opened. For greater mobility, various radio systems were developed in the mid-20th century for transmission between mobile stations on ships and in automobiles.

Handheld mobile phones were introduced for personal service starting in 1973. In later decades, the analog cellular system evolved into digital networks with greater capability and lower cost. The demand for telephones was increasing in 1990 & due to that Indian government was under pressure to open the telecom sector for private investor as a part of Liberalisation-Privatisation-Globalisation policies.

A Smart Phone is a portable device that combines advanced computing capabilities with the features of a conventional mobile phone. It usually features a touchscreen interface that lets users access a variety of services and apps, including social media, email, online surfing, and multimedia playback and streaming. In addition to GPS navigation and built-in cameras, smartphones also support a number of communication channels, such as text messaging, voice calls, and internet-based messaging applications. More advanced hardware, a wide range of mobile operating systems, internet access, business apps, mobile payments, and multimedia features like music, video, gaming, radio, and television set smartphones apart from feature phones with older designs.

About Brand Preference:

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Brand preference reflects a desire to use a particular company's product(s) or service(s) even when there are equally priced and equally available alternatives. In fact, more often than not, brand preference indicates a desire to seek out a specific product or service even when it requires paying more or expending more effort to obtain it. That means, customer chooses one brand over another consistently is called Brand preference. Brand preference is important to companies because it creates repeat customers out of their target audience as it creates awareness and also helps to develop a strong reputation. It provides an indicator of their customers' loyalty, the success of their marketing tactics, and the strength of their respective brands.

2. Literature Review

- **Ahalya U and Geetha B (2019)**, conducted a study on consumers brand preference towards Mobile phones in Pollachi city. This study conducted on 115 mobile phone users of Pollachi city. The objective of this study was to know the reasons for preferring, factors influences consumers and study conducted on 200 students of Hyderabad city. The objective of this study was to identify the identify the satisfactory level of consumers towards branded mobile phone. The finding reveals that the majority of male respondents having salary below Rs.15000 per month preferred Samsung mobile due to quality and spending Rs.15000-20000 for mobile phone.

- **Pandiyaraj and Magesan(2016)**, conducted a study on Consumer Brand Preference towards Cell Phones in Srivilliputtur Taluk. The objective of the study was to know the history, socio-economic profile of respondents and analyse the brand preference and factors influencing of consumers towards cell phones. The study conducted on 125 respondents. It was revealed from the study that usages is more in the age group of 21-40 and come to know through advertisement. Majority of the respondents preferred due to quality, price, technology and durability. They use mobiles for browsing internet, local calling, gaming and entertainment. Majority of the respondents preferred Samsung brand as compared to others.

3. Statement of the problem

Now a day, research on brand preference is very important because it helpful to retain existing customers and also get better prospects. In Today's market, due to fierce competition,

companies have to focus on the brand preference. This study aims to find out what are the attributes offered by the smart phone manufacturers and preferred by consumers. In this study, the researcher has concentrated on smart phone companies to study the consumers preference towards them.

4. Objectives of the study

The research objectives of the study with respect to brand preference towards cellular service providers are as under:

1. To study the attributes affecting brand preference of consumers towards mobile phone.
2. To study the relation between socio-economic characteristics of consumers and brand preference.

5. Research Methodology

Sampling unit : Respondents from Vadodara city
 Sample size : 150 respondents
 Sampling method : Non probability convenience sampling method
 Sources of data : Primary & Secondary (Primary data through respondents & secondary data through books, websites, etc.)
 Data collection method : Survey
 Data collection tool : Questionnaire
 Research design : Descriptive

6. Limitations

1. The sampling done in this study was non-random sampling due to time and cost constraints and also limited to the Vadodara city. Therefore, the results cannot be generalized to the population.
2. The biasness of consumers in answering the questions might be there because the language of the questionnaire was English with which not all consumers might be comfortable.

7. Data Analysis Tools

Cross-Tabulation with Chi-Square Analysis

The chi-square statistic is the primary statistics used for testing the statistical significance of the cross-tabulation table. Chi-square tests determine whether or not the two variables are independent. If the variables are independent then the results of the statistical test will be non-significant and accept the null hypothesis means there is no relationship between the variables. If the variables are related then the results of the statistical test will be statistically significant and reject the null hypothesis means there is some relationship between the variables.

8. Data Analysis & Interpretation

Objective based analysis

8.1. CROSSTAB

Age * Brand Preference
Cross tabulation of Brand Preference with Age

		Preferred brand							Total
		Samsung	Xiaomi	Oppo	Vivo	Apple	Realme	OnePlus	
Age	26-35 Years	3	6	8	10	14	4	6	51
	36-45 Years	4	7	7	11	16	4	5	54
	46-55 Years	3	2	5	6	15	4	3	38
	56-62 Years	2	1	0	0	1	2	1	7
	Total	12	16	20	27	46	14	15	150

Inference:

As shown in the above table, the highest percentage of target audience members preferred Apple brand are between 36 – 45 Years age group.

Gender * Brand Preference
Cross tabulation of Brand Preference with Gender

		Preferred brand							Total
		Samsung	Xiaomi	Oppo	Vivo	Apple	Realme	OnePlus	
Gender	Male	8	9	11	16	37	12	10	103
	Female	4	7	9	11	9	2	5	47
Total		12	16	20	27	46	14	15	150

Inference:

As shown in the above table, the highest percentage of target audience members preferred Apple brand are male.

Educational Qualification * Brand Preference
Cross tabulation of Brand Preference with Education qualification

		Preferred brand							Total
		Samsung	Xiaomi	Oppo	Vivo	Apple	Realme	OnePlus	
Education Qualification	SSC	0	0	1	0	2	0	0	3
	HSC	1	2	1	3	4	4	3	18
	Under Graduate	1	1	2	3	6	1	2	16
	Graduate	5	9	10	16	31	5	6	82
	Post Graduate	5	4	6	5	3	4	4	31
	Total	12	16	20	27	46	14	15	150

Inference:

As shown in the above table, the highest percentage of target audience members preferred Apple brand are graduate.

Occupation * Brand Preference
Cross tabulation of Brand Preference with Occupation

		Preferred brand							Total
		Samsu ng	Xiaomi	Oppo	Vivo	Apple	Realme	OnePlus	
Occupation	Students	0	0	1	0	2	0	0	3
	Salaried	6	11	16	23	41	13	13	123
	Business man	3	1	1	3	1	1	0	10
	Professio nal	2	3	2	1	1	0	1	10
	Housewi fe	1	1	0	0	1	0	1	4
Total		12	16	20	27	46	14	15	150

Inference:

As shown in the above table, the highestpercentage of targetaudiencemembers preferred Apple brand are salaried.

Annual Income (Rs.) * Brand Preference
Cross tabulation of Brand Preference with Annual Income (Rs.)

		Preferred brand							Total
		Samsung	Xiaomi	Oppo	Vivo	Apple	Realme	OnePlus	
Annual Income	Below Rs.300000	7	4	8	11	17	2	1	50
	Rs.300001 -500000	2	12	11	15	28	10	14	92
	Rs.500001 -700000	3	0	1	1	1	2	0	8
	Total	12	16	20	27	46	14	15	150

Inference:

As shown in the above table, the highestpercentage of targetaudiencemembers preferred Apple brand are Rs.300001 to Rs.500000.

10.Findings

The findings of the research are presented below:

1. It was found that the preference of customers towards the Cellular Service Provider's was majorly based on availability of network services, customer services, promotional services in comparison of data plan, mobile number portability, value added services and tariff plan.
2. It was found that the highestpercentage of targetaudiencemembers preferred Apple brand are between 36 – 45 Years age group.
3. It was found that the highestpercentage of targetaudiencemembers preferred Apple brand are male.
4. It was found that the highestpercentage of targetaudiencemembers preferred Apple brand are married.
5. It was found that the highestpercentage of targetaudiencemembers preferred Apple brand are graduate.
6. It was found that the highestpercentage of targetaudiencemembers preferred Apple brand are salaried.
7. It was found the highestpercentage of targetaudiencemembers preferred Apple brand are Rs.300001 - 500000.
8. It was found that except annual income of the target audience members, the other factors do not have significance difference to brand preference while choosing particular service providers.

11. Conclusions

- Majority of the target audience members prefer Apple brand and preference mainly based on availability of network services.

12. References

Books/Journal:

1. Kotler, Philip, 8th Edition, Marketing Management, Prentice Hall of India, New Delhi, 1994
2. Cooper, D., Schindler, R., Pamela. S (2003), Business Research, Tata McGraw- Hill, New Delhi
3. Nargundkar, R. (2005), Marketing Research, Tata McGraw-Hill, New Delhi.
4. Ahalya U., Geetha B, (2019). A study on consumers brand preference towards Mobile Phones, Journal of Emerging Technologies and Innovative Research.
5. Pandhiyaraj P.K., and Magesan A.A., (2016), A study on Consumer Brand Preference towards Cell Phones in Srivilliputtur Taluk, Journal for Bloomers of Research, Vol. 9, No. 1, PP: 1528-1537

Websites:

6. <https://en.wikipedia.org/wiki/Smartphone>
7. <https://business.mapsofindia.com/india-policy/liberalization-privatization-globalization.html>
8. <https://www.elon.edu/u/imagining/time-capsule/150-years/back-1870-1940/>
9. https://en.wikipedia.org/wiki/History_of_the_telephone
10. <https://www.britannica.com/technology/telephone>
11. <https://en.wikipedia.org/wiki/Telephone>
12. <http://www.technofunc.com/index.php/domain-knowledge/telecom-industry/item/history-of-telecommunications-industry>



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ગાંધી વિચારનું શિક્ષણ

સદીઓ પુરાણી ગુલામીની જંજીરોમાં જકડાયેલા ભારત દેશને મુક્ત કરાવનાર મુક્તિદાતા તરીકે, એક સાચા લોકશિક્ષક તરીકે ભારત દેશની વર્તમાન લોકશાહીના ભાગ્યવિધાતા તરીકે, ભારત દેશની આધુનિક શિક્ષણના પ્રણેતા તરીકે તેમજ સત્યના પ્રયોગો આત્મકથાનાં સ્વયંના અનુભવમાંથી દેશને રાષ્ટ્રીય બુનિયાદી શિક્ષણની અમૂલ્ય ભેટ આપનાર દાતા તરીકે ગાંધીજીનું નામ ભારતના ઇતિહાસમાં સુવર્ણાક્ષરે અંકિત થયું છે. ગાંધીજીએ જે શિક્ષણ પ્રથાને જન્મ આપ્યો તેને વિવિધ નામોથી ઓળખવામાં આવે છે. નઈ તાલીમ, બુનિયાદી શિક્ષણ, વર્ધા શિક્ષણ યોજના, જીવન શિક્ષણ, પાયાની કેળવણી, બેઝિક એજ્યુકેશન, રાષ્ટ્રીય શિક્ષણ. ગાંધીજી એટલે અહિંસા, પ્રેમ અને કરુણાનો ત્રિવેણી સંગમ. બુદ્ધ, કૃષ્ણ અને ઈસુનો સમન્વય. તેમણે ઉપદેશથી જ નહીં પોતાના જીવન દ્વારા અર્ધી શતાબ્દિ સુધી જનતાને શિક્ષણ આપ્યું. તેઓ સાચા અર્થમાં લોકશિક્ષક હતા. સત્યના પ્રયોગોના અનુભવમાંથી એમણે દેશને રાષ્ટ્રીય બુનિયાદી શિક્ષણની મહામૂલી ભેટ આપી.

આજે જ્યારે વિશ્વ અનેક સમસ્યાઓમાં ઘેરાયેલું છે ત્યારે આસપાસનાઓનો ઉકેલ ગાંધીવિચારમાં દેખાય છે. તેથી તો એલવીન ટોફલરે પોતાના બીજા પુસ્તકમાં ‘ત્રીજું મોજું’ માં એક પ્રકરણમાં ઉપગ્રહો અને ગાંધીનો સમન્વય દર્શાવ્યો છે. વિજ્ઞાન અને ટેકનોલોજીની અદ્યતનમાં અદ્યતન દેશો સાથે ગાંધીના ગ્રામ પ્રજાસત્તાકોનાં દર્શનનું એક નવું સંતુલન સાપવાની દિશામાં આપણે આજે આગળ વધી રહ્યા છીએ. આમ વિશ્વના વિચારકો આજે જ નહીં આવતીકાલે પણ ગાંધીવિચારોને આવકારે છે.

આપણે એક નવા યુગમાં પ્રવેશ કરી રહ્યા છીએ તે વખતે દેશ અને દુનિયા સમક્ષ મહાત્મા ગાંધીના સ્વપ્રના ભારતનું ચિત્ર રજૂ કરવું એ એક શુભ વિચાર છે. મહાન વ્યવહારિક રાજનીતિજ્ઞ અને શિક્ષણશાસ્ત્રી મોહનદાસ કરમચંદ ગાંધીએ કોઈ નિશ્ચિત તાત્ત્વિક વિચારસરણીના સંદર્ભમાં કોઈ ફિલસૂફી ન હતા પણ ગાંધીજીનું જીવનદર્શન પ્રકૃતિવાદી, પોતાના સ્થાનમાં આદર્શવાદી, પોતાના આદર્શોમાં વ્યવહારવાદી, પોતાની પદ્ધતિઓ અને કાર્ય યોજનાઓમાં આજે વાસ્તવવાદી પોતાની નઈ તાલીમનાં સિદ્ધાંતોમાં જોવા મળે છે. ૧૯૩૮માં “બુનિયાદી શિક્ષણ”નો પ્રારંભ થયો. બુનિયાદી શિક્ષણનો પ્રયોગ શિક્ષણક્ષેત્રે તેમનું કાંત દર્શન છે. શિક્ષણક્ષેત્રે ગાંધીજીનું પ્રદાન અદ્વિતીય છે.

ગાંધીજીના વિનમ્ર અભિપ્રાય અનુસાર, કોઈપણ સ્વસ્થ સમાજને ઘડવાનું, જીવનમૂલ્યોને રક્ષવાનું કામ હંમેશાં શિક્ષણ જ કરી શકે. સારું અને સારું શિક્ષણ... શિક્ષણ વ્યક્તિત્વ ઘડતરનું કામ કરે છે. પોતાનો વિદ્યાર્થી ટોળાનો એક ભાગ ન બની જાય એ પોતાની રીતે વિચારતો થાય. નિર્ણય લેતો થાય, કોઈની પણ વાતમાં આવી જઈ માનવતાનો સૌથી મોટો ધર્મ એ ચૂકી ન જાય તે જોવાની શિક્ષકની નૈતિક ફરજ છે. શિક્ષણ એટલે માત્ર ડિગ્રી ધારીઓ પેદા કરવાની ફેક્ટરી નથી, શિક્ષણ એટલે એક સંપૂર્ણ મનુષ્ય બનાવનારી કેળવણી. ગાંધીજી શૈક્ષણિક ફિલસૂફીની વિશેષતા એ છે કે તેમણે ખૂબ જ સલામતા પૂર્વક કેળવણીના ઉદ્દેશો નક્કી કર્યા છે. ભારતમાં તેમણે પ્રથમવાર શિક્ષણ સમાજશાસ્ત્રીય દૃષ્ટિકોણથી વિચાર્યું. આ દેશનાં સમાજમાં સર્વોદયથી સભાનતા સંકલપના લઈને તેમણે પદાર્પણ કરેલું

અતિશોષણ રહિત, સરકારમુલક અને વર્ગવિહીન, લોકશાહી સમાજવાદી, સમાજ રચના એમની કેળવણીનું એકમાત્ર લક્ષ્ય હતું.

ગાંધીજીના શૈક્ષણિક પ્રયોગોની જાણકારી મેળવવા માટે આ સંશોધન હાથ ધરવામાં આવ્યું હતું. ગાંધીજીએ કુલ છ શૈક્ષણિક પ્રયોગો કર્યા હતાં : (૧) દક્ષિણ આફ્રિકામાં બાળકેળવણીનો ઘરમાં કરેલો પ્રયોગ, (૨) ફિનિક્સ આશ્રમમાં કરેલો પ્રયોગ, (૩) ટોલ્સટોય આશ્રમમાં કરેલો પ્રયોગ, (૪) રાષ્ટ્રીય ગુજરાતી શાળાનો પ્રયોગ, (૫) ગુજરાત વિદ્યાપીઠનો ઉચ્ચ શિક્ષણ ક્ષેત્રે કરેલો પ્રયોગ, (૬) નઈ તાલીમનો પ્રયોગ. અને દશાવિલા ઔપચારિક શિક્ષણનાં પ્રયોગોમાંથી પ્રથમ ત્રણ પ્રયોગ વિદેશની ધરતી પર કરવામાં આવ્યા હતા. જ્યારે અંતિમ ત્રણ પ્રયોગ ભારતની ભૂમિ પર કરવામાં આવ્યાં હતાં. આ પ્રયોગમાં ઉદ્યોગ વાટે શિક્ષણ આપવાની પદ્ધતિ હતી. નિવાસી તાલીમ દ્વારા અપાતા શિક્ષણને પ્રાધાન્ય આપવામાં આવતું હતું.

ગાંધીજીએ કહ્યું છે કે, મેં અત્યાર સુધી હિન્દુસ્તાનને જે અનેક વસ્તુઓ આપી એ બધીમાં કેળવણીની યોજના અને પદ્ધતિ ભારેમાં ભારે વસ્તુ છે. અને હું નથી માનતો કે આના કરતા વધારે સારી વસ્તુ હું આપી શકીશ. તેમના આ વિધાન પછી કોઈપણ વ્યક્તિ એ વાત સાથે સહમત થશે કે, ગાંધીજીનું મહત્વપૂર્ણ પ્રદાન શિક્ષણના ક્ષેત્રમાં છે.

ગાંધી વિચારનું શિક્ષણ :

(૧) નવી કેળવણી :

બીજા દેશોની બાબતમાં ગમે તે હોય, પણ હિંદુમાં, જ્યાં વસ્તીનાએસી ટકાથી વધુ લોકો ખેતીમાં અને બીજા દસ ટકા ઉદ્યોગોમાં રોકાયેલાં છે. ત્યાં કેવળ અક્ષરજ્ઞાનની કેળવણી આપવી અને છોકરા-છોકરીઓને ભણતર પૂરું કર્યા પછીના જીવનનાં શારીરિક શ્રમ કરવા માટે નાલાયક બનાવવા એ ગુનો છે. ગાંધીજી કહે છે કે, આપણો મોટા ભાગનો સમય રોટલો મેળવવા માટે મજૂરી કરવામાં જતો હોવાથી આપણા બાળકોને બચપણથી આવી મજૂરીનું ગૌરવ શિખવાડવું જ જોઈએ. આપણાં બાળકોને એવું શિક્ષણ ન આપવું જોઈએ કે જેથી મજૂરી પ્રત્યે તેમને સૂગ ચડે. કેળવણી એટલે બાળક કે મનુષ્યના શરીર, મન અને આત્મામાં જે ઉત્તમ અંશો હોય તેનો સર્વાંગી

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વિકાસ સાધીને તેને બહાર આણવા, અક્ષરજ્ઞાન એ કેળવણીનું અંતિમ ધ્યેય નથી તેમ તેનો આરંભ પણ નથી એ તો સ્ત્રી અને પુરુષને કેળવણી આપવાનાં અનેકમાંનું એક સાધન માત્ર છે. અક્ષરજ્ઞાન એ સ્વતંત્રપણે કંઈ કેળવણી નથી. ગાંધીજીના મતે શિક્ષણ પદ્ધતિમાં મન અને આત્માનો ઊંચામાં ઊંચો વિકાસ સાધવો શક્ય છે. માત્ર દરેક હાથ ઉદ્યોગ આજે શીખવાય છે, તેમ જડ - યંત્રવત્ નહીં પણ શાસ્ત્રીય રીતે શીખવવો જોઈએ, એટલે કે બાળકને દરેક ક્રિયા શા માટે કરવામાં આવે છે. તે સમજાવવું જોઈએ. કેળવણી ફરજિયાત અને મફત હોવી જોઈએ, પણ બાળકોને ઉપયોગી ઉદ્યોગ આપી તે મારફતે જ તેમના મન ને શરીર કેળવવાં જોઈએ.

(૨) પાયાની કેળવણી :

ગાંધીજીના મતે પાયાની કેળવણીનાં કાર્યક્રમમાં મૂકેલી કોઈપણ વસ્તુ પાછળ એક જ હેતુ હોઈ શકે અને તે કેળવણીનો. પાયાની કેળવણીનો હેતુ હાથ-કારીગરીના વાહન દ્વારા બાળકોની શારીરિક, બૌદ્ધિક તેમજ નૈતિક ખિલવણી સાધવાનો છે, જે કોઈ યોજના શિક્ષણ દૃષ્ટિએ સંગીન હોય તેનો કુશળતાથી અમલ થાય તો આર્થિક દૃષ્ટિએ પણ તે સંગીન નીવડે જ. પાયાની કેળવણીના પાયા વિચારી જોઈએ :

- (૧) બધી કેળવણી સ્વાશ્રયી હોવી જોઈએ, એટલે કે સરવાળે મૂડી બાદ કરતાં બધું ખર્ચ પોતે ઉપારે.
- (૨) એ કેળવણીમાં છેવટ લગી હાથનો પૂરો ઉપયોગ થતો હોય એટલે કે હાથ વડે કંઈક ઉત્પન્ન છેવટ લગી થતો હોય.
- (૩) કેળવણી માત્ર પોતાના પ્રાંતની ભાષામાં આપવી જોઈએ.
- (૪) આમાં સાંપ્રદાયિક - ધર્મને સ્થાન નથી. સાર્વજનિક નીતિને પૂરું સ્થાન હોય.
- (૫) આ કેળવણી એવી છે કે જેને બાળક કે બીજા શીખે એટલે તે વિદ્યાર્થીના ઘરમાં ને ગામમાં પ્રવેશ કરે.

વળી, આ કેળવણી લેતાં કરોડો વિદ્યાર્થીઓ પોતાને હિંદુસ્તાનનું અવિભાજ્ય અંગ ગણશે તેથી બધાં પ્રાંતનાં વિદ્યાર્થી સમજી શકે એવી એક ભાષા હોવી જોઈશે. આ ભાષા બંને લિપિ - નાગરી અને ઉર્દૂ - માં લખાતી હિંદુસ્તાની જ હોઈ શકે.

ઉપરોક્ત સંદર્ભો જોતાં ગાંધીજીનાં કેળવણી વિષયક વિચારો કેટલા તાજા-સાચા અને રાષ્ટ્ર માટે ઉપકારક છે, તેની પ્રતીતિ થશે. આજના શહેરીકરણે માનવને સંકુચિત, સ્વાર્થી અને વામન બનાવી મૂક્યો.

(૩) બુનિયાદી શિક્ષણ :

બુનિયાદી શિક્ષણનાં સામ્પ્રત સમયમાં અનિવાર્ય મૂલ્યો :

(૧) આધ્યાત્મિક મૂલ્યો :

આધ્યાત્મિકતા એ વ્યક્તિનાં જીવનનું અંતિમ ધ્યેય હોવું જોઈએ. અંતે તો “પરમેશ્વર સત્ય છે તે કરતાં સત્ય એ જ પરમેશ્વર છે.” ઈશ્વરનું સત્યમાં દર્શન કરવું એ માનવમાત્રનું ધ્યેય હોવું જોઈએ. આપણાં શાસ્ત્રોમાં ઈશ્વર પ્રાપ્તિ માટે ત્રણ-ત્રણ તપસ્યાઓ દર્શાવી છે (૧) કાયિક તપસ્યા - એટલે જનસેવા. (૨) વાચિક તપસ્યા - એટલે સત્ય વદવું અને (૩) માનસિક તપસ્યા - એટલે ઉર્ધ્વ વિચારો કરવા. ગાંધીજીએ પ્રબોધેલા બુનિયાદી કેળવણીની હિમાયત કરી છે. આજના સંદર્ભમાં સમાજમાં અધ્યાત્મિક શિક્ષણનો અંતિમ ધ્યેય આત્મ સાક્ષાત્કારનો છે. એટલે વિમુક્તદાય મૂલ્યોની કેળવણીની હિમાયત

કરી છે. ત્યારે બુનિયાદી શિક્ષણ જ તેને તારી શકે તેમ છે. બુનિયાદી શિક્ષણની સહઅભ્યાસક પ્રવૃત્તિઓ, પ્રાર્થના, સમાજસેવા સમૂહજીવન, સમૂહ કાર્ય, શ્રમ, પ્રવાસ, પર્યટન વગેરે બાળકોમાં સામાજિક અને નૈતિક મૂલ્યોનું પ્રતિપાદન કરે છે.

(૨) સામાજિક અને સાંસ્કૃતિક મૂલ્યો :

કેળવણીની પ્રક્રિયામાંથી વ્યક્તિને સંસ્કૃતિ અને સંસ્કાર-વારસા માટે આદર પ્રગટવો જોઈએ. ગાંધીજીએ કહ્યું છે કે, “અક્ષરજ્ઞાન કરતાં સંસ્કારની કેળવણીને હું ઘણું વધારે મહત્ત્વ આપું છું.” જીવનમાં શ્રમનું પ્રાધાન્ય, ક્રિયા દ્વારા શિક્ષણ, સ્વતંત્ર વ્યક્તિત્વનો વિકાસ, સમૂહજીવન, સમાજ સેવાઓ અને સ્વાવલંબન જેવા બુનિયાદી શિક્ષણના મહત્ત્વનાં પાસાં વ્યક્તિન વ્યક્તિત્વ, સામાજિક અને સાંસ્કૃતિક વિકાસનાં ઘોતક છે. સ્વાવલંબન જ વ્યક્તિમાં સ્વતંત્રતાની ખુમારી લાવી શકે. સ્વાવલંબી વ્યક્તિ પુરુષાર્થી પણ હોય છે. તેથી તો અબ્રાહમ લિંકને કહ્યું છે: “હું કોઈનો ગુલામ નહીં - કોઈ મારો ગુલામ નહીં.” ગાંધીજી પણ શોષિક કે શોષિત જેવાં વર્ગો વગરની વર્ગવિહીન સમાજવાદી સમાજરચના ઈચ્છતા હતા. આજના સંદર્ભમાં તેની તાતી જરૂર જણાય છે. આજે જ્યારે જ્ઞાતિવાદ, પ્રદેશવાદ, ધર્મવાદ માથું ઊંચકી રહ્યો છે, ત્યારે બુનિયાદી શિક્ષણનાં સામાજિક અને સાંસ્કૃતિક મૂલ્યોની ખૂબ જ જરૂર છે. બુનિયાદી શિક્ષણનાં સમૂહ જીવન સમાજસેવા ઉદ્યોગ જેવાં તત્ત્વો રાષ્ટ્રીય શિક્ષણ પંચે (૧૯૬૪-૬૬) અને ઈશ્વરભાઈ કમિટીએ (૧૯૭૭) કાર્યાનુભવ, સમાજસેવા અને સમાજોપયોગી ઉત્પાદક શ્રમ કાર્યસંપુટદ્વારા સત્કાર્ય જ છે.

(૩) ભૌતિક મૂલ્યો :

બુનિયાદી શિક્ષણની શારીરિક વિકાસ, શ્રમને આવકાર, ઉત્પાદક ગાંધીજીએ હસ્તઉદ્યોગો, ગ્રામોદ્યોગો, ગૃહઉદ્યોગો દ્વારા શિક્ષણ આપીને ક્રમકાર્ય, સ્વાવલંબન જેવી આર્થિક બાબતો ભૌતિક મૂલ્યોમાં સમાય છે. ઉત્પાદન ઉદ્યોગ દ્વારા જીવનનું શિક્ષણ આપવાની હિમાયત કરેલી છે. પ્રવૃત્તિ, શ્રમ અને સ્વાવલંબન દ્વારા શિક્ષિત વ્યક્તિ જ સમાજમાં ખુમારીથી ઊભી રહી શકશે તેથી જ ગાંધીજીએ ભારતની ભૂમિને ભોગભૂમિ નહીં પણ કર્મભૂમિ કહી છે.

ગાંધીજીનું અર્થશાસ્ત્ર માનવ અર્થશાસ્ત્ર હતું. તેમણે યંત્રની મર્યાદાઓ સમજીને માનવશક્તિના ઉપયોગ ઉપર ભાર મૂક્યો છે. તેથી જ બુનિયાદી શિક્ષણના પાયામાં મુખ્ય અને ગૌણ ઉદ્યોગો નિહીત છે. મોટા ઉદ્યોગો બેકારી સર્જે છે, તેથી જ નાના, લઘુ ઉદ્યોગોની ગાંધીજીએ હિમાયત કરી છે. જો કે ગાંધીજી યંત્રોની વિરૂદ્ધ ન હતા. યંત્રોના ગાંડપણની વિરૂદ્ધ હતા. તેઓ માનતા હતા કે, જ્યાં આવશ્યક હોય ત્યાં મોટા ઉદ્યોગો સ્થાપવા, પરંતુ તેના ઉપર સ્વામિત્વ સમાજનું હોય, વ્યક્તિનું નહીં. આજના જમાનામાં દરેક ભણેલી પેઢીમાં રહેલી શ્રમકાર્યની નાનપ કે સૂગ દૂર કરવાની તાતી જરૂર છે. બુનિયાદી શિક્ષણમાં જ એ શ્રદ્ધા પડેલી છે.

(૪) ચારિત્ર્ય ઘડતરનાં મૂલ્યો :

ચારિત્ર્ય એ જીવન છે. ગાંધીજીએ કહ્યું છે : જ્ઞાનનું એકમાત્ર ધ્યેય ચારિત્ર્ય ઘડતર હોવું જોઈએ.” ગાંધીજી અક્ષરજ્ઞાન નહીં, પરંતુ ચારિત્ર્યની ખીલવણી, ધર્મભાવનાનું ભાન.” વ્યક્તિનાં અંગત જીવનની શુદ્ધિ, ચારિત્ર્ય ઘડતર માટે અનિવાર્ય ગણાવતાં ગાંધીજી કહે છે : વિદ્યાર્થીઓએ પોતાનાં અંતરમાં ડોકિયું કરવું ઘટે, પોતાનું

અંગત ચારિત્ર્યતપાસનું જોઈએ. ચારિત્ર્ય વિનાની કેળવણી શાની? અને અંગત શુદ્ધતા સિવાય ચારિત્ર્ય શાનું? શાળા અને કોલેજો ચારિત્ર્યનું ઘડતર કરવાં માટેના કારખાનાં છે. પોતાના છોકરા-છોકરી સારાં પુરુષો કે સ્ત્રીઓ બને એટલા માટે મા-બાપો તેમને ત્યાં આગળ મોકલે છે. પરંતુ આજના શિક્ષણની દશા શી છે? વર્તમાન શિક્ષણ વિશે આકોશ ઠાલવતાં જાણીતા વિચારક ડૉ. પ્રવીણ દરજી લખે છે : “આજનું શિક્ષણ યંત્ર બની ગયું છે. નરી યાંત્રિક પ્રક્રિયા એ બની રહ્યું છે અને વિદ્યાર્થી બાપડો એ યંત્રનો એક ભાગ માત્ર બનીને રહી ગયો છે. શિક્ષણ એટલે હવે માત્ર ગુણપત્રક, પ્રમાણપત્ર અને ઉપાધિ. શિક્ષણની આવી સપાટ સ્થિતિનાં માઠાં પરિણામો હવે વિશ્વભરમાં જોવા મળી રહ્યાં છે. ઘરમાં કે ઘરની બહાર નાના સાથે કે મોટેરાં સાથે કેમ વર્તવું, કેવી ભાષામાં, કેવા શબ્દોમાં, કેવા વિવેક-વિનયથી વાત કરવી તેની આ વિદ્યાર્થીને ખબર પડતી નથી. કહો કે એ ભણ્યો ખરો પણ ગણ્યો નથી. હૃદયની કેળવણી તો બાકી જ રહી જાય છે.”

આમ આજની કેળવણીમાં જે હૃદયની ચારિત્ર્યની કેળવણીની ઉણપ વર્તાય છે તે નઈ તાલીમની સમગ્ર યોજનામાં મહત્ત્વનું મૂલ્ય ગણાય છે.

ગાંધીજી તેથી જ ચારિત્ર્યનું નિર્માણ એ ‘નઈ તાલીમ નું મહત્ત્વનું ધ્યેય ગણે છે. ગાંધીજીએ ઓગષ્ટ-૧૯૨૭ માં યુવાન વિદ્યાર્થીઓને ઉદ્દેશીને યંગ ઈન્ડિયા માં લખ્યું હતું “જો તમે મોંઘુદાટ શિક્ષણ પ્રાપ્ત કર્યા પછી સીધા લગ્ન કરીને ક્ષિતિજ પરથી ઓજલ થઈ જાઓ, તો હું સમજીશ કે તમે દેશને દગો દીધો છે. હું એમ નથી કહેતો કે તમે લગ્ન ન કરો, પણ ગુલામ ન બનો. દેશ તમારી પાસે જે વાતની અપેક્ષા રાખે છે, તે કરો. તમારે દયા અને વીરતાની જીવતી-જાગતી મૂર્તિ બનવું જોઈએ. અને પોતાની રક્ષા માટે શુદ્ધતાની અચૂક ઢાલ લઈને સંસારમાં હંમેશા પ્રલોભનથી દૂર રહેવું જોઈએ. ગાંધીજીએ જે શિક્ષણની યોજના આપી તે પ્રયોગશીલ શિક્ષણની સંશોધન સંપુટ હતી. તેઓ હંમેશા પ્રયોગશીલ અને પરિવર્તનશીલ રહ્યા છે. તેથી તો તેમણે નિત્ય નવીન એટલે નઈ તાલીમ એવું સૂત્ર આપ્યું. તેઓ માનતા હતા કે .હુ જે કહું છું, તેમાં ફેરફારને અવકાશ છે.” ગાંધીજીએ લખ્યું છે કે .કોઈને મારા બે લખાણોમાં વિરુદ્ધ જેવું જણાય ત્યારે જો તેને મારા ડહાપણ પણ વિશે શ્રદ્ધા હોય તો, એક જ વિષયનાં બે લખાણોમાંથી પાછલાન તે પ્રમાણભૂત માને ” આનાથી વિશેષ કંઈ પ્રયોગશીલતા - પરિવર્તનશીલતા હોઈ શકે?

(૪) ઉચ્ચ કેળવણી :

ગાંધીજી કહે છે કે, કોલેજની કેળવણીમાં ધરમૂળથી પલટો કરું ને એનો દેશની જરૂરિયાતોની સાથે મેળ સાધું. યંત્ર શાસ્ત્રના ને બીજા ઈજનેરોને માટે પદવીઓ રખાય. એમને જુદા-જુદા ઉદ્યોગોની જોડે જોડી દીધેલા હોય ને એ ઉદ્યોગોને જે ગ્રેજ્યુએટો જોઈએ તેમને તાલીમ આપવાનું ખરચ એ ચલાવનારા જ આપે. સરકારી વિદ્યાપીઠો કેવળ પરીક્ષા લેનારી સંસ્થાઓ જ રહે, અને પોતાનું ખરચ પરીક્ષાઓની ફીમાંથી કાઢી સ્વાવલંબી બને. વિદ્યાપીઠો કેળવણીનાં આખા ક્ષેત્રની સંભાળ રાખશે અને કેળવણીનાં વિવિધ ક્ષેત્રોમાં અભ્યાસક્રમો તૈયાર કરશે. કોઈપણ ખાનગી નિશાળ કે પ્રાંતની વિદ્યાપીઠ અગાઉથી મંજૂરી લીધા વિના ચાલવી ન જોઈએ.

(૧) નવી વિદ્યાપીઠો :

ગાંધીજીના મતે ગુજરાતને ગુજરાતી ભાષા સારું,

મહારાષ્ટ્રને મરાઠી સારું, કર્ણાટકને કાનડી સારું, ઉત્કલને ઉડિયા સારું, આસામને આસામી સારું. ભાષા પરત્વે વિદ્યાપીઠો હોવી જોઈએ, નવી વિદ્યાપીઠ થાય તેના પહેલાં તેની ભૂમિકારૂપે તે ભાષા જ્યાં છેવટ લગી માધ્યમ હોય એવી છેવટ સુધીની કેળવણીવાળી શાળાઓ હોવી જોઈએ. તો જ વિદ્યાપીઠનું વાતાવરણ જામ્યું કહેવાય. વિદ્યાપીઠ ટોચ છે. પાયો મજબૂત ન હોય તો મજબૂત ટોચનીઆશા ન રાખાય. વળી, હજુ આપણે પશ્ચિમનાં પ્રભાવમાંથી મુક્ત નથી થયા. જેઓ માનતા હોય કે પશ્ચિમમાં જ સર્વસ્વ છે ને જ્ઞાનમાત્ર ત્યાંથી જ મળે એમ છે તેઓને કંઈ કહેવાપણું ન હોય. વિદ્યાપીઠો માત્ર પૈસાથી કે મોટાં મકાનોથી નથી બનતી. વિદ્યાપીઠોની પાછળ લોકમત હોવો જોઈએ. મોટું શિક્ષક મંડળ હોવું જોઈએ. સૂક્ષ્મ વિવેક હોવો જોઈએ. ગાંધીજીની દ્રષ્ટિએ વિદ્યા પૂનમાં રેડાયેલું છે. ધન સારી જમીનમાં વવાયેલા બીજની જેમ અનેકગણું વળતર આપે છે. પરદેશી તંત્ર નીચે સ્થપાયેલી વિદ્યાપીઠો એથી ઉલટું કામ કર્યું છે.

(૨) પ્રૌઢ શિક્ષણ :

ગાંધીજી કહે છે, મોટી ઉંમરના સ્ત્રી-પુરુષોને કેળવવાનું જો મારે હસ્તક હોય તો હું મારા વિદ્યાર્થીઓને પોતાના મૂલકનો વિસ્તાર અને તેની મહત્તાનો ખ્યાલ આપીને તેમની કેળવણીની શરૂઆત કરું. આપણાં ગામડાંઓના વતનીઓને મન પોતાનું ગામ એ જ જાણે પોતાનો આખો મુલક કે વતન હોય તેવી વાત કરે છે. મોટો ઉંમરના ભાઈ-બહેનોની કેળવણીનો સૌથી પહેલાં અર્થ એવો કરું છું કે મોઢાના બોલથી એટલે કે સીધી વાતચીતથી તેમને સાચી રાજકીય કેળવણી આપવી. આ મોઢાની કેળવણી સાથે જ લખવા-વાંચવાનું ભણતર પણ ચાલે. આ કામમાં ખાસ આવડતની જરૂર છે. એને અંગે ભણતરનો ગાળો બને તેટલો ટૂંકો કરવાને ખાતર અનેક પદ્ધતિઓ અજમાવવામાં આવે છે.

ગ્રામવાસીઓને ગણિત, ગામઠી ભૂગોળ, ગામઠી ઇતિહાસ અને તેમને રોજ વાપરવું પડે એવું જ્ઞાન-વાંચન, લેખન, પત્રલેખન ઇત્યાદિ આપો. તેઓ એવું જ્ઞાન પચાવશે ને ભણતર આગળ વધારશે. તેમને રોજિંદા વહેવારનાં ખપનું કંઈ જ્ઞાન ન આપે એવી ચોપડીઓનું કશું કામ નથી હોતું.

૩) ધાર્મિક કેળવણી :

સરકારી શિક્ષણ સંસ્થાઓમાંથી થઈને પસાર થતાં વિદ્યાર્થીઓનો ઘણો મોટો ભાગ કોઈપણ ધાર્મિક શિક્ષણથી વંચિત હોય છે. એ વિષે શંકા નથી. ગાંધીજીના મતે હિન્દુસ્તાન જેવા દેશમાં, કે જ્યાં એક જ ધર્મમાં પણ સંખ્યાબંધ સંપ્રદાયો છે - ત્યાં ધાર્મિક શિક્ષણનો પ્રબંધ કરવો મુશ્કેલ છે. પરંતુ જો ભારત વર્ષ આધ્યાત્મિક કામ કાંઈ નહીં તો ઐહિક શિક્ષકનાં જેટલું તો આવશ્યક મનાવું જ જોઈએ. ધર્મગ્રંથોનું જ્ઞાન વધ્યું એટલે ધર્મનું જ્ઞાન પણ થઈ ગયું એમ નથી એ સાચું છે. પરંતુ આપણે જો ધર્મનું જ્ઞાન ન આપી શકીએ તો ધર્મગ્રંથોનું જ્ઞાન આપીને પણ આપણે સંતોષ માનવો રહ્યો.

(૪) પાઠ્યપુસ્તકો :

આજે નિશાળોમાં, ખાસ કરીને બાળકોને માટે જે પાઠ્ય પુસ્તકો વપરાય છે તેમાંથી મોટા ભાગના હાનિકારક નહીં તો નકામા તો છે જ. એમાંના ઘણાં છટાદાર ભાષામાં લખેલા હોય છે એની ના પાડી શકાય એમ નથી. જે અંગ્રેજી પાઠ્ય પુસ્તકો નિશાળોમાં ચાલે છે તેની વાત કરીએ તો જે લોકો અને જે વાતાવરણને માટે તે લખાયેલાં

હોય છે તેમને માટે કે હિન્દુસ્તાનનાં વાતાવરણ માટે લખાયેલ નથી હોતા. હિન્દુસ્તાનનાં બાળકો માટે લખાયેલાં હોય છે તે પુસ્તકો પણ બાળકો માટે લખાયેલા હોય છે તે પુસ્તકો પણ મોટે ભાગે અધકચરાં અનુકરણ હોય છે અને એમાંથી વિદ્યાર્થીઓને જે મળવું જોઈએ તે મળતું નથી.

ગાંધીજી કહે છે કે સાચી કેળવણી તો બાળકો ને બાળાઓની અંદર રહેલું હીર પ્રગટાવવામાં રહેલી છે. આ વસ્તુ વિદ્યાર્થીઓનાં મગજમાં નકામી હકીકતોનો ખીચડો ભરવાથી કદી સાધી ન શકાય. એવી હકીકતો વિદ્યાર્થી પર બોજારૂપ થઈ પડે છે. તેમની સ્વતંત્ર વિચારશક્તિને હણે છે ને વિદ્યાર્થીને કેવળ યંત્રરૂપ બનાવી દે છે.

૫) શિક્ષકો :

શિક્ષકો શિક્ષણના પ્રેમને ખાતર શીખવે અને પોતાના ગુજરાન પૂરતુ જ લે. એ જૂના વિચારમાં ગાંધીજી માને છે. રોમન કેથલિકોએ એ વિચાર સાચવ્યો છે અને દુનિયાની કેટલી સર્વોત્તમ કેળવણીની સંસ્થાઓ તેમને આભારી છે. પ્રાચીન ઋષિઓ તો એથી પણ આગળ ગયેલા. તેઓ તેમના વિદ્યાર્થીઓને પોતાના કુટુંબીજન બનાવતા. પણ તેઓ જે શિક્ષણ આપતા તે જનસમુદાયને માટે નહોતું. તેઓએ હિંદમાં માનવજાતના સાચા શિક્ષકોની એક જમાત ઊભી કરી દીધી. જનસમુદાયને ઘેર બેઠાં કેળવણી મળતી અને તેમના વારસાગત ધંધાઓનું શિક્ષણ મળતું.

(૬) સ્વાવલંબી કેળવણી :

ગાંધીજીના મતે શિક્ષણ ફરજિયાત કરવાને માટે, અથવા શિક્ષણ મેળવવાની ઈચ્છા રાખતા દરેક બાળક કે બાળાને તે મળી શકે એટલા માટે આપણી શાળાઓ અને વિદ્યાલયોને સંપૂર્ણ નહીં તો લગભગ સ્વાશ્રયી કરવાં જોઈએ એવી સૂચના ઘણીવાર આ પત્રમાં થઈ છે. સ્વાશ્રયી એટલે દાન અથવા સરકારી મદદ અથવા વિદ્યાર્થીઓ પાસેથી કઢાવવામાં આવતી ફી થી સ્વાશ્રયી નહીં, પણ વિદ્યાર્થીઓની પોતાની જાત મહેનતની કમાણી માંથી સ્વાશ્રયી વિદ્યાર્થીઓને અક્ષરજ્ઞાન સાથે ઔદ્યોગિક શિક્ષણ આપવાની આવશ્યકતા દિન-પ્રતિદિન સ્વીકારાતી જાય છે તે ઉપરાંત આ દેશમાં શિક્ષણને સ્વાશ્રયી બનાવવાને માટે ઔદ્યોગિક શિક્ષણ આપવાની વધુ આવશ્યકતા રહેલી છે. પણ આ ત્યારે જ બને કે જ્યારે આપણા વિદ્યાર્થીઓ જાત-મહેનતનું ગૌરવ સમજતાં થાય અને હાથ-મહેનતના કામનું અજ્ઞાન એ નામોશીરૂપ ગણાવાની પ્રથા પડી જાય.

સંદર્ભ પુસ્તકો :

૧. મારા સ્વપ્નનું ભારત ગાંધીજી, રાજેન્દ્રપ્રસાદ - નવજીવન પ્રકાશન,

સંકલન : આર. કે.

૨ ગાંધીજીને ઓળખતા શીખીએ, ધર્મપાલ પુનરૂથાન ટ્રસ્ટ