

बिलासपुर जिले में रेल यातायात पर जनसंख्या भार का विश्लेषणात्मक अध्ययन :समस्याएं एवं संभवनाएं

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ABSTRACT

परिवहन विभिन्न स्थानों या प्रदेशों के मध्य आर्थिक संबंधों व्यक्त करता है। अतः परिवहन विभिन्न स्थानों या प्रदेशों के आर्थिक संबंधों के प्रतिरूप के अनुरूप ही होता है। लघुस्तरीय नियोजन में यातायात का विशेष महत्व है, क्योंकि इसके बिना आर्थिक, सामाजिक तथा सांस्कृतिक विकास की अविरल धारा गतिहीन हो जाती है। यातायात सुदूर क्षेत्रों को जोड़ने के साथ समय एवं धन के अपव्यय को रोकता है।

किसी भी क्षेत्र में यात्रा एवं माल की परिवहन नीयता के लिए बारहमासी सड़कों को अत्याधिक महत्व होता है। राज्य में रेल परिवहन की सीमित की सीमितता एवं अपर्याप्तता के परिणामस्वरूप सड़क परिवहन के प्रमुख संसाधन माल तथा यात्री वाहन यान ही विकास के पर्याय है। अध्ययन क्षेत्र के यात्री भार के वितरण प्रतिरूपों के अध्ययन से यह स्पष्ट होता है कि जिन क्षेत्रों में रेलवे परिवहन की सुविधा है उन क्षेत्रों का तुलनात्मक रूप से यात्री भार कम है। अर्थात् लंबी दूरी के लिए लोग रेलमार्ग का ही चयन करते हैं। छत्तीसगढ़ में यातायात में कई प्रकार की बाधाएं भी व्याप्त हैं। जिसमें सड़कों के रख-रखाव में कमी होने पुराने वाहनों का परिचालन, वर्षाकाल में सड़क पटरियों को क्षतिग्रस्त होना इत्यादि।

Key words – प्रतिरूप, बारहमासी सड़क, लघुस्तरीय नियोजन, परिचालन

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INTRODUCTION

प्रदेशों के मध्य परिवहन की जरूरत तभी पड़ती है। जब किसी वस्तु या वस्तुओं के लिए एक प्रदेश में माँग हो तथा दूसरे में इस माँग की आपूर्ति हेतु वस्तु विशेष का अधिक्य हो। इस प्रकार की परिपूरकता के लिये विभिन्न प्रदेशों की प्राकृतिक भिन्नता उत्तरदायी होती है। धरातलीय बनावट जलवायु, प्राकृतिक वनस्पति, खनिज संसाधन, मिट्टी, प्राकृतिक तत्वों में भिन्नता होने के कारण ही किसी प्रदेश में किसी वस्तु विशेष का उत्पादन एवं आधिक्य होता है, जबकि किसी अन्य प्रदेश में उस वस्तु विशेष की कमी होने से अधिक माँग होती है। इसी तरह मानवीय तत्वों की भिन्नता तथा उत्पादन पैमाने में अंतर होने पर भी परिपूरकता उत्पन्न होती है। उदाहरणार्थ यदि किसी प्रदेश में एल्युमिनियम की माँग है तो उनके मध्य परिवहन संबंध स्थापित हो सकता है, लेकिन यदि किसी प्रदेश में बॉक्साइट की माँग है तथा दूसरे प्रदेश में एल्युमिनियम का आधिक्य है तो यह विशिष्ट परिपूरकता नहीं होती, फलतः उनके बीच परिवहन की जरूरत नहीं पड़ती है।

प्रस्तुत अध्ययन का प्रमुख उद्देश्य बिलासपुर जिले में रेल यातायात पर जनसंख्या भार का विश्लेषणात्मक अध्ययन करना है। ताकि इस अध्ययन के आधार पर इस क्षेत्र की परिवहन की समस्याओं एवं संभावनाओं का सम्यक ज्ञान हो।

METHODOLOGY

Collection of Data:

प्रस्तुत अध्ययन मुख्यतः द्वितीयक आंकड़ों पर आधारित है। मुख्य रूप से दक्षिण पूर्व मध्य रेलवे कार्यालय, बिलासपुर, मंडल वाणिज्य प्रबंधक कार्यालय, दक्षिण पूर्व मध्य रेलवे, बिलासपुर एवं अन्य स्रोतों से आंकड़े एकत्र किए गए हैं। अध्ययन में आनुभाषिक विश्लेषणात्मक तथा प्रतिशत विधि का प्रयोग किया गया है। तालिकाओं एवं दण्ड आरेखों का भी प्रयोग किया गया है।

RESULT AND DISCUSSION

बिलासपुर रेलवे जोन मुख्यालय के साथ-साथ दक्षिणी-पूर्वी मध्य रेलवे का महत्वपूर्ण जंक्शन है जहाँ से प्रतिदिन कई हजारों की संख्या में यात्री विभिन्न दिशाओं की ओर यात्रा करते हैं। वर्ष 2009-10 में माहवार यात्री संख्या तथा आय तालिका 1 में स्पष्ट किया है। बिलासपुर स्टेशन से विभिन्न दिशाओं तथा स्टेशनों में प्रतिदिन यात्री संख्या जनसंख्या भार को तालिका 2 में दर्शाया गया है।

परिवहन की सस्ती लागत के लिए यह आवश्यक है कि माल ढोने की लम्बी दूरियों में कोई बाधा या रुकावट न हो। परिवहन मार्ग यथासम्भव सीधे तथा समतल वाले हों। माल ढोने वाले वाहनों या पोतों के आकार बड़े हों। माल की ढुलाई करने वाले वाहनों को लौटते समय दूसरे प्रकार का माल ढोने के लिये उपलब्ध हो।

परिवहन की गति भी परिवहन लागत को घटा बढ़ा सकती है। शीघ्रगामी परिवहन के साधनों से वस्तुओं की ढुलाई सस्ती पड़ती है। अब तापशीत नियंत्रित वाहनों से लम्बी दूरी तक ऐसे माल की ढुलाई भी सम्भव हो गयी है, जो शीघ्र खराब हो जाते हैं। लेकिन ऐसे परिवहन में खर्च अधिक आता है। परिवहन लागत को कम करने के लिए यह आवश्यक है कि वस्तुओं का प्रसंस्करण करके उनका परिवहन किया जाये। साथ ही सड़क मार्गों को यथासम्भव अधिक चौड़ा करना, रेल मार्गों में जहाँ भी सम्भव हो दोहरी या अधिक लाइनें बिछाना, उनके किनारे-किनारे प्रकाश की व्यवस्था करना, उनके मार्ग के पुलों, सुरंगों आदि की मरम्मत करने से परिवहन की कुशलता बढ़ती है और उनकी गति में वृद्धि होती है। मोड़ों को अधिक सुविधाजनक बनाकर तथा छोरों की टरमिनल सुविधाओं को बढ़ाकर वाहनों की गति में वृद्धि की जा सकती है। इसके साथ-साथ नवीन तकनीकों द्वारा सुधार किये गये

इंजनों का प्रयोग कर परिवहन की क्षमता और गति में वृद्धि की जा सकती है। जलपातों, टैंकरों, स्टीगरों और वायुयानों आदि में आधुनिक किस्म के इंजनों का प्रयोग करके उनकी गति बढ़ायी जा सकती है। उन्हें स्वचालित सिगनलिंग, रेडियो संचार, रडार आदि सुविधाओं से भी सुसज्जित करना चाहिए।

बिलासपुर रेलवे जोन मुख्यालय के साथ-साथ दक्षिण-पूर्वी मध्य रेलवे का महत्वपूर्ण जंक्शन है जहाँ से प्रतिदिन कई हजारों की संख्या में यात्री विभिन्न दिशाओं की ओर यात्रा करते हैं। वर्ष 2009-10 में माहवार यात्री संख्या तथा आय को तालिका 1 में स्पष्ट किया गया है। जिसमें अप्रैल 2009 से लेकर दिसंबर 2010 तक के आंकड़ों के विश्लेषण से स्पष्ट होता है कि इन 9 महीनों में सबसे अधिक यात्री और आय माह अक्टूबर में प्रतिवेदित (12.39 एवं 12.40 प्रतिशत) हुआ है। दूसरे क्रम पर माह दिसंबर में 11.34 प्रतिशत एवं 12.19 प्रतिशत प्रतिवेदित हुआ है। इस अवधि में सबसे कम यात्री माह अप्रैल में 10.34 प्रति है जबकि आय में, सबसे कम 9.64 प्रतिशत माह अगस्त में प्रतिवेदित हुआ है। बिलासपुर स्टेशन से विभिन्न दिशाओं तथा स्टेशनों में प्रतिदिन यात्री संख्या जनसंख्या भार को तालिका में प्रदर्शित किया गया है। वैसे बिलासपुर स्टेशन से अप दिशा (रायपुर मार्ग) की यात्री भार ज्यादा है जो वर्ष 2009-10 के आंकड़ों से स्पष्ट हो जाता है इस वर्ष में डाउन दिशा की ओर छत्तीसगढ़ का अंतिम स्टेशन यामगोंव (145 किमी.) है जहाँ इस अवधि में 2360 यात्रियों ने यात्रा की जबकि इसी अवधि में अप दिशा में अंतिम स्टेशन डोंगरगढ़ (192किमी) के लिये 28376 लोगों ने यात्रा की। इस तरह देखा जाय तो अप दिशा में रेलवे पर यात्री भार ज्यादा प्रतिवेदित हुआ है।

तालिका में बिलासपुर रेलवे स्टेशन से वर्ष 2009-10 तथा 2010-11 में विभिन्न दिशाओं तथा स्टेशनों के लिये माहवार आरक्षित टिकट बिक्री एवं आय का तुलनात्मक विवरण दिया गया है। जिसके विश्लेषण से स्पष्ट होता है। कि विभिन्न महीनों में आरक्षण यात्रियों की संख्या तथा आय में काफी भिन्नता है खासकर जून-जुलाई, अगस्त तथा जनवरी में तुलनात्मक रूप से यात्रियों की संख्या तथा आय कम प्रतिवेदित हुआ है। रेलवे यात्रा की दृष्टि से ये महीने कुछ सुस्त महीने माने जाते हैं। जबकि मार्च-अप्रैल तथा अक्टूबर-नवम्बर महीने रेल यात्रा की दृष्टि से ज्यादा भार वाले महीने माने जाते हैं। राज्य के प्रमुख रेलवे स्टेशनों (बिलासपुर एवं रायपुर नगरों से अप एवं डाउन लाईन) से प्रतिदिन विभिन्न स्टेशनों के बीच जनसंख्या भार को तालिका 3 में स्पष्ट किया गया है।

TABLE - I

बिलासपुर स्टेशन से माहवार रेलवे यात्री संख्या एवं आय

2009-10				
माह	यात्री	प्रतिशत	आय	प्रतिशत
अप्रैल	646692	10.34	21574129	9.73
मई	752491	12.03	27206890	12.27
जून	704977	11.27	26159436	11.79
जुलाई	649350	10.38	23849103	10.75
अगस्त	657953	10.52	21374593	9.64
सितम्बर	668986	10.7	21927641	9.88
अक्टूबर	774731	12.39	27503523	12.4
नवम्बर	686964	10.98	25099406	11.32
दिसम्बर	709219	11.34	27029941	12.19
कुल	6251363		221724662	

स्रोत – मुख्य बुकिंग पर्यवेक्षक दक्षिण पूर्व मध्य रेलवे, बिल

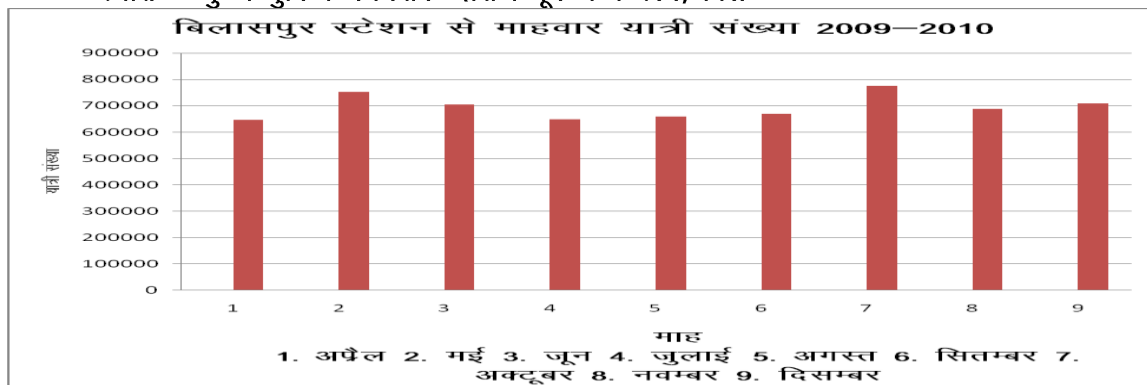


TABLE - 2

बिलासपुर स्टेशन : आरक्षित टिकट बिक्री एवं आय का तुलनात्मक विवरण

2009-10				2010-11		
माह	मॉग पत्र	यात्री	आय	मॉग पत्र	यात्री	आय
अप्रैल	62566	95526	22810610	56583	83750	18343135
मई	68715	90952	19207808	65179	85350	19084382
जून	59494	78814	16977002	52954	69177	16353820
जुलाई	50313	72208	17339831	51329	74316	18748070
अगस्त	51068	76444	17817646	51091	77557	19269684
सितम्बर	51577	79200	17642322	52943	82645	19042022
अक्टूबर	57394	85105	18878849	57496	82324	18294610
नवम्बर	59254	82754	18465214	58897	85431	19499278
दिसम्बर	58691	82267	17152913	56180	80167	17315590
जनवरी	52985	73011	16108116	55157	80488	18549506
फरवरी	55522	80055	17347064			
मार्च	60118	93951	21105272			

स्रोत: मुख्य वाणिज्य प्रबंधक, दक्षिण-पूर्व-मध्य रेलवे, बिलासपुर

TABLE - 3

छत्तीसगढ़ राज्य : बिलासपुर नगर से विभिन्न स्टेशनों में रेलों पर प्रतिदिन जनसंख्या भार (2010)

क्रं.	स्थान (अपलाईन)	दूरी (कि.मी.)	यात्री संख्या	प्रतिशत
1.	दाधापारा	6	860	2.88
2.	चकरभाठा	12	1015	3.40
3.	बिल्हा	18	3020	10.13
4.	दगोरी	24	890	2.98
5.	निपनिया	30	810	2.70
6.	भाटापारा	40	4866	16.32
7.	हथबंद	48	630	2.11
8.	तिल्दा	59	699	2.34
9.	बैकुठ	65	279	0.64
10.	सिलयारी	72	201	0.25

11.	मंदर	83	662	2.20
क्रं.	स्थान (अपलाईन)	दूरी (कि.मी.)	यात्री संख्या	प्रतिशत
12.	रायपुर	111	8286	27.79
13.	सरोना	117	205	0.42
14.	कुम्हारी	121	342	1.14
15.	भिलाई	130	790	2.64
16.	भिलाई पावर हाउस	134	940	3.15
17.	भिलाई नगर	137	315	1.05
18.	दुर्ग	141	796	2.67
19.	राजनांदगांव	170	310	1.03
20.	डोंगरगढ़	192	3096	10.38
योग			29812	100%

क्रं.	स्थान	दूरी (कि.मी.)	यात्री संख्या	प्रतिशत
1.	उसलापुर	5	970	9.02
2.	घुटकू	9	924	8.59
3.	कलमीटार	17	1130	10.50
4.	करगीरोड़	30	2152	20.01
5.	वेकटनगर	38	991	9.21
6.	बेलगहना	46	1090	10.13
7.	खोंड्री	54	765	7.11
8.	खोंगसरा	65	699	6.50
9.	पेंडारोड़	87	2032	18.89
योग			10753	

स्रोत: कार्यालय, मंडल वाणिज्य प्रबंधक, द.पू.मध्य रेलवे बिलासपुर

TABLE - 4

छत्तीसगढ़ राज्य : बिलासपुर नगर प्रमुख नगरों में रेलों पर जनसंख्या भार (2010)
रायगढ़ लाईन

क्रं.	स्थान (डाउन लाईन)	दूरी (कि.मी.)	यात्री संख्या	प्रतिशत
1.	गतौरा	6	540	5.07
2.	जयरामनगर	10	415	3.89
3.	लटिया	16	403	3.78
4.	कोतमी सोनार	21		
5.	अकलतरा	32	1240	11.64
6.	कापन	36		
7.	चोंपा	43	1650	15.49
8.	नैला	54	1122	10.53
9.	सारागोंव	59		
10.	बराद्वार	64	436	4.09
11.	जेठा	70		
12.	सक्ती	78	532	4.99
13.	झाराडीह	86	217	2.03
14.	खरसिया	98	1020	9.58

15.	रावर्टसन	106	203	1.90
16.	भूपदेवपुर	114	212	1.99
17.	किराडीमल नगर	126	307	2.88
18.	रायगढ़	133	2035	19.11
19.	कोतरलिया	139	164	1.54
20.	यामगोव	145	150	1.40
योग			10646	
मसिक पासधारी			507	
महायोग			11153	

स्रोत: कार्यालय, मंडल वाणिज्य प्रबंधक, द.पू.मध्य रेलवे बिलासपुर

CONCLUSION

नियोजित यातायात का भावी विकास पर प्रभाव— आर्थिक विकास हेतु अनुकूल विन्यास समायोजन, आर्थिक तत्वों के समुचित स्थापन, उत्पादन विशेषीकरण तथा क्षेत्रीय कार्यात्मकता में परिवहन का महत्व अप्रतिम है। वृहद पैमाने पर उत्पादन उत्पादों का विपणन एवं संचरण, व्यापारिक विकास तथा सामाजिक सांस्कृतिक एवं बौद्धिक समागम, संवादों, समाचारों, नीतियों, योजनाओं एवं अविष्कारों का संचरण परिवहन द्वारा संभव है। परिवहन सेवाओं के अभाव में किसी क्षेत्र के सर्वांगीण विकास की कल्पना नहीं की जा सकती। व्यक्तियों तथा वस्तुओं की एक दूसरे स्थान के लिए गतिशीलता ही परिवहन है। राष्ट्रीय आर्थिकी के बहुआयामी विकास में भूवैन्यासिक अंतर्संबंध को निर्धारित करने में परिवहन की महती भूमिका है। अतः परिवहन ग्रामीण विकास का एक परम आवश्यक तत्व है। वास्तव में यातायात—जाल आर्थिकी की धमनियाँ हैं, जिनके द्वारा आर्थिकी का जीवन रक्त प्रवाहित होता है। अतः परिवहन जाल भूवैन्यासिक व्यवस्था का अत्यंत आवश्यक अंग है और उसकी पूर्ण सुविधा के बिना किसी भी क्षेत्र के प्राकृतिक एवं सांस्कृतिक संसाधनों का गहनतम उपभोग असंभव है। आदर्श परिवहन जाल यातायात समय को कम करता है, परिवहन खर्च घटाता है, विपणन अवसरों को विस्तृत करता है, अकृषित रोजगार अवसरों में वृद्धि करता है, तथा उपभोक्ता वस्तुओं की उपलब्धता को सुनिश्चित करता है।

भारी आर्थिक विकास हेतु अनुकूल भूवैन्यासिक समायोजन, आर्थिक तत्वों के समुचित संस्थापन, उत्पादन विकेन्द्रीकरण तथा क्षेत्रीय कार्यात्मक समायोजन में परिवहन का महत्वपूर्ण योगदान होता है।

यातायात नियोजन का आर्थिक विकास पर प्रभाव निम्न रूपों में दृष्टिगोचर होगा—

1. अनुकूल परिवहन सुविधा होने पर कृषि के लिए आवश्यक रासायनिक उर्वरक, बीज, यंत्र आदि बाजार केन्द्रों से प्राप्त करना आसान हो जायेगा।
2. परिवहन की सुविधा दुग्ध उत्पादन हेतु ग्रामीणों को उत्प्रेरित करेगी जिससे क्षेत्र में श्वेत क्रान्ति आ जायेगी।
3. समुचित परिवहन सुविधा के फलस्वरूप ग्रामीण क्षेत्रों में कृष्येत्तर कार्यो तथा श्रम की गतिशीलता बढ़ेगी, एवं लघु तथा कुटीर उद्योगों के विकास में महत्वपूर्ण योगदान होगा।
4. व्यापार का मूर्त रूप परिवहन मार्गों पर ही दृष्टिगोचर होता है क्योंकि परिवहन एवं व्यापार एक दूसरे से संबद्ध होते हैं। अतः समुचित परिवहन व्यवस्था से व्यापार में गतिशीलता आएगी तथा कृषि उपजों, सब्जी आदि का उचित लाभ कृषकों को प्राप्त होगा।

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STATISTICAL TECHNIQUE USED: EFFECT OF YOGIC PRACTICE ON IMMEDIATE MEMORY

Gulbahar khan*

ABSTRACT

The study under report was conducted to find out the effect of yogic practice on 'immediate memory'. Fifty high school students of Noida city, were engaged as subjects. The immediate memory of the subjects was measured by immediate memory test (Dixit, 1986). The test was administered on the selected subjects before and after yogic practices of three months. The data were analyzed by employing Mean, S.D. and 't' value. The immediate memory of post test (after yogic practices) is significantly higher in comparison to the pre test (before yogic practices). It means that yogic practices increase the immediate memory.

Keywords: Yogic practice, Memory, students, Training

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INTRODUCTION

Yoga is considered to be one of the most important, effective and valuable tool for man to overcome various physiological and psychological problems. Yoga helps the whole body to enable it to face with stress and strain. Yoga proposes healthy diet and encourages the natural process elimination, whenever it is necessary Yoga aims at an integrating all potentialities of person.

Immediate memory and stress are the major problems of the modern world, particularly of the youth and college going students, who are loosing their health and well-being. Immediate memory is defined as “the mental process of retaining information for later use and retrieving such information” (Birren, Sloane, & Cohen, 1992). Memory is classified into two categories, i. e. Short term memory and long term memory Short term memory is also known as episodic or working memory Short-term memory can last from a few second to one hour. Long-term memory can last for a life time (Lezak, 1995). Decreased cognitive functioning such as memory loss, is most frequently associated with again diseased and injury

Yogic practices play an important role in cognitive functioning. Elsayed, Ismail, and Young (1980) proposed three reasons why yogic exercise improved fitness and also enhanced cognitive functioning. They proposed that increased transportation of oxygen and glucose to the brain as well as increased self-esteem and decreased psychological distress, would result in improved performance on complex psychological task. Rogers, Meyer, and Mortel (1990) studying on 80 elderly volunteers proposed that regular participation in physical activity could minimize cognitive decline by sustaining optimal “cerebral perfusion”. Capaldi, Hawkins, and Kramer (1992) agreed with Rogers et al, that oxygen and blood to the brain affect mental function. They based this conclusion on the fact that cardiovascular conditioning through yogic exercise increases aerobic capacity and cardiac output by increased stroke volume and oxygen extraction. As a result, cardiovascular conditioning may reduce or reverse age related declines in mental function attributed to cardiovascular insufficiency. Molley et al. (1968) working on older adults found that after yogic exercise there was increase in logical memory Diesfeldt and Diesfeldt-Groenendijk (1977) also reported an improvement in recent memory following light exercise. The positive impact of yogic exercise on physical well-being has been well documented The relationship correlates with the extent to which the cardiovascular system is stressed and is quantifiable (Brooks & Fahey, 1984). The idea that yogic exercise improves mental attitude and performance has been the basis for many corporations establishing fitness programs.

The studies conducted in the field of physical education, are mostly concerned with short-term memory or long-term memory of cognitive

functioning. There are negligible studies pertaining to immediate memory and yogic practices. Hence, the present investigation aims at the following:

The objective of the present study was to examine the effect of yogic practices on immediate memory. It was hypothesized that there will be significant difference between the Mean immediate memory scores of pre test and post test condition.

METHODOLOGY

Sample:

First of all about 400 male students studying in high school and interested in yoga exercises were selected from NOIDA PUBLIC SCHOOL of NOIDA city. Among them, fifty students were finally selected through simple random sampling method .

Tool:

Immediate memory test: Immediate memory of the subjects was measured by an 'immediate memory test' constructed by Dixit (1986).

Procedure:

The immediate memory of the selected subjects was assessed by the above mentioned test before and after the training of yogic practices. The choice of yogic practices, namely Asana, Pranayama, and Dhyana were made on the basis of experts' advice acquired. The investigator conducted pre- research tour and visited various yoga centers for conversation with experts in the field of yoga to gain practical' experiences.

In the present study, the subjects were tested (pre test- post test) on the aforementioned measure to find out the significance of difference between Mean scores of pre test and post test conditions. For this, t-value was computed while calculating Mean, Standard Deviation (S.D.), Standard Error (SE.), Standard Error of Difference (SED.) and Co- efficient of correlation (r).

Research Design:

As mentioned earlier the present study was designed to examine the effect of yogic practices on immediate memory of the selected subjects. The immediate memory test was administered to the subjects before yogic practices and after the training (yogic practices) of three months, thus a single group was tested at two times (pre and post), so it tends be a single group design.

RESULT AND DISCUSSION

As reported earlier, the Mean immediate memory scores of the subjects were obtained under pre test and post test condition to observe the effect of yogic practices on immediate memory and significance of difference was find out using t-test. The Mean, S.D., S.E., S.E.D." Coefficient of Correlation along with 't' "value have been present d in Table no. 1. The comparison of mean immediate memory scores of pre test and post test condition is also presented through Bar diagram appeared in figure 1.

Results of analysis indicates that the Mean immediate memory scores of post test is higher in comparison to Mean immediate memory scores of pre test condition. The obtained t-value is found to significant at .01 level of confidence. Thus, the hypothesis of the present study is accepted The finding of the investigation indicates that immediate memory is improved after the yogic practices for three months.

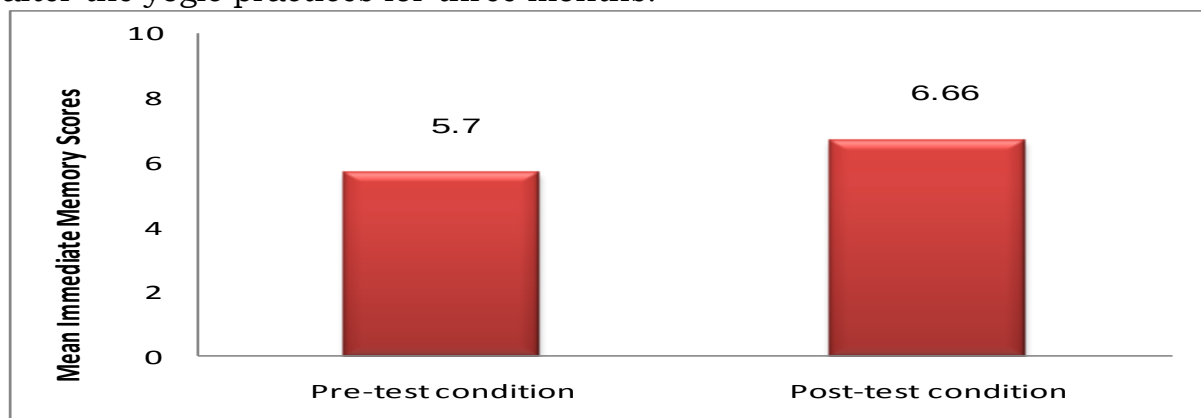


Figure 1: A comparison between Mean immediate memory scores of pre-test and post test conditions

On the basis of this result, it may be said that yogic practices improve the immediate memory of the subjects. The present finding gets support from the studies of various investigators who reported improvement in memory after different yogic exercises. Elsayed, Ismail, and Young 1980; Roger, Meyer, and Mortel, 1990 indicate that yogic practices significantly increase the immediate memory level of practioners. In fact, due to yogic practices including sarvangsana, halasana, matsyaasana, bhramari pranayama, ujjayi, nari shodhan, and om dharna and dhyana vigilance, introspective awareness, and will power are developed result in improved immediate memory.

CONCLUSION

The Mean immediate memory of the post test condition is significantly higher in comparison to the Mean immediate memory scores of pre test condition. Summarily, we may state that yogic practices increase the immediate memory of the subjects.

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RELATIONSHIP BETWEEN SOCIAL COHESION AND TRENDS TABRIZ MALE CITIZENS TO SPORT

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ABSTRACT

The purpose of this study is to examine the relationship between social solidarity and the attitude of Tabriz male citizens to the sport for all. The method of research is descriptive and survey. The statistical society of the present research consisted of all Tabriz males above 15 years old. So the sample size contains 383 Tabriz male citizens who were randomly selected by cluster sampling. The research tools are two questionnaires of social solidarity & tendency of sport for all. The validity of questionnaires was confirmed by nine experts and reliability of them by alpha coefficient ($\alpha:0/81$) was determined. For the analysis of data, statistical methods of binomial test and Spearman correlation coefficients were used. Findings indicated a significant inverse correlation between social solidarity and the attitude of Tabriz male citizens to sport for all. This means that citizens with higher social solidarity have low attitude to sport for all. However sportive activities haven't been able to cause the social creation and reinforcement so because of the important and positive function of these issues especially on metropolises, serious consideration of the officials and planners for the solutions of the mentioned problems seems obligatory.

Keywords: sport for all, attitude, social solidarity, citizens.

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INTRODUCTION

Over the past 20 years, great attention to the concept of social capital among academic researchers from several disciplines including sociology of sport is (Harvey, 2007). Desirable functions of sport in society such as increased empathy, solidarity and social participation, strengthen social ties and contribute to the process of socialization is (Majdara, 2011). In this regard, the exercise can overcome obstacles and differences are cultural (Rosso & McGrath., 2012). and to contribute to public health has been valued (Australian Institute of Health and Welfare, 2006).

The definition of sport to express Pirdukobertan "all sports for everyone 92 years ago (Mirzamani, 1390). Professor Ken Hardman "Professor of Manchester University in England and a member of the Sports Council of Europe" states that sport, in fact, a form of physical activity that improves physical health and forming social relationships or lead to the results of matches at all levels (Sajjadi, 2010). In a study of Philip and Jack public in 2007 with the theme of sports participants did and it turns out that developing the sport in general in society, through the participation of researchers, politicians and people with experience there (Joke opdenacker, 2007).

Check the status of sport in Australia, Germany, Japan, Malaysia, Finland and Denmark show that regular program for the development of sport in the country more than 50 years of history. Several factors play a role in this success Before anything can be grown in the framework of the national program for sport and active government support of these programs cited. In addition, the development and establishment of sports clubs and public places and the formation of professional associations related to sport also is noteworthy (javadpour, 2011). As well as social and personal health is more important in modern society And these countries in developing strategic document, the consent and participation of society in order to live a healthy, social cohesion and economic development are considered (javadpour, 2013). Tondnevis and et al (2004) Factors affecting the development of sport include: Improve the economic situation of people, the media, according to family status (number of children and marital status), Sport competitions and awards, expand public transport fleet, giving priority to leisure time and the use of private sector investment.

In Persian, the word attitude in the face orientation and in some cases "attitude" in Persian language have. The term of social psychology and other sciences has several meanings. In one of the oldest uses of this term means that the body posture, For example, in initial tests of reaction time, experimenters when the subjects prepared to respond to stimuli Beck spoke, used the term. But now someone refers to the mental aspect, although be prepared to act or respond to a stimulus is still preserved in this definition (Karimi, 2003). One of the theories that there is a tendency for this theory jack and is Eisen. They tend to explain the behavior of their role. In their opinion, behavior in the wake of a series of factors caused. Pre-loop behavior intention to perform a behavior. The creation of intention in turn is a function of two variables: trend towards behavior and subjective norm (Rafipou, 1993).

The findings Navabakhsh and Javanmard (2013) One of the functions of sport in society, the level of social and cultural capital of the statistical population So as to increase and expand the network of relationships between people sent in common and people brought out of isolation and loneliness and solidarity and links between people in order to fit them together to Communicative action and to reach an agreement and agreed to strengthen institutions and structures of society marks. Thus, according to the major functions and enormous benefits for human societies, sport and social cohesion We are here to study the relationship between social cohesion and attitude toward sport can be.

MATERIALS AND METHODS

Survey descriptive study, in terms of target field is applied and the data collection. The study sample included all male citizens over 15 years old Tabrizi, according to the Statistical Center of Iran in 1390, up that number is about 620

thousand people are on the Statistical Center of Iran. The sample size Morgan table, 383 residents of Tabriz men who were selected by cluster sampling. Tools and methods of data collection for this study has included two questionnaires that According to research, design and set goals and two of the sport's social cohesion and tends to measure. Validity content and face validity of the questionnaire was confirmed by sports management and reliability based on Cronbach's alpha was 0.81

ANALYSIS OF RESULTS

. For the the statistical methods, binomial test and Spearman correlation coefficient, SPSS version 18 was used.

Table 1. The demographic distribution

Marital status	Number	Percent	Valid percent
Married	228	59.4	59.4
Single	155	40.6	40.6
Total	338	100.0	100.0
Employment status	Number	percent	Valid percent
Practitioner	252	65.7	65.7
Student or student	75	19.5	19.5
Unemployed	39	10.2	10.2
Retired	17	4.7	4.7
Total	338	100.0	100.0
Current Location	Number	percent	Valid percent
Private home	237	61.7	61.7
Rental	75	19.5	19.5
Villa	9	2.3	2.3
the apartment	51	13.3	13.3
other items	11	3.1	3.1
Total	338	100.0	100.0
Number of family members	Number	percent	Valid percent
Two people	27	7.0	7.0
three person	75	19.5	19.5
four people	138	35.9	35.9
Five people	93	24.2	24.2
Six and more	50	13.3	13.3
Total	338	100.0	100.0
Head of Household	Number	percent	Valid percent
Yes	204	53.1	53.1
No	179	46.9	46.9
Total	338	100.0	100.0

For variable marital status, Employment status, Current Location, Number of family members, Head of House hold, frequency and percentage and histogram is drawn. Of the total samples, 59.4 percent are single, married and 40.6 percent. Of the total sample, 65.7 percent were employed, 19.5 percent of the student or students, 10.2% were unemployed, 4.7 percent are retired. Of the total sample, 65.7 percent were employed, 19.5 percent of the student or students, 10.2% were unemployed, 4.7 percent are retired. Of the total sample, 53.1 percent of heads of households. Of the total sample, number of family members 7% two, 18.5% 3 35.9% 4 patients, 24.2% and 13.3% 5 people 6 people and more.

Table 2. Descriptive indicators variables

	No	Avreage	Standard deviation	Skewness	Elongation	min	max
tendency towards sport	384	3.5648	0.41898	-0.437	-0.444	20.59	4.41
social cohesion	384	2.5563	0.71230	-0.319	-0.542	1.00	4.10

Social cohesion average of 2.56, the lowest amount equal to 1.0 times the maximum value of 4.10. average tendency to sport to 3.56, the lowest amount equal to 2.59 and 4.41 times the maximum value.

Tabriz man to the attitude of citizens to participate in sport for sport orientation were revealed as distribution, binomial nonparametric test was used to test the hypothesis. As a result of the tendency of citizens to participate in sport for men Tabriz significantly higher than average.

Table 3. Binomial test results to check the tendency towards sport

dependent variable	Group	About Floor	Number	Likely observed	Test probability
tendency towards sport	Group 1	≥ 3	54	0.14	0.50
	Group2	$3 <$	330	0.86	

To search for social cohesion Tabriz male citizens were revealed as the distribution of social cohesion variables, binomial nonparametric test was used .Binomial test results show that the social cohesion among citizens Tabriz man is significantly below the national average(P-values of less than 0.05 and a lot of class, "smaller and more equal)

Table 4. Binomial test results to check the Social cohesion

dependent variable	Group	About Floor	No	Likely observed	Test probability
Social cohesion	Group 1	≥ 3	285	0.74	0.50
	Group2	$3 <$	99	0.26	

Relationship between social cohesion Tabriz male citizens and their attitudes towards sport

To test this hypothesis, the Spearman correlation coefficient was used. Spearman correlation coefficient equal to 0.136- and 0.001-test is significant. The tendency of male citizens between social solidarity and universal sports Tabriz there is a significant inverse relationship.

Table 5
Spearman correlation test for social cohesion and attitudes towards sport

tendency towards sport	Social cohesion	
	Correlation	-0.163
	Significance level	0.001
	Number	383

DISCUSSION AND CONCLUSION

Results show that the social cohesion among citizens Tabriz significantly lower than the average man is. That due to the effects of urbanization and urbanization, changing lifestyle patterns and urban planners people, especially the lack of attention to this important issue cited and this despite the fact that in Western countries as an important factor in social cohesion and social capital Special attention turns. However, in recent years, actions by municipalities including hiking holidays and made TV and radio in major cities and the presence of municipal authorities in the event that suggests attention to building and strengthening social cohesion and trust, but should not be confined to the limit.

The results indicate that Tabriz male citizens to exercise universal tendency to be significantly higher than average.

The results of most studies in the field of participation in sport in our country and even some foreign countries Show low participation in sports is universal. Finally, the results indicate that Tabriz male citizens between social cohesion and their tendency to sport there is a significant inverse relationship. This means that in areas of the city of Tabriz, people have more social cohesion trend towards sport and environment areas with less social cohesion is low.

Despite the fact that sport can play a role as a key factor in creating social cohesion and On the other hand, social cohesion and could lead to the tendency of citizens to be very effective and useful sport and the results of research carried out in Western countries suggest a positive effect on each of these two categories is In fact, one of the most important goals of Western citizens in the exercise, pay attention to social issues, public relations, social interaction, cohesion is. Studies in other countries show that people in the sport for a better life and improve the quality of life. Motivation to engage in sport, improve social relations.

The interaction, cooperation of individual motives participate in sport is. Unfortunately, despite the situation in the country in research and research necessary to guide society in the right direction and the right to use the capacity of urban culture not and many of the city because of anomalies and lack of attention, rather than a positive impact on the negative effects in the opposite direction have.

CONFLICT OF INTEREST

The authors declare no conflict of interest

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CONTRIBUTION OF PSYCHOLOGICAL SKILLS IN RUNNING PERFORMANCE OF NATIONAL LEVEL SPRINTERS

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ABSTRACT

Participants of competitive sports, have to be more alert and attentive to the task in hand to give the desired level of performance during the competitive situation. There are such important psychological competitive requirements, which if not fulfilled by the participants will lead to disastrous failure of performance. The purpose of the study was to investigate the contribution of psychological skills to sprinting performance. A purposive sample of forty one national level male sprinters from various national level athletics championship were selected as the subjects for this study. The ACSI-28 -Athlete Coping Scale Inventory-28 (Smith et al. 1995) is a sport-specific scale consisting of 28 items multidimensional inventory that measures the psychological characteristics of athletes on seven subscales was employed on all the subjects. For collection of data, the subjects were contacted personally by the scholar with their coaches at the site of respective Championships and their sincere cooperation was solicited. To investigate the psychological skills on seven sub-scales for national level male Sprinters, means and standard deviations were computed. Multiple Correlation and Regression analysis were computed to find out the contribution of different psychological skills to sprinting performance. The results of study revealed that the sprinting performance of male sprinters was significantly correlated only with coach ability factor of psychological skills. The selected psychological variable did not significantly predict 100 meter sprinting performance of male sprinters.

Keywords: Male, sprinter, Psychological Skills, National level, Indian

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INTRODUCTION

The sport performance of an athlete or a team does not only depend on the good physical and technical preparation, but it is also the result of the combination of physical and psychological factors, perfectly placed in the frame of a training which promotes performance (Martin, Carl & Lehnertz, 2000). According to Lazarus (1991), psychological skills describe the knowledgeable, emotional and behavioral effort of a person trying to face the external and internal demands which lie ahead.

Numerous factors that are believed to be contributory for an outstanding performance. Psychological factors are influencing more than another factors, which is no longer a misnomer but accepted fact. Goal orientation helps an athlete to raise the standard of training and performance in competition. Whereas, coping skills protects human being from psychological harm by challenging experiences in their lives. Finally participation motivation addresses the general questions of why and how athletes become actively involved in sport. Along with many other disciplines, psychology has recognized the importance of individual differences such as gender in teaching and research. (Jayashree, Amina and Shailaja, 2009).

Psychological skills currently most focused on in sport include arousal, mental imagery, attention, concentration, self-confidence, goal setting and motivation (Wann & Church, 1998; Weinberg & Gould, 2007).

Psychological skills are important characteristics of sport performance. The considerable emphasis has been directed at identifying relevant skill and instructing sport consultant, coaches, and athletes in how to teach, learn, and apply them (Williams, 1993). Moreover, there is an evidence that psychological skills have a relationship with sport performance (Gabril, & Perkins, 1987; Gould, Weiss, & Weinberg, 1981; Mahoney, 1989 Greenspan & Feltz, 1989) and injury vulnerability. Finally, psychological skill are often important result variables in performance enhancement intervention program, and it is therefore important to be able to assess change in such skills as a means of evaluating program efficacy (Smith, 1980, 1989b). For all of these reasons, it is planned for assessment of psychological skills of Indian Athletes in reference to their performance

The ACSI-28 accounted for as much variance in batting average as did physical skills. For pitching, the psychological measures accounted for much more variance in earned run average than did physical skills (Smith and Christiansen, 1995). The psychological factors that influence soccer performance could provide important information to improve the athlete's preparation for the game and lead to intervention methods to improve fair play (Junge et al., 2000). Successful and non-successful athletes differ significantly on self-confidence and competitiveness (Jacques & Van, 1996). Mental qualities and preparation factors are important in the athletic and personal development of elite track and field athletes (Vernacchia et. al., 2000). Sport psychological skill levels differ from one position to another in the game rugby (Andrew, 2006). Peaking under pressure and 'coach-ability' appeared to be strong predictor variables for earned run average, and coach-ability' for batting average (Kimbrough, Louisa, & Balkin, 2007). Adversity and coach ability is affected by the age groups of the athletes. Older athletes were better prepared to cope with the psychological distress involved in the play of badminton and reported better self-control on emotions (Bebetsos and Antoniou, 2003). Personal coping ability is effected by the level of achievement in gymnastics (Waples, 2003). Psychological skills may affect performance in differing ways

throughout competition (Thelwell, Greenlees & Weston, 2010). Free diving sport has positive effects on situational and stable psychological characteristics (Alkan & Akis, 2013).

Similarity was seen in seven dimensions of psychological characteristics among university male athletes of different levels. Inter-university and All India level male athletes expressed significant difference on goal setting and mental preparation (Sharma & Nigam, 2011). Male basketball players at different levels of performance showed the significant differences on specific psychological skills. But significant difference was not observed between juniors and youth national boys basketball players on coping with adversity and peaking under pressure (Yadav, Shukla and Yadav, 2012). Yadav (2014) revealed that the level of coping with adversity and peaking under pressure was significantly high among university judokas compared with national level judokas, The freedom from worry was significantly high among national level judokas compared with the university level judokas. However, other psychological factors did not show any significance of difference among achievement in university and national level competitions. Indian Judo players at International, National and Inter-university levels, as whole, had similarity in adversity, coach-ability, concentration, confidence, and goal setting factors of psychological characteristics. But they exhibited different psychological ability for pressure and worry (Shrivastava, 2014). Heinrich & Maryke (2011) showed that the goal attack and wing defense players firmly out performed than other positional groups, while the goal shooters showed the lowest psychological skill levels. Harrison (2013) showed that a level of worry was experienced in the higher performing athletes, yet no other psychological skills were predicted by the presence of a coach. Jooste Barend, & Linda (2014). indicated that the psychological skill demands differ among players in different playing positions and did not have positive correlation between team success and psychological skills.

The correlation was found among confidence, goal setting, and mental preparation subscales of ACSI-28 (Baltzell, 1999). The confidence and achievement motivation and Peaking under Pressure were significant predictors and robust correlates of athletic performance (Christiansen, 2000). Psychological skills are the predictor of outstanding performance in adulthood (Morris, 2000). The correlations amongst trait anxiety, sport confidence, and coping were yielded in athletes. Confidence was positively associated with coping with adversity and negatively with anxiety (Cresswell & Hodge, 2004)

The purpose of the study was to (a) assess the predictability of psychological skills (b) to assess the sprinting performance of 100 meter male sprinters between selected psychological skills. It was hypothesized that: The selected psychological skills will significantly predict the 100 meter and 200 meter sprinting performance

METHODOLOGY

Selection of Subjects:

A purposive sample of forty one national level male sprinters, who participated in 72nd All India Inter-university Athletic Meet (M/W) held at Bangalore and 18th Federation Cup National Athletics Championship held at NIS Motibagh, Patiala and 54th National Athletics Championship held at PAC Ground, Lucknow (U.P.) were selected as the subjects for this study.

Description of Questionnaire:

The ACSI-28 -Athlete Coping Scale Inventory-28 (Smith et al. 1995) is a sport-specific scale consisting of 28 items. It is a multidimensional inventory that measures the psychological characteristics of athletes on seven subscales. The scales are summed to yield a Personal Coping Resources score, which should reflect a multifaceted psychological skills construct. Each subscale consisted of four items. The ACSI-28 has demonstrated test-retest reliability (.47 to .87) and internal consistency for the subscales were accepted (from .64 to .81). ACSI-28 demonstrated a full scale internal consistency of .86 with all subscales ranging from .62 to .78 (Smith et al. 1995)

Administration of Questionnaire:

For collection of data, the subjects were contacted personally by the scholar with their coaches at the site of respective Championships and their sincere cooperation was solicited. Respondents were called to a common place. Necessary instructions were provided to the subjects before the administration of questionnaire. Confidentiality of the responses was guaranteed so that the subjects cannot camouflage their real feelings. After completion the Questionnaires were collected and scored.

Statistical Analysis:

To investigate the psychological skills on seven sub-scales for National level male and female Sprinters, means and standard deviations were computed. Multiple Correlation and Regression analysis were computed to find out the contribution of different psychological skills to sprinting performance. The level of significant was set at .05 level.

RESULTS AND DISCUSSION

Descriptive statistic on sprinting performance (100 meters and 200 meter) and zero order correlation coefficients between sprinting performance and psychological skills of male and female athlete were computed, in order to find out the predictability of psychological skills regression analysis by enter method was employed. The data has been presented in table 1 to 3 and has been depicted in figure 1

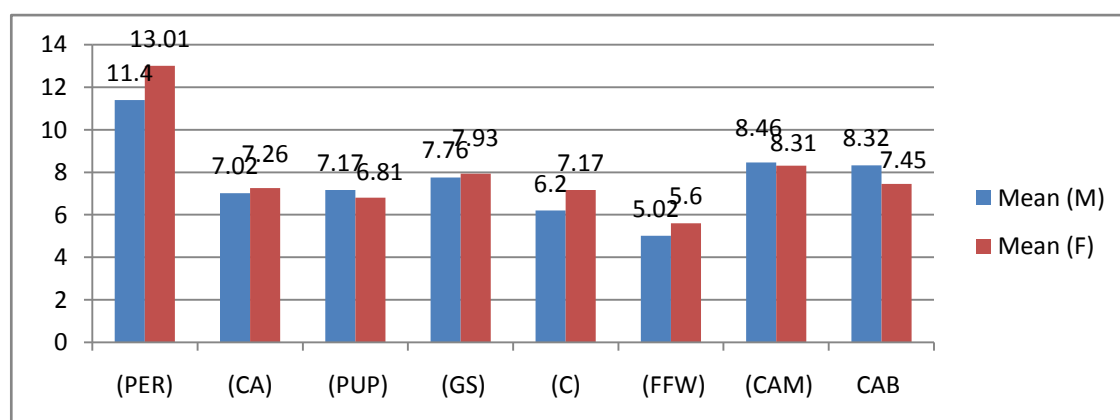


Fig 1 : Mean Score on Sprinting Performance and Psychological Skills of 100 Meter Male and Female Sprinters

TABLE 1
DESCRIPTIVE STATISTICS AND CORRELATION/COEFFICIENT OF/AND
BETWEEN SPRINTING PERFORMANCE AND PSYCHOLOGICAL SKILLS
OF 100 METERS
MALE SPRINTERS

Variables	Mean	SD	PER 1	CA 2	PUP 3	GS 4	C 5	FFW 6	CAM 7	CAB 8
(PER)	11.40	0.52	1	0.85	-0.08	0.013	0.071	0.232	0.091	.323*
(CA)	7.02	2.07		1	0.599	0.619	0.938	0.659	0.145	0.572
(PUP)	7.17	2.99			1	0.337	.600*	0.262	.622*	0.139
(GS)	7.76	1.83				1	0.218	0.067	.648*	.400*
(C)	6.20	1.82					1	0.209	.400*	.372*
(FFW)	5.02	1.98						1	0.114	0.035
(CAM)	8.46	2.59							1	0.085
CAB	8.32	2.34								1

* Significant at the 0.05 level

Data in table 1 indicated that sprinting performance of male sprinters was significantly correlated only with coach ability (CAB) ($r=0.32$). All other dependent variable had insignificant correlation with 100 meters sprinting performance of male sprinters.

TABLE 2
MULTIPLE CORRELATION FOR THE PREDICTORS OF 100 METER SPRINTING PERFORMANCE OF MALE SPRINTERS

Model	R	R Square	Adjusted Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	Df 1	Df 2	Sig. F. Change
1	.448a	.201	.031	.51212	.201	1.184	7	33	.338

Coefficients:-

Variables	B	SEB	β	t	Sig.
Performance(time in seconds)	10.614	0.578		18.361	.000
Coping with adversity	0.019	0.040	0.076	.475	.638
Peaking under pressure	-0.019	0.041	-0.109	-.461	.648
Goal setting & mental preparation	-0.053	0.590	-0.187	-.901	.374
Concentration	0.011	0.058	0.039	.190	.850
Freedom from worry	0.043	0.483	0.164	1.003	.323
Confidence and achievement motivation	0.028	0.053	0.141	.531	.599
Coach Ability	0.081	0.040	0.363	1.999	.054

The multiple correlation Coefficient (R) using all the predictors simultaneously, is .45 ($R^2=0.20$) and the adjusted R^2 is 0.03, meaning that only a negligible 0.03 % of variance in 100 meter sprinting performance of male sprinters can be predicted from selected psychological skills.

TABLE 3
ANOVA FOR REGRESSION ANALYSIS FOR 100 METERS MALE SPRINTERS

Model	Sum of Squares	df	Mean Square	F
Regression	2.175	7	0.311	1.184*
Residual	8.655	33	0.262	
Total	10.829	40		

* Insignificant at .05 level

The ANOVA in table 3 shows that $F=1.184$ is statistically insignificant at 0.05 level indicating that combination of predictors i.e. selected psychological variable did not significantly predict 100 meter sprinting performance of male sprinters.

DISCUSSION

Descriptive statistic on sprinting performance (100 meters) and zero order correlation coefficients between sprinting performance and psychological skills of male and female athlete were computed, in order to find out the predictability of psychological skills regression analysis by enter method was employed. Analysis of data of 100 meter male sprinters on sprinting performance and psychological skills indicated that sprinting performance of male sprinters was significantly correlated only with coach ability (CAB) ($r=0.32$). All other dependent variable had insignificant correlation with 100 meters sprinting performance of male sprinters. The multiple correlation Coefficient (R) using all the predictors simultaneously is 45 ($R^2=0.20$) and the adjusted R^2 is 0.03, meaning that only a negligible 0.03 % of variance in 100 meter sprinting performance of male sprinters can be predicted from selected psychological skills. The ANOVA showed that $F=1.184$ is statistically insignificant at 0.05 level indicating that combination of predictors i.e. selected psychological variable did not significantly predict 100 meter sprinting performance of male sprinters.

CONCLUSION

Sprinting performance of male sprinters was significantly correlated only with coach ability. All other dependent variable had insignificant correlation with 100 meters sprinting performance of male sprinters. Finally, the selected psychological skills do not predict 100 meter sprinting performance of male sprinters

FUTURE DIRECTION FOR RESERACH

Research has disclosed that a minimum of fifty % of athletic performance successes and even a lot of athletic performance errors and failures are owing to mental factors. Often times, skills plus physical and technical training will take athletes and groups solely up to now before they reach a performance upland. It's mental training which will carry them to subsequent level. It's vital to recollect that these psychological skills are learned, practiced and applied in each coaching and competition things. These skills are useful if athletes are committed to swing the time and energy into learning and mastering them. The results of the study can educate the coaches, trainers and education lecturers regarding the psychological skills required to perform with success at totally different levels of athletic performance. The findings of this study are doubtless to produce pointers for making ready psychological ability coaching programme for athletes.

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सड़कों की क्षमता एवं यात्री प्रबलता का मापन का विश्लेषणात्मक
अध्ययन : छत्तीसगढ़ राज्य के सड़क यातायात
के विशेष संदर्भ में
Kajal Moitra*

ABSTRACT

परिवहन विकास के विश्लेषण में सड़कों की क्षमता तथा उपयोग स्तर का सही मापन अत्यंत आवश्यक है। किसी भी प्रदेश में सामाजिक, आर्थिक संवृद्धि सुनिश्चित करने में परिवहन तंत्र की भूमिका बड़ी निर्णायक और अर्थ व्यवस्था के विभिन्न अंगों के विकास में काफी महत्वपूर्ण होती है। विशेषकर कृषि विकास और विपणन व्यवस्था को सुदृढ़ करने तथा ग्रामीण विकास को गति प्रदान करने के लिए परिवहन का योगदान उल्लेखनीय है। परिवहन के समुन्नत साधन क्षेत्र में उत्पादकता को बढ़ाकर वस्तुओं व सेवाओं के बाजार को विस्तृत करके नवीन आर्थिक क्रियाओं को जन्म देते हैं। साथ ही विकसित एवं अविकसित क्षेत्रों को अंतर्संबंधित कर क्षेत्रीय विकास में सहायक सिद्ध होते हैं।

यदि कृषि और उद्योग को आर्थिक जोवन का शरीर व हड्डियाँ माना जाये तो परिवहन तंत्र को उस आर्थिक ढांचे की स्नायु प्रणाली मानना चाहिये। परिवहन तंत्र की उपस्थिति से ना केवल विकासजन्य क्रियाये विकसित होती हैं, बल्कि क्षेत्र का सर्वांगीण विकास प्रारंभ हो जाता है। इस प्रकार विकास की गति एवं दर इस बात पर निर्भर करती है कि परिवहन प्रणाली कितनी विश्वसनीय, सक्षम एवं तीव्रगामी है।

Key words :- सामाजिक – आर्थिक संवृद्धि, सर्वांगीण, विकासजन्य, तीव्रगामी

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INTRODUCTION

वर्तमान में प्रत्येक उत्पादक क्षेत्र का संबंध अन्य सभी क्षेत्रों से घनिष्ठ होता जा रहा है तथा उपभोक्ता के रूप में भी प्रत्येक क्षेत्र की अन्य क्षेत्रों से आपूर्ति पर निर्भरता बढ़ती जा रही है। इस प्रकार विभिन्न क्षेत्रों की आर्थिक अन्योन्याश्रयता अधिकाधिक जटिल होती जा रही है। इस संदर्भ में उलमेन महोदय से स्थानिक अन्योन्यक्रिया के निर्धारण में परिपूरकता, मध्यवर्ती अवसर और अंतरशीलता को आवश्यक तत्व माना है। यह कहना अतिशयोक्ति नहीं होगा कि परिवहन राज्य के लिए रक्त वाहिनी शिराओं के समान है जिनके आभाव में राज्य की कल्पना भी कठिन है। इन्हीं से मानव एवं वस्तुओं का स्थानांतरण होता है। अतः से मानव की स्थानीय, क्षेत्रीय राष्ट्रीय एवं अन्तर्राष्ट्रीय गतिविधियों को प्रभावित करते हैं इनके अभाव में राज्य की आंतरिक क्रियायें एवं प्रशासन कुंठित हो जाता है तथा अन्तर्राष्ट्रीय संबंधों में बाधा उपस्थित होती है।

प्रस्तुत अध्ययन का प्रमुख उद्देश्य छत्तीसगढ़ राज्य सड़क यातायात के विशेष परिपेक्ष्य में सड़कों की वाहन भार क्षमता एवं यात्री प्रबलता संरचना का मापन का विश्लेषण करना है। परिवहन विकास के विश्लेषण में सड़कों की क्षमता तथा उपयोग स्तर का सही मापन अत्यंत आवश्यक है। एवं संबंधित समस्याओं के निराकरण हेतु समाधान प्रस्तुत करना है।

METHODOLOGY

Sources of data:

प्रस्तुत अध्ययन मुख्यतः प्राथमिक आंकड़ों पर आधारित है। द्वितीयक आंकड़ों का संकलन भी अन्य स्रोतों से किया गया है।

Statistical Analysis:

अध्ययन में विश्लेषण हेतु आनुपातिक तुल्यांक, प्रतिशत विधि का प्रयोग किया गया है। आंकड़ों के प्रदर्शन हेतु तालिका का उपयोग भी किया गया है।

RESULT AND DISCUSSION

सड़कों की क्षमता एवं उपयोग स्तर— परिवहन विकास के विश्लेषण में सड़कों की क्षमता तथा उपयोग स्तर का सही मापन अत्यंत आवश्यक है। सड़कों पर अनावश्यक अवरोध के बिना किसी दिये हुये केन्द्र से एक दिन में अधिकतम संख्या में स्वतंत्र परिवहन के आधार पर सड़क-क्षमता की माप की जाती है। सड़कों की बनावट तथा चौड़ाई, वाहनों के प्रकार, उनकी गति एवं सघनता आदि कारक सड़कों की क्षमता निर्धारित करते हैं। सड़क क्षमता का मानक निर्धारण कुछ कठिन है। इस संबंध में परिवहन नियोजन समिति का सुझाव स्पष्ट है।

सड़कों की क्षमता के आंकलन के लिए कोई उपयुक्त मानक नहीं होने के कारण क्षेत्र में कुछ सड़क शाखाओं की चौड़ाई प्रारंभ से अतः तक एक समान नहीं है। राज्य में सड़कों की प्रतिदिन क्षमता 1000 से 10000 यात्री कार इकाई है, को तालिका क्र. 1 में दर्शाया गया है।

TABLE 1

छत्तीसगढ़ राज्य:— विभिन्न प्रकार के सड़कों की क्षमता निर्धारण का मानक

क्र.	सड़कों का विवरण	यात्री-कार इकाई में प्रतिदिन क्षमता
1.	एकहरी सड़कें	
2.	प्रायः भार ले जाने योग्य साधारण एकहरी सड़कें	1000
3.	प्रत्येक तरफ 1.5 मीटर विकसित पटरी के साथ एकहरी सड़कें	3000

4.	आदर्श दशाओं के साथ विकसित दोहरी सड़कें	10000
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यात्री-कार इकाई सड़क की क्षमता मापने की इकाई है। यात्री-कार इकाई विभिन्न प्रकार के वाहनों के द्वारा लगने वाला समय एवं उनके द्वारा सड़क की चौड़ाई घेरने के आधार पर मोटर-कार के अनुपात पर ज्ञात किया जाता है। विभिन्न प्रकार के लिये यात्री-कार इकाई हेतु तुल्यांक मूल्यों को तालिका क्र. 2 में दर्शाया गया है।

TABLE 2

छत्तीसगढ़ राज्य: विभिन्न प्रकार के वाहनों के लिए यात्री-कार तुल्यांक

क्र.	वाहनों का प्रकार	यात्री-कार इकाई में
1.	मोटर-कार, जीप एवं मालगाड़ी डिब्बा	1
2.	मोटर-साइकिल, स्कूटर, तीन-पहिया	1
3.	बस ट्रक्टर एवं ट्रेक्टर ट्राली	2
4.	ट्रेक्टर एवं ट्रेक्टर ट्राली	3
5.	साइकिल	0.5

स्रोत: महानिर्देशक, सड़क विकास, यातायात मंत्रालय, भारत सरकार, नई दिल्ली

किसी भी प्रदेश में यात्री एवं माल की परिवहननीयता की दृष्टि से बारहमासी सड़कों का विशेष महत्व होता है। अतः प्रस्तुत अध्ययन में परिचर्तन संबंधी योजना के लिए केवल मुख्य सड़कों को ही लिया गया है। चूंकि सड़कों का उपयोग-स्तर ज्ञात करने के लिये कोई आवश्यक आंकड़े उपलब्ध नहीं हैं, अतः राज्य के प्रमुख सड़क मार्गों पर सामान्य मौसम के समय यात्री प्रबलता सर्वेक्षण किया गया है।

राज्य के प्रमुख सड़क मार्गों पर यात्री प्रबलता सर्वेक्षण 24 घंटों के लिए किया गया। इसके लिए छात्रों तथा सहयोगी साथियों की सहायता ली गई है। रात के यातायात के आकड़ों विभिन्न सड़क मार्गों में स्थित नाका तथा आसपास के दुकानदारों से प्राप्त किया गया है इस प्रकार प्रत्येक मुख्य सड़क मार्ग के लिये उपयोग स्तर ज्ञात किया गया है। प्रत्येक मुख्य सड़क मार्ग की यात्री प्रबलता, यातायात का दबाव राष्ट्रीय राजमार्ग 6, राष्ट्रीय राजमार्ग 9, 32 एवं 37 पर है, क्योंकि इन सड़कों का संबंध राज्य के अंदर तथा बाहर स्थित उच्च स्तर के केन्द्रों से है।

उल्लेखनीय तथ्य यह है कि राज्य के विभिन्न सड़कों में उपयोग-स्तर सभी स्थानों पर समान नहीं है। राष्ट्रीय राजमार्ग 6 पर स्थित रायपुर, दुर्ग रायपुर, दुर्ग एवं राजनांदगांव सड़क मार्ग का उपयोग, उनकी क्षमता से अधिक है क्योंकि इस सड़क मार्ग पर नगरीय एवं प्रादेशिक अंतर्संबंधित वाहनों का आवागमन अधिक होता है। इसके विपरीत क्षेत्र के उत्तरी-पश्चिमी छत्तीसगढ़ तथा द.पू. भागों में स्थित निम्न स्तर के केन्द्रों को जोड़ने वाली सड़कों का उपयोग अपेक्षाकृत कम है। ज्ञातव्य है कि क्षेत्र में नगरीय केन्द्रों के मध्य स्थित सड़क मार्गों को छोड़कर किसी भी अन्य सड़क मार्ग का उपयोग उनकी क्षमता से अधिक नहीं हो रहा है।

यात्री प्रबलता की संरचना -छत्तीसगढ़ में विभिन्न प्रकार के वाहनों की संरचना को तालिका में विश्लेषित किया गया है। जिससे स्पष्ट है कि यात्री प्रबलता की दृष्टि से स्कूटर तथा मोटर साइकिल का स्थान प्रथम है। ट्रक तथा माल ले जाने वाले वाहनों का द्वितीय स्थान है तृतीय स्थान मोटर कार तथा जीप का है। राज्य में ग्रामीण क्षेत्रों में परिवहन प्रणाली अविकसित स्थिति में है। ग्रामीण क्षेत्रों में साइकिल तथा बैलगाड़ी परिवहन में मुख्य साधन रहा है। लेकिन अब मोटर साइकिल तथा कार-जीप की संख्या भी बढ़ती जा रही है।

क्षेत्र में सन् 2009 में कुल पंजीकृत वाहनों की संख्या में स्कूटर तथा मोटर साइकिल का प्रतिशत 87.54 है। इसके पश्चात् ट्रक (6.60 प्रतिशत) एवं मोटरकार व जीप का स्थान आता है। अन्य वाहनों का प्रतिशत 4.55 है।

विगत 10 वर्षों में वाहनों की कुल संख्या में 34.05 प्रतिशत वार्षिक वृद्धि हुई है। किसी क्षेत्र में परिवहन विकास योजना यात्री प्रबलता में अपेक्षित वृद्धि पर आधारित होती है। तथा यात्री प्रबलता, जनसंख्या का वितरण, उद्योगों की स्थिति एवं सामाजिक-आर्थिक क्रियाकलापों पर निर्भर करती है। किसी प्रदेश में विभिन्न प्रकार के वाहनों की मांग जनसंख्या के आकार एवं स्थिति, प्रति व्यक्ति आय, माल परिवहन एवं विक्रय हेतु कृषि उत्पादों की मात्रा इत्यादि द्वारा प्रभावित होती है। राज्य के विभिन्न क्षेत्रों में यात्री एवं माल परिवहन संबंधी आंकड़े उपलब्ध नहीं होने के कारण यात्री प्रबलता में वृद्धि का आंकलन एवं प्रक्षेपण करना काफी कठिन है।

पंजीकृत वाहनों की संख्या में वृद्धि की दर (1991-01) तथा 2011 लोगों के यात्रा व्यवहार एवं जनसंख्या वृद्धि की प्रवृत्ति के आधार पर भविष्य में यात्री प्रबलता का अनुमान लगाया गया है जिसके आधार पर यह कहा जा सकता है कि भविष्य में राष्ट्रीय राजमार्ग क्रमांक 6 एवं 43 तथा राजकीय राजमार्ग 9, 32, व 37 का उपयोग उसकी क्षमता से अधिक होगा।

CONCLUSIONS

राज्य में सड़क परिवहन के विकास में विभिन्न प्रकार की समस्याएँ बाधक हैं जिसका विवरण निम्नलिखित है—

1. संरचनात्मक समस्याएँ— राज्य में सड़क जाल के अपेक्षित घनत्व, सम्बद्धता एवं अभिगम्यता का अभाव है, साथ ही वर्तमान सड़कें परिवहन के लिए संतोषजनक व पर्याप्त नहीं हैं। राज्य में राष्ट्रीय राजमार्ग क्रमांक 6 एवं 43 छोड़कर प्रायः सभी सड़कों की दशा खराब है। नदी तथा नालों पर पुल का अभाव है, कुछ जीर्ण तथा संकरे हैं जिसमें भारी वाहनों का परिवहन सम्भव नहीं है।
2. संचलनात्मक समस्याएँ— वर्तमान में सड़क निर्माण का कार्य लोक निर्माण विभाग के दायित्व में है। क्षेत्रीय परिवहन कार्यालय वाहनों को परमिट देता है तथा पुलिस विभाग इन सड़कों पर यातायात नियंत्रण संबंधी नियमों का क्रियान्वयन करता है। इस प्रकार विकेन्द्रीकृत व्यवस्था के कारण सड़क विकास कार्यक्रम समन्वित ढंग से करना काफी कठिन है।
3. संगठनात्मक समस्याएँ— राज्य में सड़कों की लम्बाई संतोषप्रद नहीं है। जिससे समस्त क्षेत्र में अभिगम्यता कम हो गई है। राज्य की अधिकांश सड़कें सकरी हैं जिसमें भारी वाहनों को तीव्रता से गुजरने में असुविधा होती है। ऐसी स्थिति में दो-पहिया वाहनों का काफी असुविधा होती है।
4. समन्वित प्रादेशिक विकास एवं रोजगार उपलब्ध कराने में परिवहन विकास कार्यक्रम एक महत्वपूर्ण धुरी का कार्य करती है। इस संदर्भ में सड़क परिवहन जाल को एक प्रभावशील साधन माना जाना चाहिये। समन्वित सड़क विकास कार्यक्रम में केन्द्रों के पदानुक्रम को आधार मानना उपयुक्त होगा।
5. शोधार्थी ने राज्य में सड़क परिवहन तंत्र के विकास हेतु एक 10वर्षीय योजना संस्तुत की जिसमें नई सड़कें तथा योजक सड़कों के निर्माण हेतु अधिवासों में जनसंख्या के आकार को आधार माना गया है। साथ ही यह ध्यान में रखा गया है। कि विभिन्न श्रेणी के नगरीय केन्द्रों के मध्य परिवहन प्रणाली अधिक सुगम हो सके।

6. भारत सरकार ने छठवीं पंचवर्षीय योजना में 1500 एवं उससे अधिक जनसंख्या वाले ग्रामों को तथा सातवीं पंचवर्षीय योजना में 1000 से 1500 जनसंख्या वाले ग्रामों को पक्की सड़कों का लक्ष्य निधारित किया था परंतु सातवीं पंचवर्षीय योजना के अंत तक 1500 से अधिक जनसंख्या वाले 87 प्रतिशत ग्रामों को पक्की सड़कों से जोड़ा गया था। आठवीं पंचवर्षीय योजना के दृष्टिकोण पत्र में भी ग्रामीण परिवहन, ग्रामीण ऊर्जा तथा कृषि विकास को प्राथमिकता दी गई है ताकि नगर एवं ग्रामों के मध्य सार्वजनिक परिवहन प्रणाली से सुगम बनाया जा सके। उपर्युक्त तथ्यों को ध्यान में रखकर शोधकर्ता ने अध्ययन क्षेत्र में सड़क परिवहन विकास हेतु 1000 से अधिक जनसंख्या वाले सभी ग्रामों को पक्की सड़कों से जोड़ने का सुझाव दिया है। ताकि क्षेत्र में सामाजिक आर्थिक विकास कार्य शीघ्रतापूर्वक सम्पन्न हो सके।

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