Volume 9, Issue 1, January-March-2022
p ISSN : 2349-8811
e ISSN : 2349-9133

The International Quarterly Journal

Horizons of Holistic Education

Peer Reviewed and Referred Journal

:: Published By ::
Children's University
Sector-20, Gandhinagar-382021 (Gujarat) India
Email : editorhhecu@gmail.com
Website : hhe.cugujarat.ac.in

We are happy to announce the publication of an International Journal of research in education entitled: ***Horizons of Holistic Education*** with International Standard Serial Number (ISSN). You are invited to send your original research papers and research articles for the publication in ***Horizons of Holistic Education*.**

The Journal of *Horizons of Holistic Education* (HHE), published by the Children's University, is an International quarterly Interdisciplinary Journal which covers topics related to holistic development of children. HHE covers all the areas which deal with the children, such as Child education, Child psychology and Panchkosh development of children, children's literature and so on. It also includes intellectual efforts encompassing Sociology, Vedic Science, Medicine, Psychology, Drawing, Music, History, Geography, Home Science, Philosophy, Economics, Commerce and Literature concerned with Children. The researches based on such topics shall be given priority.

Aim and Scope — an International journal of ***Horizons of Holistic Education***(quarterly) aims to publish original research papers, related to the theory and practice of various disciplines of Humanities. We invite you to contribute your fulllength research papers, short communications and Review articles and Articles concerned with holistic modern development in the area of liberal sciences pertaining to the children's studies.

FROM THE VICE CHANCELLOR'S DESK

Education system relies on the integrity and efficiency of its evaluation and assessment. The final outcome and the result should be bringing about the inner strength of the individuals. To identify the potentials of the individuals for the better adjustment in the society and among the fellow human environment.

Examination is created to assess the performance of the student. But in the present time the examination has created the side effect of exam as fear and stress. It has threatened the child, parent and the society at large. It clearly shows that this particular examination system was not desired in its original form. The present system tests the mere memory power rather than the real talent of the student in a true sense.

Maintaining the integrity of the examination system, the present time and structures seek modification and transparency throughout the process. Video recording in of packing and opening of question papers and confidentiality in preparing question papers should be kept in part of confidentiality and reform. Syllabus statement should include recommended assessment schemes to be adopted. A clear policy of dealing with unfair means relating to examination or evaluation must be placed in order.

Examinations in India need serious reforming as well as it should also be recognized that an examination reform has the potential to lead educational reform. In order to reform the examination system, the educational institutions need to consistency strive towards excellence and chalk out new strategies. This can be done by organizing workshops, training sessions, refresher courses and all above all by developing an advanced work culture. Reforming examinations alone will attain very little unless it is accompanied by other basic reforms, improvement of teacher training, teacher quality and teacher-student ratio. In addition, make the curriculum and textbooks more relevant and interesting and challenging. At secondary level, spending more on education will be vital. It has often been

lamented that in Indian education the tail (assessment) has usually wagged the dog (of learning and teaching). The de-emphasizing exams will certainly liberate the learning and teaching process from its straitjacket. But in the educational system this pivotal position of exams can be used to leverage age advantage - to hasten reform within Indian education as whole.

Regards,

Mr. Harshad P. Shah
Vice Chancellor
Children's University

FROM THE CHIEF EDITOR'S DESK

'March' month of examination a perspective towards holistic development."

The month of March is all about happiness and anxiety. Happiness is about the changes in the season and festive mode of the same. Anxiety is for the seasons of examinations for all the standards and for the people ending financing year. It is a time of settlement for all.

The examination is commonly used in schools, colleges, competitive or medical situations. Examinations in school are a way to test the knowledge of different subjects acquired over some time. Medical examinations refer to various test to understand the functioning of the different parameters of the body, e.g. blood tests, ultrasound. Examinations can also be conducted as a screening process for jobs or for admitting a student in a particular course. These are referred to as entrance examinations. Then there are qualifying examinations, whereby success in these examinations qualifies one to take up a profession or career.

In a typical examination, there is either a test or a series of tests, where the student or the candidate is tested over different parameters to understand his performance. They could be descriptive tests or multiple choice questions.

'Examination' is derived from the Latin word "examinare" which means 'to test something'. The English word 'examination' refers to a formal study of one's proficiency level in knowledge or skill.

Examinations are quite crucial in assessing one's abilities. They are a means with which a person's knowledge of their respective field can be assessed. They serve as a rite of passage, allowing students to discover their talents and skill. Exams are a necessary evil of sorts. They ensure that a person is quite capable of performing their assigned tasks in their professions. For instance, the public would prefer the justice system were governed by an educated judge instead of an illiterate one.

The objective of Education is to prepare students in facing the challenges of this highly competitive world, but education in the Indian examination system gives priority to memory and rote learning rather than understanding the application of theories or concepts and imparting creative and critical thinking skills among students (NPE- 1986). Students memorize information from guide books or test papers before the exams and attain good scores. Unable to comprehend the topics, many students are tensed during preparation and try to memorize the information.

Thus, our education system struggles to enhance students' cognitive skills which are the main aim of quality education. A way to overcome this problem is to look at the possibilities offered by Alternative Assessments All the test items in Formative Assessments are factual and memory based. Hence we are not getting the desired results from students. And ultimately the lacking in holistic development of the students seeks the concern.

Regards,

Dr. Jignesh B. Patel
Chief Editor,
Horizons of Holistic Education

EDITORIAL BOARD

Advisory Board Chairperson

Shree Harshad P. Shah
Vice Chancellor & Director General,
Children's University,
Gandhinagar, Gujarat.
Email : vccu.gujarat@gmail.com

Editor in Chief

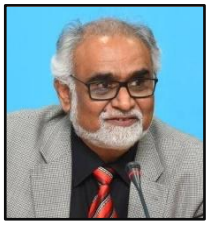
Dr. Jignesh B. Patel
Associate Professor, Department of Education
Children's University, Gandhinagar, Gujarat.
Mobile : 9429429550
Email : drjigp@gmail.com

Key Advisors (In Alphabetical Order)

Shree Aniruddha Deshpande
President,
RambhavMhalgiPrabodhini,
Thane, Maharashtra.
Mo: 98903 59342
e: abdeshpandepune@gmail.com

Prof. C. B. Sharma
Chairman,
National Institute of Open Schooling (NIOS),
A-24-25, Institutional Area,
Sector-62,
Noida, Uttarpradesh.
Mo : 9810512605
e :cbsharma01@gmail.com

Prof. Sachchidanand Joshi
Member Secretary,
Indira Gandhi National Center for the Arts
11, Man Singh Road, New Delhi.
Mo : 9205500164 / 9425507715
e : msignca@yahoo.com /
Sjoshi09@yahoo.com

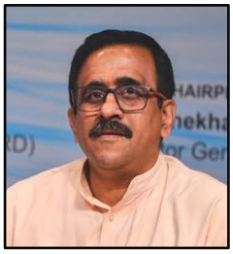


Prof. Rameshchandra G. Kothari
Former Vice Chancellor,
Veer Narmad South Gujarat University,
Surat, Gujarat.
Mo : 97147 99445
e : rgkothari@yahoo.com

Chief Academic Advisor (In Alphabetical Order)

Prof. Dilip Betkekar
National Vice President,
Vidyabharti Akhil Bharatiya
Shiksha Shanthan, New Delhi.
Mo: 7972351208/ 8806580307/
9422448698
Email: dilipbetkekar@gmail.com

Shri Mukul Kanitkar
Organizing Secretary,
BharatiyaShikshan Mandal,
Nagpur, Maharashtra.
Mo:94057 74820
Email: bsmrfoffice@gmail.com

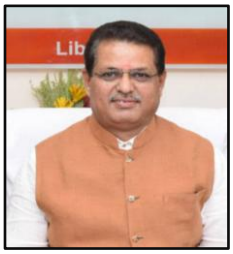


Prof. Rajesh Kotecha,
Shri Vaidya Rajesh Kotecha
Secretary, Ministry of AYUSH,
Government of India, Bharat.
Tel. : 24651950
Email: secy-ayush@nic.in

Prof. Manoj Soni
Member,
Union Public Service
Commission,
New Delhi.
Tel :23381098

Prof. Shashi Vanzari
Hon. Vice Chancellor,
SNDT University,
NathibaiThackersey Road,
Mumbai, Maharashtra - 400 020.
Mo: 98503 99818 / Tel. :91-22-
22031881
Email: vc@sndt.ac.in

Dr. Nitin Pethani
Hon. Vice Chancellor,
Saurashtra University,
Rajkot, Gujarat.
Mo : 90999 51909
Tel. : (0281)2577633/
(0281) 2576802
Email: vc@sauuni.ac.in



Prof. Shashi Kant Sharma
Professor,
Department of Journalism and Mass Communication,
Himachal Pradesh University, Shimla, PIN 171 0050
Ph:- 91-177-2833731, Telephone:- 91-177-2833731
Email:- shashikanthpu@gmail.com

Editorial Board (In Alphabetical Order)

p ISSN : 2349-8811 e ISSN : 2349-9133

Horizons of Holistic Education

Peer Reviewed and Referred Journal

January-March.,-2022, Vol-9, Issue- 1

INDEX

Horizons of Holistic Education **p ISSN : 2349-8811**
January-March.,-2022, 9(1), 1-8 **eISSN : 2349-9133**

Measurement Estimation Skills among Students

Rinki Tiwari
Research Scholar, UGC- SRF
Department of Education, Faculty of Education and Psychology
The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat

Prof. R. C. Patel
Head, Department of Education
Dean, , Faculty of Education and Psychology
The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat

Received: 05/01/2022 Accepted: 07/02/2022

ABSTRACT

Everything cannot be predicted nor can every situation to be encountered can be known and sorted beforehand. When pre-planned strategies prove to be ineffective and regular mode equipment shows failure in its efficiency, where measurement and its tools have a negligible scope, then it is measurement estimation that takes the lead role. Measurement estimation skill has a significant role in critical situations as well as in normal conditions. It is a decision-making process where the stimulus and our sensory organs and above all our brain are the key players in the whole process. However, though this skill demands flexibility and is highly probable for spot decision through perfect strategy still competency is the fundamental pillar of any skill. For competency, training of students especially in school through different curricular and co-curricular activities is highly significant. This paper gives an overview of measurement estimation as a skill and suggests some significant steps that can be of great help in inculcating and enhancing this skill through curricular and co-curricular activities. Moreover, this skill demands more attention from the academicians as students generally are found to be less friendly with actual process understanding of any problem and are acquainted mainly with formulas highly focussed on the product rather than the process.

Keywords: *Measurement Estimation, Skill, Decision Making Process, Curriculum*

Introduction of Measurement Estimation Concept

Measurement estimation is of great significance because in many situations typical practical problems do not permit the use of measurement tools then measurement estimation comes into action and it becomes the responsibility of estimates to provide a check on the results of measurement. Bright (1976) asserted that "Amount (e.g., length, mass, temperature) is an important part of one's understanding of the world" while

estimation in this line is the process of comparing an attribute of an object to some unit which is selected to quantify that attribute. Although there are different definitions, estimation is evaluated as a decision-making process. According to Patkin & Gazit, (2013) before the decision, processes or measurements are made quickly in the mind, through some procedures or past experiences. It is important to learn these procedures. The child should learn to accurately estimate the different attributes such as the length of lines, the mass of objects, the areas of simple figures, the distance between two points; and to adopt an effective strategy to make an accurate decision and hence good estimation.

Theoretical Approach on Measurement Estimation

The research of Piaget et.al. (1960) provides some guidelines about the ages at which children are hypothesized to be able to perform measurement estimation tasks. No measurement is accomplished in stages I and IIA (ages: approximately *1-7. Piaget et.al. (1960) asserts that substage IIB (ages: 6-7) may be a transitional stage during which conservation, transitivity, and therefore the role of block measurement starts to appear while in substage IIIA (ages 7-9) conservation of length and area are achieved, transitivity comparison can be made, and measuring units are used; however, the need for using a common unit for comparing is not understood. In substage IIIB (ages: 9-12) measurement of length in one, two, or three dimensions and measurement of the area by using unit iteration is accomplished. The logical operations do not appear until stage IV (12-13). Piaget et al. (1960) maintain that metric measurement of length and area are achieved simultaneously during stage IIIB. Children respond to estimation-type tasks that can reveal how they think about measurement. In one of the tasks, children were asked to build a tower that was the same height as a model tower using blocks of various sizes. Visual comparisons were used to accomplish this task by *1-5 years old (level I); 5-7 years olds (level II) used manual transfer to bring the towers closer together or they used body comparisons, and children over 8-years of age (level III) used a rod for comparisons. Thus, this theory depicts that measurement estimation starts developing among children right from an early age. Undoubtedly, the level of this skill marches from simple to complex where students learn one skill from the other in a sequence as the theory suggests.

Measurement Estimation as a Skill

Measurement Estimation is a critically useful skill in everyday life. In this century we focus on numerous life skills. Such skills are highlighted even by eminent institutes such as United Nations. Among such skills measurement estimation is a crucial real-life skill (Gooya et al., 2011; Walle et al., 2016). One of the reasons for the renewed interest in the field of measurement estimation has been the realization that estimation involves a complex network of skills and concepts. Another has been the realization that the age at which children can apply any individual skill or concept is highly dependent on the task and/or context in which they are situated. Numerous skills are involved in process of use of students' measurement estimation skills. As problem-solving skills improve with measurement estimation activities. According to Hogan & Brezinski (2003), measurement estimation activities also positively affect the development of students' spatial reasoning skills. While, Joram et al., (2005) assert that measurement estimation

activities enable student information to be transferred to other fields of mathematics like numbers, calculation, fractions, and proportion. Therefore, this interconnectivity of different skills to the measurement estimation skill enables students to make connections between abstract ideas and real-life situations.

Enhancement of Measurement Estimation skill

To be a good estimator, it is required that estimation should be in regular practice. An effective environment is critically important that encourages frequent use of measurement estimation skills. An example that reflects enhancement of measurement estimation as a skill is depicted with the help of a figure below.

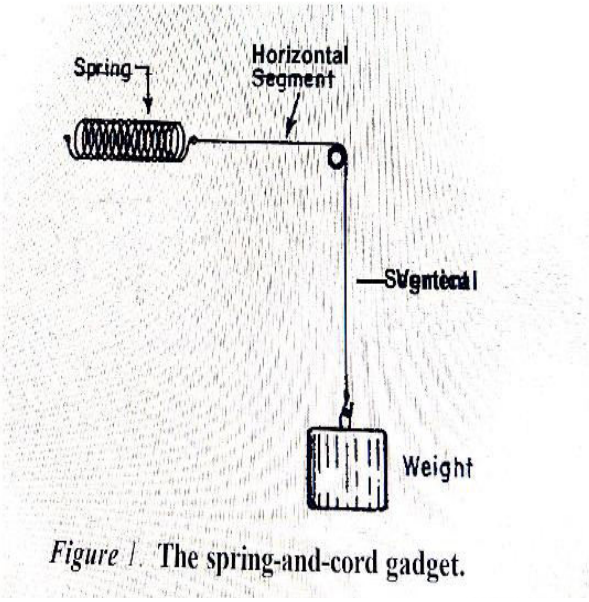


Figure 1. The spring-and-cord gadget.

Piaget et al., (1968) reflect upon the development of conservation of length through the gadget shown in the figure above. It provides a simple illustration of the process wherein the gadget, the cord is attached to a spring and drape over a nail so that the cord is divided into two segments by the nail, a horizontal segment, and a vertical segment and different weights attached to the cord will produce changes in the length of the horizontal segment of the cord and concomitant changes in the length of the vertical segment. As per the theory of Piaget et.al (1960), a 5- or 6-year-old child who already has two skills for the length of the cord: (a) understands approximately how the length of the vertical segment relates to the length of the horizontal segment; that is,roughly controls the relationship between the vertical length and the horizontal length using the vertical to predict the horizontal (b)also understands approximately how the horizontal length relates to the vertical length; that is, can use the horizontal to roughly predict the vertical. But the child doesn't yet understand that the changes within the horizontal length catch up on the changes within the vertical length so that the entire length of the cord does not change; that is doesn't yet understand the conservation of the length of the cord. To construct an understanding of this conservation, the child must coordinate their two skills for predicting the length (vertical predicts horizontal, and horizontal predicts vertical).

According to Piaget et al., (1968), such a combination occurs only if (a) the child has the two skills and (b) and plays with a gadget during which length conserves, as the child uses the two skills thoroughly to the gadget, the task itself influences the child to notice a connection between them because the properties of the task make the two skills closely related, and then the child search for the association and gradually moves to a new, higher-level skill for the length conservation of the cord. Generally, the child's control and knowledge of these two skills cannot by itself produce association of those skills. The child must be induced to coordinate them by applying them to something for which they do coordinate.

Measurement Estimation Skill Development through Spatial Reasoning Skill

Measurement estimation is closely and strongly associated with spatial reasoning skills. According to Hogan & Brezinski, (2003) measurement estimation activities positively affect the development of students' spatial reasoning skills. Human beings use the skill of measurement estimation on many occasions in daily life. A child while learning to walk comprehends the spatial separation between the self and say mother at a distance. While, Brewer, (1992), asserts that spatial vision and action are normally extremely well-integrated. The task of locomotion by the child demands continuous estimation of spatial separation and angle of approach for the right steps to advance. Everyday tasks such as walking on the sidewalk to driving a car require not only motor skills but also spatial reasoning skills. Hartley (1977) …… image-based mental measurement interpretation is particularly appropriate for spatial dimensions such as line length, in which the mental ruler metaphor is intuitively appealing. Thus, there would be from the very outset a perception of relationship at once spatial and estimation. Piaget and In helder(1956). It is thus by no means absurd to suppose that perceptual relationships of a protective order (perspective) and of a metric order (estimation of size at a varying distance) should appear later than these more elementary spatial relationships whose nature has first to be defined.

Hence, it can be concluded that everyday tasks such as walking on the sidewalk to driving a car to land a plane on the ground require not only motor skills but also spatial reasoning skills.

Measurement Estimation Skill Development through Problem-Solving Skill

The National Council of Teachers of Mathematics (1989) ……Estimation is an awareness of reasonable results. Polya, (1973), asserts that while, problem-solving refers, in addition to reaching the result, to the situation of finding a way, or relief from challenges. Learning to estimate-learning the scales and dimensions of the environment for appropriate action in that environment is an important component of problem-solving skills in general. It is possible, however, to perceive estimation as a next upper-level strategy or problem-solving process that can be over laidonor that can be summoned when counting is highly expensive or not feasible. According to Siegler, & Booth, (2005), participants estimate first and then calculate, they may use their estimate as a sanity check to evaluate the reasonableness of their answers. According to Geary,(2004), conceptual understanding and procedural knowledge are essential to problem-solving, as a variety of cognitive and non-cognitive actions that require some knowledge and skills

might necessitate a problem solver to get engaged. Polya, (1973), asserts that problem-solving is described as a characteristic of human activity as well as all problem including mathematical problems may require no single solution to be applied.

In the same parallel lines, measurement estimation skill does not rely on a single answer but for sure demands, the best-estimated value nearest to the accurate value.

Implications of Measurement Estimation Skills

A very important, advantage to learning the skill of measurement estimation is that to estimate well, one must truly understand the entire system. An exact calculation only requires choosing the correct equation and providing the correct values for all variables: the source of the values does not need to be understood, nor does their relation to the system as a whole. According to Lunt and Helps, (2001), the equation does not need to be understood for an exact answer to be found; one needs merely "plug and chug". But to estimate, one has to understand every aspect of the process involved in the entire system.

One example is in the area of problem-solving. Calculators can give every possible answer to the question at hand, and it is up to the user to distinguish a correct answer from an erroneous one. Another significant use of estimation lies in the area of answer cross-checking then the problem solver recognizes how absurdly low the answer is or the degree of accuracy of the estimated value. The third application of estimation lies in the area of making modifications in the approach towards a problem, further arming oneself with improvised strategies. For example, if one happens to have only a single value for a particular problem, and if one puts it in parallel with another similar problem, what effect would be expected? How large the effect is expected to be? The answers to these questions are speedily found by estimation, which is much quicker than exact calculation.

Inculcation of Measurement Estimation skill in Curriculum

As per National Research Council, (2001), "The curriculum should provide opportunities for students to develop and use techniques for mental arithmetic and estimation as a means of promoting deeper number sense". But work of Case & Sowder, (1990); Hope & Sherrill, (1987); Reys et.al. (1980); & Sowder, (1992) reflects those current instructional methods have not been particularly effective at supporting estimation knowledge and a large majority of students have difficulty estimating the answers to problems in their heads. However, to inculcate measurement estimation as a skill in curriculum an important question to ponder upon that is of considerable educational significance: How should we organize the growing body of knowledge about children's estimation competencies in a fashion that will allow us to plan an effective curriculum in this area? It is noted that it is one of the few areas of mathematical reasoning that, until very recently, most contemporary mathematics curricula have left untouched. The conclusion drawn from this fact is not that children's estimation should be left as an untutored skill: It is too valuable a tool for children's everyday and academic pursuits. Rather, the conclusion drawn is that any attempt to introduce estimation into a curriculum must face the challenge of how to do so without pro- reducing the increasing split, which is often seen in other areas, between the understanding of number those children glean from their

everyday quantitative activity and the school-based algorithms they learn to execute (Resnick, 1982, 1986). More than anything else, this split is responsible for the increasing lack of confidence so many children exhibit in their mathematical abilities and the corresponding decrease in their participation in school mathematics.

The real issue is whether the topic of measurement estimation should simply be attached as another unit in the current curriculum or whether curricula to be developed that enable children to figure out different strategies to improve their level in measurement estimation and their insights. Since estimation, as per researches, is one of the few areas in which most children have a superficial approach, a strong inclination towards accurate answers and the use of the formula is favored. Steps that might promote the achievement of this goal include the following: 1. Important to focus on teachers' understanding, instructions should be clear regarding the conceptual structure to facilitate the use of measurement estimation at various levels of development. 2. Classroom discussion of different strategies used by students in the classroom is crucial s it allows other students to view the problem from different angles 3. Such problems should be provided which either have a connection to the old ones or are anyway related to the prior experience of the students. 4. Similar kinds of problems should be practiced to achieve expertise and also simultaneously add a bit to the higher level of development 5. A set of quite complex level problems should be imposed upon students where advanced features are salient initially but with the progress in the process, the advanced features are explored. 6. Usually, problems that are interrelated at different levels of development should be preferred as it is helpful even for slow learners7. A general understanding should be developed among students of their approach to measurement estimation and its effect on their mathematical understanding.

Consequently, it is really to be taken to note that a good estimator must have the patience to reach the best value and be committed to being perfect in measurement estimation. As Hatano (1988), asserted that there is good evidence that good estimators possess what is called "adaptive" rather than merely "routine" expertise. Thus, measurement estimation demands flexibility in thinking as some situation requires a spot strategy to deal with.

Conclusion

Thus, attention must be devoted to the promotion of this sort of expertise in a broader segment of the population. Moreover, any kind sort of curriculum eventually proves to be most valuable will have to be associated with at least two factors. The first is focussing on developing a deep sense of understanding of number sense among young children, that can be applied to measurement estimation. The second is to be on the regular habit of using measurement estimation before any instrument that is to develop that competence as well as confidence. The different effective steps mentioned above do not anyway structure any particular teaching techniques or particular curriculum to achieve these two measures. Rather, it is one of the suggested approaches to develop general competencies that are relevant to the use of various strategies, the order of such competency, and how it evolves from one level of development to the next.

References:

Piaget Jean; Inhelder Barbel (1956). The child's conception of space. Routledge & Kegan Paul London.

Piaget, J.; B. Inhelder& A. Szeminska; (1960). The Child's Concept of Geometry. New York: Basic Books, I960.

Piaget, J. et.al. (1968). Epistemologie et Psychologie de la function. Etudes d'Epistemologie Genetique, Pp,23

Polya. (1973). How to Solve It. Princeton, NJ: Princeton University Press

Bright, G.W. (1976). Estimation as Part of Learning to Measure. National Council of Teachers of Mathematics Yearbook, 38, (pp. 87-104). Reston, VA: NCTM.

Hartley A. A. (1977). Mental Measurement in the magnitude estimation of length. Journal of Experimental Psychology: Human Perception and Performance. pp. 622-628.

Reys, R. E., Bestgen, B. J., Rybolt, J. F., & Wyatt, J. W. (1982). Processes used by good Computationalestimators. Journal for Research in Mathematics Education, p. 183-201.

Resnick, L. B. (1982). Syntax and semantics in learning to subtract. In T. P. Carpenter, J. M. Moser, & T. A. Romberg (Eds.), Addition and subtraction: A cognitive perspective (pp. 136- 155). Hillsdale, NJ: Lawrence Erlbaum Associates,

Resnick, L. B. (1986). The development of mathematical intuition. In M. Perlmutter (Ed.), Perspectives on intellectual development: The Minnesota Symposia on Child Psychology (Vol. 19, pp. 159-194). Hillsdale, NJ: Lawrence Erlbaum Associates

Hope, J. A., & Sherrill, J. M. (1987). Characteristics of unskilled and skilled mental calculators. Journal for Research in Mathematics Education, 18(2), 98-111.

Hatano, G. (1988). Social and motivational bases for mathematical understanding. In G. B. Saxe & M. Gearhart (Eds.), Children's mathematics (pp. 55-70). San Francisco: Jossey-Bass.

National Council of Teachers of Mathematics. (1989). Curriculum and evaluation standards for school mathematics. Reston, VA: Author

Case, R. and Sowder, J.T. (1990). The Development of Computational Estimation: A Neo-Piagetian Analysis. Cognition and Instruction, Vol. 7, No. 2, pp. 79-99

Brewer, B. 1992. "Self-Location and Agency." Mind 101: 17

Sowder, J. T. (1992). Estimation and related topics. In D. Grouws (Ed.), Handbook of research on mathematics teaching and learning (pp. 371-389). New York: Macmillan.

Lunt, B.M. & Helps, R.C. (2001). Problem Solving in Engineering Technology: Creativity, estimation, and critical thinking areessential skills Electronics Engineering Technology Brigham Young University

National Research Council. (2001). Adding it up: Helping children learn mathematics. Washington, DC: National Academy Press.

Hogan T.P. &Brezinski, K.L. (2003). Quantitative Estimation: One Two, or Three Abilities? Mathematical Thinking and Learning, vol.5, pp.259-280.

Geary, D.C., (2004). Mathematics and learning disabilities. Journal of Learning Disabilities, 37(1): 4-15

Joram, E., Gabriele, A. J., Bertheau, M., Gelman, R. & Subrahmanyam, K. (2005). Children's use of the reference point strategy for measurement estimation. Journal for Research in Mathematics Education, 36(1), 4-23

Siegler, R. S., and Booth, J. (2005). "Development of numerical estimation: A review," in Handbook of Mathematical Cognition, ed. J. Campbell (New York, NY: Psychology Press), 197–212.

Gooya, Z., Khosroshahi, L. G., & Teppo, A. R. (2011). Iranian students' measurement estimation performance involving linear and area attributes of real-world objects. ZDM Mathematics Education, 43(5), 709-722.

Patkin, D., & Gazit, A. (2013). On roots and squares-estimation, intuition, and creativity. International Journal of Mathematical Education in Science and Technology, 44(8), 1191-1200

Van de Walle, J. A., Karp, K. S., & Williams, J. M. B. (2016). Elementary and middle school mathematics. Teaching developmentally. Boston: Pearson.

Horizons of Holistic Education **p ISSN : 2349-8811**
January-March.,-2022, 9 (2), 9-14 **e ISSN : 2349-9133**

Fetal sacrament (गर्भसंस्कार) and Neuroscience

Dr. Rakesh Patel
HOD- Prenatal care and Education
Children's University, Gandhinagar

Received: 11/01/2022 Accepted: 17/03/2022

ABSTRACT

Motherhood is the most important part of life. It is, on the one hand, a miraculous beacon of physiology, and on the other, a gift from God to man. This is the school of the nine-month-old womb. During this time the mother and baby are in a state of learning and constant change.
Through the mother during pregnancy, the baby can be taken on the steps of holistic development. The role of neurons in this process is very important. Many of the processes for activating neurons were devised by your sages. In which fetal communication, study and creative activities have an important place. In this research paper, research has been done in a descriptive manner keeping in view the above topics.

Key Words:- Fetal, Garbh Sanskar, Neuroscience, Human Development

Introduction:

At present the education system is moving in the right direction. But when it comes to value education and life development, we have many questions. India has made significant progress in the field of school education since independence. Progress can be seen especially in terms of literacy rate, infrastructural facilities, universal educational accessibility and school enrolment.
Science says that the development of a child begins before birth. This means that baby's mental development begins during pregnancy. According to neurology, millions of neurons begin to form in the first month. These neurons begin to form the possibilities of life.
The technological advances in neuroscience allowed scientists to research and develop studies about the human brain, especially in the first six years of a child's development. ... As the child interacts with the environment, new synaptic connections are formed in the brain, resulting in different learning and skills. Neuroscience may be able to make extremely important contributions to child development by building on repeated demonstrations that differences in neural activity patterns precede and predict differences in cognitive performance.

Neuroscience and Human Development

Neuroscience is the study of how the human nervous system develops and functions. We can derive a greater understanding of how our minds develop, what influences higher education functions, and how to better retain information from the science behind learning from neuroscience.

The connecting points between neurons, called synapses, are where learning is thought to occur. Yet the synapses alone store recollections of only the most elementary reflexes. ... Myelin, it turns out, plays a key role in learning by adjusting the speed of information transmission through neural networks. The consensus among neuroscientists is that the basis of learning and memory creation lies in changes in electrically active nerve cells, called neurons, and the connections between them, the synapses. Although neurons come in many diverse shapes, a stereotypical example of two neurons is shown in Figure 1.

Neuron for Deep Learning

Neurons in deep learning models are nodes through which data and computations flow. Neurons work like this: They receive one or more input signals. These input signals can come from either the raw data set or from neurons positioned at a previous layer of the neural net.The brain consists of three principle parts – stem, cerebellum and cerebrum – Of the three, the cerebrum is most important in learning, since this is where higher-ordered functions like memory and reasoning occur. When we acquire new knowledge (of any kind), neurons become more strongly connected, which creates a stronger network and allows the neurons to communicate with each other faster and more efficiently. While the neuroscience of learning and memory is, of course, much more complicated, those are the basics

Brain-based learning can also affect social-emotional development, or a student's ability to understand and regulate their emotions. Studies have found that brain-based learning strategies can improve a student's motivation and attitude. The nervous system not only works to produce thoughts, emotions, and behaviour, but also controls important body functions, like breathing. Studying the nervous system advances understanding of our basic biology and body function. An artificial neuron is a connection point in an artificial neural network. ... In both artificial and biological networks, when neurons process the input they receive, they decide whether the output should be passed on to the next layer as input.

Brain and the Central Nervous System

Around week 5, your baby’s brain, spinal cord, and heart begin to develop. Your baby’s brain is part of the central nervous system, which also houses the spinal cord. There are three key components of a baby’s brain to consider. These include:

Cerebrum: Thinking, remembering, and feeling occurs in this part of the brain.

Cerebellum: This part of the brain is responsible for motor control, which allows the baby to move their arms and legs, among other things.

Brain stem: Keeping the body alive is the primary role of the brain stem. This includes breathing, heartbeat, and blood pressure.

Fetal Dialogue and Its Effects

During weeks 8 to 10, the cerebrum begins its development in earnest. Neurons proliferate and begin their migration throughout the brain. The anterior commissure, which is the first interhemispheric connection (a small one), also develops. Reflexes appear for the first time during this period. Just four weeks after conception, the neural tube along your baby's back is closing. The baby's brain and spinal cord will develop from the neural tube. The heart and other organs also are starting to form.

The activities that are performed during the fetal process are very useful in the process of holistic development of the baby. Namely, the process of fetal communication in which a very

positive message is conveyed to the child through the mother. He is given knowledge about creation and family. Due to which this message is recorded by the child's sense of hearing to its neurons. And the child begins to cultivate many things.

What is a Neuron?

Neurons are information messengers. They use electrical impulses and chemical signals to transmit information between different areas of the brain, and between the brain and the rest of the nervous system. ... Neurons have three basic parts: a cell body and two extensions called an axon (5) and a dendrite (3). Within an artificial neural network, a neuron is a mathematical function that model the functioning of a biological neuron. ... The output of the neuron can then be sent as input to the neurons of another layer, which could repeat the same computation (weighted sum of the input and transformation with activation function).Which brain cells play a role in learning and memory by communicating with neurons? It appears that glial cells called astrocytes — so-called because they are shaped similarly to stars — play an active role in memory and learning. This is according to a new study from the University of California (UC), Riverside.

Cognitive Activity and Pregnant Woman Activity

When you are learning, important changes take place in your brain, including the creation of new connections between your neurons. This phenomenon is called neuroplasticity. The more you practice, the stronger these connections become. Overall, larger brain size and volume is associated with better cognitive functioning and higher intelligence. The specific regions that show the most robust correlation between volume and intelligence are the frontal, temporal and parietal lobes of the brain. Pregnant women are more likely to have a creative effect on the fetus when an activity is performed. Maternal concentration and activity help the developing fetus.

Brain-Based Learning in Education

Start your child's learning journey in the womb. Infants in utero receive currents of information via sound, emotion and thought waves. This stimulation gives newly formed brain cells the mental and emotional nourishment they need to form strong, early connections.

Different technique and activities used during the Bright Brain Prenatal sessions are:

1. Music Therapy
2. Dialogue with Fetus (गर्भसंवाद)
3. Positive Thinking
4. Language activity
5. Yoga & Exercise
6. Art and Craft
7. Meditation & Relaxation

Brain-based learning refers to teaching methods, lesson designs, and school programs that are based on the latest scientific research about how the brain learns, including such factors as cognitive development—how students learn differently as they age, grow, and mature socially, emotionally, and cognitively. Brain-based learning helps students relax in order to improve

alertness. Teaches play music, introduce soft scents and dim lighting to promote a stress free learning arena. Brain-based learning develops neuroplasticity, which is the brain's ability to change and grow. What happens to the neurons in your brain every time you learn something new? The brain's neural connections change forming and strengthening pathways that allow you to interact with and learn from your constantly changing environment.

Brain Cells Make You Smarter

Fetal brain development starts probably before you even realize you've conceived. When you're just 5 weeks pregnant, the first neural cells begin to divide and differentiate into neurons and glia (the two types of cells that form the nervous system).

Also at about week 5 of pregnancy, the neural plate folds onto itself to form the neural tube, which closes by about week 6 of pregnancy to eventually become the brain and spinal cord. By about week 10, the brain is a small, smooth structure that looks a whole lot more like the brain you're used to (minus the folds that make up the various brain regions, which develop later in pregnancy).

When does a Fetus have Brain Activity?

Everyday activities like new ideas, stories and quizzes are useful for the development of the brain of mother and child. From birth onwards one becomes more mentally aware, familiar with words and emotionally connected with all.

The first synapses in baby's spinal cord form during week 7 of pregnancy. By week 8, electrical activity begins in the brain — allowing your baby to coordinate his first (spontaneous) movements that doctors can even see on an ultrasound! Your baby's brain continues to develop in the coming weeks, endowing him with a remarkable range of involuntary movements like stretching, yawning and sucking by the end of the first trimester and more coordinated movements in the second trimester.

That said, the brainstem, which controls vital functions like heart rate and breathing, isn't mostly complete until the end of the second trimester, and the cerebral cortex doesn't take up its duties until the third trimester.

In fact, the cerebral cortex — which is responsible for voluntary actions, thinking and feeling — only starts to work around the end of pregnancy, with simple electrical activity detectable in regions associated with senses (like touch) and motor skills in premature babies.

The more you challenge your mind to learn, the more your brain cells grow. Things you once found very hard or even impossible to do – like speaking a foreign language or doing algebra – become easier. The result is a stronger, smarter brain. It allows us to learn, see, remember, hear, perceive, understand and create language. Sometimes, the human brain also fails us. Cognitive psychologists study how people acquire, perceive, process and store information. The nervous system plays a role in nearly every aspect of our health and well-being. It guides everyday activities such as waking up; automatic activities such as breathing; and complex processes such as thinking, reading, remembering, and feeling emotions. Studying the Brain. Understanding the brain is of vital importance to psychologists because of its influence over behaviour and mental states.

What Happens to the Brain During Fetal Development?

The fetal brain begins to develop during the third week of gestation. Neural progenitor cells begin to divide and differentiate into neurons and glia, the two cell types that form the basis of the nervous system. By the ninth week, the brain appears as a small, smooth structure.

Even though the fetus is now developing areas that will become specific sections of the brain, not until the end of week 5 and into week 6 (usually around forty to forty-three days) does the first electrical brain activity begin to occur.

But here are six simple, research-supported ways to help boost your baby's brain development in utero.

- 30-Minute walk everyday
- Take Food as Medicine.
- Supplement A Healthy Diet.
- Read books.
- Get More Sleep.
- Do smart and skilful activity

Almost all organs are completely formed by about 10 weeks after fertilization (which equals 12 weeks of pregnancy). The exceptions are the brain and spinal cord, which continue to form and develop throughout pregnancy.

What is the Role of Brain Development in a Fetus?

The brain begins to form early in the first trimester and continues until you give birth. During pregnancy, fetal brain development will be responsible for certain actions like breathing, kicking, and the heartbeat. The human brainstem is fashioned around the 6th–7th week of gestation and matures in a caudal to rostral arc, thereby forming the medulla, pons, and midbrain. Hence, by the 7th–9th gestational week the fetus displays spontaneous movements, 1 week later takes its first “breath,” and by the 25th week demonstrates stimulus-induced heart rate accelerations. As the pons, which is later to mature, mediates arousal, body movements, and vestibular and vibroacoustic perception, from around the 20th to 27th weeks the fetus responds with arousal and body movements to vibroacoustic and loud sounds delivered to the maternal abdomen.

The midbrain inferior-auditory colliculus followed by the superior-visual colliculus is the last to mature and in conjunction with the lower brainstem makes fine auditory discriminations and reacts to sound with fetal heart rate (FHR) accelerations, head turning, and eye movements—around the 36th week. When aroused the fetus also reacts with reflexive movements, head turning, FHR accelerations, and may fall asleep and display rapid eye movements. Thus fetal cognitive motor activity, including auditory discrimination, orienting, the wake–sleep cycle, FHRs, and defensive reactions, appear to be under the reflexive control of the brainstem, which also appears capable of learning-related activity.

In the end I would say that awareness should be brought in the society about the activities to be done during pregnancy as shown in Indian Ayurveda texts and Dharmashastras. This work has been done by Children's University, Gandhinagar for the last ten years. Welcome to this unique university. And so far thousands of pregnant mothers have taken advantage of this fetal center.

References:

Gordon, S. (2021). Everything You Need to Know About Fetal Brain Development: What You Can Do to Support This Growth. https://www.verywellfamily.com/everything-you-need-to-know-about-fetal-brain-development-4707581https://www.google.com/search?q=neuron+and+education+tecknics&oq=neuro&aqs=chrome.2.69i57j35i39l2j0i19l7.10883j0j15&sourceid=chrome&ie=UTF-8
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5459260/
https://www.sciencedirect.com/science/article/abs/pii/S0273229799904860
https://www.healthline.com/health/when-does-a-fetus-develop-a-brain#anatomy
https://www.whattoexpect.com/pregnancy/fetal-development/fetal-brain-nervous-system/
https://brightbraininternational.com/eng/brain-based-education/

.

Horizons of Holistic Education **p ISSN : 2349-8811**
January-March.,-2022, 9 (3),15-20 **e ISSN : 2349-9133**

Women Empowerment Through Unorganized Sector

Ms. K. Veilatchi
Assistant Professor of Commerce K.R. College of Arts and Science Kovilpatti-628 503
Affiliated to Manonmaniam Sundaranar University, Tirunelveli-627 012
Tamil Nadu, India.

G. Dhivya, E. Abarna Jeyaseeli
Department of Commerce K.R. College of Arts and Science Kovilpatti-628 503
Affiliated to Manonmaniam Sundaranar University, Tirunelveli-627 012
Tamil Nadu, India.

Received: 17/01/2022 Accepted: 25/02/2022

ABSTRACT

The female labour force constitutes one third of the rural workers in India. Women workers face series problems and constraints related to work such as lack of continuity, insecurity, wage discrimination, unhealthy job relationship, absence of medical and accident care etc. Underemployment, but in many cases the jobs are low-paid and they face job security. Women's empowerment (or female empowerment) is the process of empowerment women. It may be defined in several ways, including accepting women's viewpoint or making an effort to seek them, raising the status of women through education, awareness, literacy, and training. In comparison to the organized sector, this sector has not tasted the advantages or benefits of the organization. In defining the unorganized sector, self- employed with or without family labour and micro enterprises with less than five workers, is also included. Unorganized sector or informal sector do not enjoy much privileges of the organized sector especially when it comes to women it fully biased with lots of economic disparities.

Key Words: Empowerment, Informal women workers, Problems, Unorganized Sector.

Introduction:

In India, women constitute almost half of the total workforce. However, over 96 per cent of women work in the informal, unorganized sector. The size of the informal labour market varies from the estimated 4-6% in the high-income countries to over 50% in the low-income countries.

Its size and role in the economy increase during economy downturns and period of economy adjustment and transition. Women's empowerment has become a significant topic of discussion in development and economics. Economic empowerment allows women to control and benefit from resources, assets, and income. While often interchangeably used, the more comprehensive concept of gender empowerment concerns people of any gender, stressing the distinction between biological and gender as a role. The difficulty begins with the unorganized industry itself being identified or defined. The term unorganized sector was first used by Hart in 1971 who described the unorganized sector as that part of urban labour force, which falls outside the organized labour market. The constitution of India under the Article 23 which speaks about the right against exploitation.

To know the living, workers and economic status of women in the informal sector. We need to identify the problem that women face in the informal sector. To study social security measures for unorganized workers. There are several principles defining women's empowerment such as, for one to be empowered, they must come from a position of disempowerment.

Over the years, the unorganized industry has gained traction. In all official documents and analyses, the word 'unorganized industry' is widely used in India.

India's workforce accounts for approximately 92% of the unorganized group, with the entire farm sector falling under the informal category, while only one-fifth of the non-farm employees are in the organized sector.

The Ministry of labour, Government of India, has categorized the unorganized labour force under four groups depending on occupation, nature of employment, specially distressed categories and service categories.

There is no formal employer-employee relationship. The work status is of inferior quality of work and inferior terms of employment, both remuneration and employment. Workers in the unorganized sector are usually subject to indebtedness and bondage as their meagre income cannot meet with their livelihood needs. The unorganized workers do not receive sufficient attention from the trade unions. Inadequate and ineffective labour laws and standards relating to the unorganized sector.

Social welfare scheme for unorganized sector a detailed analysis of the problems of unorganized sector workers showed that social security is required to reduce the vulnerability of unorganized sector workers.

Welfare measures for the unorganized sector the ministry of labour and employment in order to ensure the welfare of workers in the unorganized sector which, inter-alia, includes weavers, handloom workers, fishermen and fisherwomen, toddy tappers, leather workers, plantation labourer's, beedi workers, has enacted the unorganized workers social Act, 2008.

Formalization of unorganized workers India's unorganized sector workforce has been at the forefront of driving the economy's rampant growth prior to the onset of **COVID-19,** however, despite increased economic prosperity emplotation, poverty and lack of basic necessities are still commonplace.

Why do women work?

Women work mainly for economic independence, for economic necessity, as some women are qualified enough to work, for a sense of achievement and to provide service to the society.

Importance of women participation women's participation may be used both for support by an agency and as a control device by the law-markers. Participation may be direct or indirect, formal or informal; it may be political, social or administrative in nature.

Review of Literature:

Women's Empowerment

Mohanty Bedabati: (2005)[1] Dowry torture is more prevalent among women in the lower age group and the same gets less manifested in the later part of life. The reasons for such decline in the incidence of dowry torture are accommodation of demands of in-laws by the parents, development of a positive understanding between the victim and the husband, changing family environment because of the responsibility of offspring and above all acceptance of harassment as a part of life and not reporting about the torture.

Manjusha Sharma: (2005)[2]Karnataka experiences also indicate that women in the younger generation show an interest in the PRIs. The majority of them are married but the significance attached to marital status seems to be declining. Illiteracy among female members is higher at the gram panchayat level, while female members at the zilla panchayat level were graduates. The women members had a little exposure to mass media compared to men, particularly in newspaper reading, perhaps due to lower literacy rates among rural women.

Unorganized Sector

Bairagya Indrajit, (2009)[2] conducted study on "Measuring the Informal Economy in Developing Countries". The goal of this study was to measure the economic importance of the informal sector in Indian economy by its share, growth and composition from the year 1970 to 2006. Another objective was the measurement of efficiency performance of the unorganized sector.

Mukherjee Piu, Paul G D Bino, Pathan J.I (2009)[3]conducted a study on the migrant workers' working condition in to explore whether migration to urban areas had substantially altered their working and living conditions as also the labor market and human development issues. The study reviewed how the migrants survived the expected deficiencies and dispossessions and also the role of labor brokers in this arena.

Problems of Women Unorganized Sector:

Minimum wages: The supreme court of India held that the employer of salaries below the statutory minimum salary level was equal to forced labor and forbidden under Article 23 of the India constitution.

Absence of a suitable physical environment at work: In most industries in the unorganized sector, the sanitary conditions in the lack of proper toilet facilities are so precarious.

Revenue loss resulting from accident: A job or other injury is a significant problem for migrant as a result of income loss. When a breadwinner dies, the family needs to borrow money, spend saving or sell properties, and the income loss is irreversible.

No trade union or labor union knowledge: Not many, but most, are unaware of the existence of the trade union and its rules. Trade union means a trade union, registered under the trade unions Act, 1926 for the time being. Trade union which is analyzable in the following ingredients.

Long working hours: During long working hours the social and family lives of workers in general and of women workers, in particular, have a serious impact. Long working hours beyond labor standards are common in India in the unorganized workers.

Health and occupational risks: The key cause for detrimental effects on the health conditions of workers of working conditions in the unorganized workers. Lack of health care resources often force poor workers to forget it or to become indebted.

Insecurity resulting from illness: Many studies show health risk to informal workers as the primary risk. A variety of studies have shown that the lack of funding for treatment sometimes leads to inadequate health care or debt or a bad payment. Poverty was a major factor in the absence of health care.

Benefits of unorganized sector:

In Laxmi Mandal & Ors.Vs. Den Dayal Harin agar Hospital & Ors, the Supreme Court of India acknowledged that reproductive rights are covered under Article 21 of the Constitution of India, i.e., 'Protection of Life and Personal Liberty'.

Poverty, insufficient healthcare and other socio-economic barriers make quality health services inaccessible to women.

Women working in the unorganized sector are particularly vulnerable as they continue to work in harsh circumstances till the last days of their pregnancy which can cause complications. Lack of resources pushes them to resume work soon after childbirth, even though their bodies might not permit it. Constant work also limits their ability to breastfeed exclusively during the baby's first six months, which itself is unhealthy for the growth of the child.

Women's economic empowerment is central to realizing women's rights and gender equality. Women's economic empowerment includes women's ability to participate equally in existing markets; their access to and control over productive resources, access to decent work, control over their own time, lives and bodies.

Empowering women in the economy and closing gender gaps in the world of work are key to achieving the 2030 Agenda for Sustainable Development and achieving the Sustainable Development Goals, particularly Goal 5, to achieve gender equality, and Goal 8, to promote full and productive employment and decent work for all.

When more women work, economies grow. Women's economic empowerment boosts productivity, increases economic diversification and income equality in addition to other positive development outcomes. Conversely, it is estimated that gender gaps cost the economy some 15 percent of GDP.

Increasing women's and girls' educational attainment contributes to women's economic empowerment and more inclusive economic growth. Education, upskilling and re-skilling over the life course – especially to keep pace with rapid technological and digital transformations

affecting jobs—are critical for women's and girl's health and wellbeing, as well as their income-generation opportunities and participation in the formal labor market.

Overcome the problem of unorganized sector:

The unorganized worker employees should be granted pension during the rainy season, maternity leave benefits, accidents relief, natural mortality allowance, education assistance for children for higher education. Unique scheme for helping unorganized sector to their specific demands and needs should be developed by central and state government. The contribution of unorganized workers to GDP is almost 50%.

- Women workers lack in skill, skill development programs should be provided to them to enhance their skill level.
- Women workers should be educated and make them aware about their rights and legislative provision.
- It is very much essential to create awareness among women workers about the institutional support available to them to protect their rights.
- A comprehensive law is needed to protect the rights of women labour.
- Any kind of exploitation including sexual harassment of women workers is to be prevented and stringent action needs to be taken against the wrong doer.
- Mass media should be used to communicate the social message relating to women equality.
- A separate women grievance cell headed by a woman should be established in every organization sector and in case of unorganized sector women to form self-help groups for their protection.

Conclusion:

The overwhelming majority of employees in the country are from an unorganized sector, including the agricultural sector, the construction, shops, road sellers, small-scale service providers, salt pans, domestic work, rework, beedi industries, etc. Unorganized workers function without sufficient benefits in extreme conditions. For both economic and social growth, security and support for unorganized sector workers are very important.

In India, almost 92 per cent of the work force in the unorganized sector one- third of which are women and their dependents. Though the Indian Constitution guarantees equality of opportunity related to work, equal rights for livelihood, equal pay for equal work etc., The condition of women in the unorganized sector is deplorable. The most serious hazard faced by the working class in the era of globalization is the increasing threat to job security.

Contract, casual, temporary, part-time, piece-rated jobs and home-based work etc., decreasingly replacing permanent jobs. Unorganized labourers are stated to be those labourers, who have not been able to organize themselves in the pursuit of the common interest. They often experience barriers in the achievement of their desired goals and objectives. These barriers are like causal and uncertain nature of employment, unawareness, backwardness, illiteracy, insecure environmental conditions and work culture.

Reference:

Mohantty, Bedabati (2005), Violence against Women an Analysis of Contemporary Relatives Kanishka Publishers, Distributers, NewDelhi.

Sharma, Manjusha, (2005): Empowering Women for Rural Development, in Governance at Grassroots Level in India (ed.) S.S. Chahar, Kanishka Publications, Distributors, NewDelhi.

Gaur, K.D., RanaRachita& Gaur Munish (2005), Panchayati Raj and Women, in Women and Panchayati Raj, ed. by J.L. Singh, Sunrise Publication, Delhi.

Sujata D. Hazarika:2006Stree Shakti SHG & Empowerment of Women in Havari District, Karntaka, Third Concept, March.

Sreelakshmamma, K. (2008), Empowerment of Women in India, Serials Publications, NewDelhi.

SophornTous, Noun Veasna (2009) Study on Living and Working Conditions of Domestic Workers in Cambodia, Report of ILO, Pgs3-5.

Geetha K.T. (2010), Women in Informal Sector-A Case Study, IJBEMR, Volume- 1, Issue-2, December 2010, pgs23-26.

Musooka Moses Kimera (2010), Regard for Workers' Dignity: A Remedy to The Poor Conditions of Workers in Wakiso Town: Wakiso District, pgs1-3.

Kashappa, Asha & G. Sreeramulu (2010), Women Empowerment through Self Help Groups (SHGS), Third Concept, May.

Ramakrishna, V.V.S. and Govindu, V. (2011), Political Empowerment of Women in Panchayati Raj Institutions, edited by D. Pulla Rao in Political Dimension of Women Empowerment, The Associated Publishers, Ambala.

Horizons of Holistic Education **p ISSN : 2349-8811**
January-March.,-2022, 9 (4), 21-26 **e ISSN : 2349-9133**

Building Psychological Immunity to Combat Covid-19

Dr. Madhu Asthana
Ex. Principal and Head, Department of Psychology
Sri Agrasen Kanya Autonomous P.G. College, Varanasi, (U. P.) India.

Received: 16/01/2022 Accepted: 21/03/2022

ABSTRACT

The corona virus pandemic Covid-19 is the defining global health crisis of our time. The only way to fight with this condition is to build and strengthen immunity within ourselves. Health ministry has issued several guidelines to ensure the physical hygiene and to build physical immunity against the virus, but the problem is not only physical. Issue of guidelines for physical immunity and hygiene has been highlighted by the government but that of psychological immunity has been ignored. It is very crucial to build and strengthen psychological immunity along with physical immunity to make ourselves strong enough to protect from corona infection and to resilient from the damages, especially psychological, caused by this pandemic. Psychological immunity is defined as "a system of adaptive resources and positive personality characteristics that acts as psychological antibodies at the time of stress." As physical immunity protects individuals from different viral infections of the environment, psychological immunity acts as a buffer against environmental stressors, day-to-day hassles, and negative emotions. Building psychological immunity is a process that can be targeted through various deliberate and purposeful interventions. Some measures for boosting psychological immunity are suggested in detail. These are simple tips that can be useful. Most of them focus on the ways one can increase his/her resilience.

Key words: Psychological Immunity, Covid-19

Introduction

On March 11, 2020, WHO declared the Novel Corona Virus Disease (Covid-19) outbreak as a pandemic. As we all know the pandemic involves the worldwide spread of a new disease. Covid-19 is an infectious disease caused by a new discovered corona virus called SARS-Cov-2, and it has impacted a large number of people and families around the world.

The corona virus pandemic Covid-19 is the defining global health crisis of our time and the greatest challenge we have faced since World War II. We have reached the tragic mile stone of more than two million deaths and the human race is suffering under almost intolerable burden of loss. Actually this pandemic is not only a health crisis it's also an unprecedented socio-economic crisis. Stressing every country it touches, it has the potential to create devastating social, economic and political effects that leave deep and long-lasting scars.

We have already fought with many outbreaks, as cholera, malaria, plague, influenza, tuberculosis, HIV, Ebola, SARS etc. in our life but covid-19 has come forth as most dangerous because of its very high spreading power. To control it and save ourselves from infection several restrictions like physical distancing, use of mask and lockdown have been advised. Invention of vaccine has given the light of hope. Millions of people are getting vaccinated. A few months ago it seemed that corona infection is now under control, but these days the rate of infection is getting higher and higher and now we are facing the third wave of this pandemic with several variants of corona virus. The condition is getting more and more alarming. The only way to fight with these conditions is to build and strengthen immunity within ourselves. Health ministry has issued several guidelines to ensure the physical hygiene and to build physical immunity against the virus, but the problem is not only physical. As we have seen in the first phase of the pandemic, lockdown had placed a strong break on the moving wheel of life throughout the world. People in many countries have lost their jobs as a result of nonessential business closing to restrict the spread of virus. The fear of getting infection, quarantine, isolation, death, losing our loved ones, restrictions of lockdown and employment loss have contributed to various psychological problems. The same was in the second wave of Covid 19 pandemic. Issue of guidelines for physical immunity and hygiene has been highlighted by the government but that of psychological immunity has been ignored. It is very crucial to build and strengthen psychological immunity along with physical immunity to make ourselves strong enough to protect from corona infection and to resiliate from the damages, especially psychological, caused by this pandemic.

The term 'Psychological immunity' was coined by Olah in 1995, 2000. Psychological immune system is in-charge of building a safety net to protect us from the effects of chronic stress and gives us the strength to endure the most terrible events. Psychological immune system helps in dealing with conflicting emotions. It acts as a character strength that helps individuals to face their fears, anxieties and environmental threats in a more competent manner. Individuals possessing good psychological immunity are adaptive and flexible in a given situation. Psychological immune system also encourages people to take responsibility for their own actions and life (Bhardwaj and Agrawal, 2015).

Psychological immune system, as defined by Olah (2004) is "an integrated system of cognitive, motivational and behavioral personality dimensions that should provide immune against stress, promote healthy development and serve as stress resistance resources or psychological antidotes". Psychological immunity is defined as "a system of adaptive resources and positive

personality characteristics that acts as psychological antibodies at the time of stress." As physical immunity protects individuals from different viral infections of the environment, psychological immunity acts as a buffer against environmental stressors, day-to-day hassles, and negative emotions. While biological immune system keeps us alive protecting from diseases, the psychological immune system mitigates the impact of emotional shock and allows us to move forward. Psychological immune system uses various strategies to protect us.

Psychological immune system is composed of two essential elements. First, the *resilience* which means facing adversity without falling apart and come out stronger, and second, *eudemonia,* which states that sustainable happiness does not come from pleasure but from the meaning of life. It has two properties first is healing and the second is positivity.

This psychological immune system functions as a superordinate system with three interacting subsystems, and each of these three systems has many sub-systems:

1. **Approach Beliefs**: This guides the organism's orientation towards the environment.
2. **Monitoring-Creating-Executing Beliefs**: This initiates the seeking out and assimilation of information as well as puts into action necessary to influence and create possibilities within the environment, instigates the exploration of the physical, social and intra-psychic environments for challenge and new experience.
3. **Self-Regulating Beliefs**: This ensures the functioning of the rest of two systems by stabilizing the individual's inner emotional life.

Olah has described sixteen factors of psychological immune system which cover the three aforesaid systems of beliefs. Positive thinking, sense of control, sense of coherence and sense of self growth are the part of *approach belief system*. Challenge orientation, sense of change, social monitoring capacity, problem solving capacity, self- efficiency, social mobilizing capacity, social creation capacity and goal orientation are elements of *monitoring-creating-executing beliefs*. *Self-regulating beliefs* include synchronicity, impulse control, emotion control and irritability control.

Among these sixteen factors of psychological immune system Gupta and Nebhinani (2020) have emphasized certain positive characteristics such as *positive thinking, sense of coherence, sense of control, emotional regulation, goal orientation, positive self-efficacy*, and *problem-solving skills*, and have discussed their roles to play especially in this pandemic. Gupta and Nebhinani (2020) illustrate that problem solving is a character strength that can encourage people to look for hope in the extreme situations like Covid-19. Sense of coherence and control can help individuals determining the meaningfulness of the crisis situations and encourage their belief about control of the situation within themselves. Positive emotional regulation can help people dealing with the negative emotions pertinent to Covid-19 and associated uncertainties of the future. Goal orientation can encourage individuals to rebuild their short-term goals of life considering the current scenario of Covid-19. Goals can be devised as goal of the day that encourages individuals to live in the present moment. Positive self-efficacy further enhances people's belief on their

abilities to achieve their predetermined goals. Problem solving skills can help individuals to define problem situations and look for alternative ways of dealing with them. In this way psychological immune system can help individuals in handling their fears, anxieties, and environmental hassles.

In a study on medical professionals Dubey and Shahi (2011) found significant positive relationships of coping strategies with different beliefs pertaining to psychological immune system. Rachman (2016) discussing on cognitive influences on the psychological immune system, has concluded that cognitive appraisal can affect life-long health behavior and he also stressed that high levels of subjective well-being can add 4 to 10 years to life.

Besides all the importance of psychological immunity, we are witnessing lots of psychological turmoil, frustration, fear, anxiety and boredom during this pandemic, that have led to increased use of maladaptive coping behaviors, such as problematic use of internet, other behavior addictions, and drug, tobacco and alcohol abuse. Tendency of suicide has also been observed in patients with Covid-19 and in the suspected patients of Covid-19, perhaps due to fear and anxiety. The failure of psychological immunity is obvious in such type of suicidal tendency. We must have to build up our psychological immune system much strong to face this crisis and adverse conditions.

Building psychological immunity is a process that can be targeted through various deliberate and purposeful interventions. Here one thing is important that the second wave of Covid-19 was much and more dangerous for children and in the third wave old people are getting more and more infected.

As stated above this pandemic has cost the humanity a severe psychological loss as well as physical and economic loss. If we have to defeat corona, we have to build our psychological immunity and make ourselves mentally strong. Gupta and Nebhinani (2020) and Asthana (2021) have suggested some measures for boosting psychological immunity. There are simple tips that can be useful. Most of them focus on the ways one can increase his resilience.

Acceptance: Mindful acceptance of this pandemic situation is the first step of building Psychological immunity. Acceptance itself is so powerful that it can bring the imperative discipline require to follow the protocol of Covid-19 without any difficulty. When we accept the severity of pandemic we easily and with precautions follow the protocol such as use of masks, physical distancing, use of sanitizers etc.

Positive Thinking: Positive thinking is the main contributor of psychological immunity. It costs nothing and gives us many benefits. Thinking positively doesn't mean falling into blind self-confidence or stopping ourselves from being realistic. Each and every thing has two faces- one is bright while other is dark. Let us focus on the bright aspect and this will fill hope in us.

Connectedness/Social Support: Enhancing the connectedness within the family relations can create a ground for good social support as protective factors for future mental health problems. Since there are restrictions in going outside and meeting people publically, but in the era of

technology we can easily remain connected with our loved ones with phones, video calls, WhatsApp, instagram etc. This connectedness is the base of social support, so it should be maintained.

Problem Solving: In this corona period several problems have come forth. It is obvious that when there is a problem, there is solution. Withdrawal from the problem will make us psychologically weak. We must try to develop problem solving ability just as we learn other abilities.

Optimism: Optimism is a positive aspect of thinking and belief. Nurturing hope or optimism about overcoming the crisis can also help in building psychological antibodies against Covid-19. This critical period will also be over and we will overcome that, this hope help develop psychological immunity in us.

Altruism: This covid-19 and associated situations have raised several types of problems before us. Some people easily share their problems with others, while some find it difficult. They hesitate in seeking support from others. In these conditions, engaging in altruism in the form of positive attitude toward help seeking and giving can also enhance the psychological immunity.

Reading Good Literature: Researches have proven that reading good literature is found to be effective in enhancing psychological immunity (Bhardwaj and Agrawal, 2015; Sabatie, et al, 2017; Gupta and Nebhinani,2020). So reading good literature is best for mental strength and immunity.

Belief in Change: It is a paradoxical fact that only change is permanent. The thing today will not be in the same form tomorrow. Situations of life change with every bit of time. The situations of today will definitely change tomorrow and so the conditions created by Covid-19 pandemic. We can hope for the better change and that will help enhance our psychological immunity.

Self-Control: In crisis often people lose their control and show impulsive, emotional and irritating behavior. In such times it is needed to control ourselves, not to let the circumstances to control us, and make our thinking and behavior normal and smooth. This type of self-control is indicative of mental strength and higher psychological immunity.

Self-Efficacy: Self-efficacy is a personal judgment of how well a person is able to cope with a given situation based on the skills they have and the situations they face. If our level of self-efficacy is high and we feel that we can deal properly and effectively with future conditions, it shows the strength of our psychological immune system. Building this belief and strength in one's self is very essential.

Detachment: Practicing detachment doesn't mean locking ourselves away from everything and everyone. Instead, detachment means that we shouldn't be dependent on or slave to anything or anyone. Here detachment is meant for material things. For our loved ones connectedness is the basic string of happiness and wellbeing.

Belief in Almighty: Belief in the regulating power of the whole cosmos, and the feeling that 'What HE does, does for our betterment/wellbeing' helps support us mentally. Hearty belief in Almighty will support us mentally and strengthen our psychological immunity.

The above tips are significant for building psychological immunity not only to deal with crisis of Covid-19 pandemic but also to deal with our day to day hassles and environmental stressors. If we consider all these aspects and build and strengthen our psychological immunity along with physical immunity, we will competently deal with the current crisis of Covid-19, defeat it and become successful to deal with future repercussions of this crisis.

References:

Asthana, M. (2021) Corona and Manovaigyanik Pratirodhak Kshamata. *Mental health care. in* Jan. 16.

Bhardwaj, A. and Agrawal, G. (2015) Concept and Applications of Psycho-Immunity (Defense Against Mental Illness): Importance in Mental Health Scenario. *Online Journal of Multidisciplinary Researches* . Vol. 1, 6–15.

Dubey, A. and Shahi, D. (2011) Psychological Immunity and Coping Strategies: A study of Medical Professionals. *Indian Journal of Social Science Researches*. Vol. 8 (1-2), 16-47

Gupta, T. and Nebhinani, N. (2020) Let's Build the Psychological Immunity to fight against COVID-19. *Indian Journal of Psychiatry*. Sept-Oct. 62(5), 601-603.

Gupta, T. and Nebhinani, N. (2020) Building Psychological Immunity in Children and Adolescents. *Journal of Indian Assoc. Child Adolesc. Mental Health*, Vol.16(2),1- 12

Olah, A. (1996) Psychological Immune System: An Integrated Structure of Coping Potential Dimensions. Paper presented at the 9th conference of the European Health Psychology Society, Bergen, Norway.

Olah, A. (2000) Psychological Immunity: A New Concept in Coping and Resilience. Coping and Resilience International Conference, Dubrovnik- Covtat, Croatia.

Olah, A. (2004) Psychological Immunity: A New Concept in Coping with Stress. *Applied Psychology in Hungary*, 56,149-189.

Rachman, S.J. (2016) Invited Essay: Cognitive Influences on the Psychological Immune System. *Journal of Behavior Therapy and Experimental Psychiatry*. Vol. 53, Dec. 2-8.

Sabatie, C.; Cervantes D.R.; Torres, M.M.; De Los Rios, O.H. and Sanudo, J.P. (2017) Emotion Regulation in Children and Adolescents: Concepts, Processes and Influences. *Psycol Desde El Caribe*. 2017, 34(1).

Horizons of Holistic Education **p ISSN : 2349-8811**
January-March.,-2022, 9 (5), 27-32 **e ISSN : 2349-9133**

Comparative Study of Nutritional Status of Urban and Rural Children

Dr.Chetna Sonkamble
Dean, Interdisciplinary Studies,
Dr.Babasaheb Ambedkar Marathwada University, Aurangabad. (M.S.)
yaadni@gmail.com

Dr.Vandana Bankar
Head, Department of Home Science,
Arts and Science College, Chincholi (Li.),Ta -Kannad, Dist-Aurangabad (M.S.)
vandanabankar1980@gmail.com

Received: 31/01/2022 Accepted: 17/03/2022

ABSTRACT

Children are an important wealth of the nation and play a supportive role in nation-building. Only if they remain healthy then they could design the future of the nation for that, they should get healthy food. If children don't get these food elements in sufficient amounts, they can face malnutrition and it also affects children's health. As a result, such children get sick constantly and their physical development stops. Such children remain weak in the study.
According to the medical examination of children, the average number of healthy children in urban areas is 80% and in rural areas it is 62.5%. Weight, height, and shoulder size of urban children are respectively found 16.15, 97.70, and 15.87. Rural children's weight, height, and shoulder size are respectively found 14.93, 96.42, and 14.73. And the difference was found as per the Chi square test. According to the above data, the method which was used to determine the diet status of the urban and rural area children as per its conclusion it's found that the diet status to be degraded in a rural area. Parents of rural areas work in the fields for entire day and unable to pay proper attention toward their children and Parents in urban areas seem to be more aware. If we make the economical comparison between urban and rural areas, it would be found that the economic status of the urban areas is good than the rural area.

Keywords: - Children, Malnutrition, Health, Nutritional status

Introduction:

Children are an important wealth of the nation and play a supportive role in nation-building. Only if they remain healthy then they could design the future of the nation for that, they should get healthy food. This age group, which constitutes 25% of the Indian population, is the basis of future society but they are suffering from many contagious diseases. For example, respiratory disorders, diarrhea, pneumonia, skin disorders, fever, malnutrition, etc. Because of this they are getting weaker due to these diseases. Therefore, it is having an adverse effect on their overall development.

There is a slight difference in malnutrition both urban and rural areas. Carbohydrates, proteins, calories, vitamins, iron, water, and oxygen are needed for the proper function of the human body. All these elements work together in the human body.If children don't get these food elements in sufficient amounts, they can face malnutrition and it also affects children's health. As a result, such children get sick constantly and their physical development stops. Such children remain weak in the study.

Malnutrition means there is an insufficiency in the human body of one or more proteins for a long period. It affects children's physical growth and overall development, this is called malnutrition. The term malnutrition means the human body gets food in less or more amounts and the body fails to perform the digest process properly, or excessive loss of nutrients from the body. Therefore, this leads to cells' imbalance in the body and various diseases occur due to lack of nutrients. Such as hemorrhage, diseases caused by iodine deficiency, eye diseases, Kwashiorkor disease and Marasmus disease, etc.

If the quality of nutrition of a person is good then his health also remains good. The major reason behind writing this research paper is to identify the health conditions of the children.

Objectives:

1. Nutritional status of urban children.
2. Nutritional status of rural children.
3. To compare nutritional status of urban and rural children.

Hypothesis:

1. Children in rural areas are malnourished.
2. The nutritional status of children in rural areas is low.

Research Area:

Ektanagar and Ayodhyanagar in Aurangabad city. Chitegaon, and Kesapuri of the rural area.

Sample Selection:

Randomly, 80 children from urban areas and 80 children from rural areas have been selected for primary study.

Data Collection:

The analytical method for determining the quality of nutritional status for this study will be applied as a best method. In this method, most of the symptoms of diseases caused by lack of nutrients are visible from outside. The information obtained by this method is useful if these symptoms can be identified. Diseases can be diagnosed on the basis of symptoms.

While doing a medical examination of the whole body check-up from head to toes is performed in a good light. It includes hair, face, nose, eyes, tongue, teeth, gums, skin, nails, hands, feet, chest, swelling on the feet and bone diseases, etc.

Review of Pre-Research Material:

As per the report of the National Nutrition Monitoring Bureau (2001), near about 45% of pre-school children are malnourished. It is also observed that 65% of children are short in height and near about 47% of adults have energy deficiency for a long time.

According to Parimita Sen Gupta's research study, malnutrition was 9.50%, and in the developing areas its growth rate was 14.9%. If entire society decides to reduce child malnutrition by half by 2015, this would help to decrease its effect. Health and malnutrition are the major problems in India. And not they only invite death and disease among the

children. So it creates permanent physical weakness in children. 47% of underweight children are found malnourished in 2004 in India who were below five years age.Among them, 16 children died, and 46 children remained short in height.

As per the study of SimranVisai, ChhandaMallik in 2011, they found children like underweight, short in height, and weak in health. Their proportions are as follows respectively, 52.1%, 49.6% and 22.7%. It was found that near about 16% children were underweight, 24.4% children were short in height and 1.7% children were weak in a health.

In a study conducted by Sadruddin Biswas and Kaushik in 2011, they measured height and weight applying the human milli method. Then they came to the conclusion that the height and weight of boys were more than girls. Overall, underweight children 54.42%, undergrowth children 39.2% and weak in health22.10% children were found.

This suggests that if the quality of the diet is poor, children face different types of nutrition's efficiency and have to fall victim to problems like malnutrition. As a result, their overall development is also affected.

Signs and symptoms occurred due to lack of nutrients in medical examination

Sr.No.	Part of Body	Signs	Deficiency
1	Overall appearance	Very thin body	Celeries
2	Hair	Thin, to change hair color	Proteins,Vitamins C
3	Nails	Having white spots	Iron, Proteins
4	Skin	Dry and scaly skin, pale face and hyper tension	D, iron, B-2
5	Eyes	Night blindness, burning eyes and dry	Vitamin A
6	Mouth	Flowing blood from gums, inflammation of the lips	C, B-2, B-2, B-3
7	Throat	Jyoter	Iodine

Anthropometric assessment:

Height, weight and other measurements are used to determine nutritional status of human. Human physical growth is depend on his heredity and nutritional status. Therefore, in the anthropometric assessment method human height, weight, and arm size are being measured.

1. Weight:

Weight measurement is one of the most widely used simple criteria for determining the nutritional level of children's. If someone doesn't get a proper diet, it affects weight. So weight was measured.

2. Height:

Nutritional level is determined by considering height and weight according to age. If there is less growth in height and have a nutritional deficiency for a long time, then it affects the human body. Therefore, it is useful to assess the nutritional status of young children.

3. Shoulder size:

Shoulder size measurement indicates muscles growth and development. This measurement is useful for determining whether children have protein or calorie malnutrition.
Doctors' consultation has been taken into consideration for determining the nutritional status for this research paper.

Percentage of symptoms in medical examination of urban and rural children

Sr. No.	Symptoms	Urban area	Percentage	Rural area	Percentage
1.	Normal children	64	80	50	62.5
2	Torn lips	02	2.5	05	6.25
3	White tongue	03	3.75	04	05
4	Swollen gums	04	2.5	06	7.5
5	Easily broken hair	03	3.75	08	10
6	Decayed teeth	04	5	03	3.75
7	White nails	02	2.5	03	3.75
8	Swelling on the body	00	00	01	1.25

According to the medical examination of children, the average number of healthy children in urban areas is 80% and in rural areas it is 62.5%. Torn lips were found 2.5% in urban areas and 25% in rural areas. White –tongued children were found 3.75% in urban area and 5% in rural area.Children having swollen gums found in 2.5% in urban areas and 7.5% in rural areas. Children with easily broken hair found 3.75% in urban areas and 10% in rural areas. Children with white nail found 2.5% in urban areas and 3.75% in rural areas. Children with decayed teeth found 5% in urban areas and 3.75% in rural areas, and the percentage of swelling on the body found 1.25% only in rural areas.

Anthropometric assessment:

Comparison of moderate weight of children in urban and rural areas

Group	Area	Moderate of Weight	Kay square
A Group	Urban area	16.15	X^2
B Group	Rural area	14.93	3.75

Comparison of moderate height of children in urban and rural areas

Group	Area	Moderate of Height	Kay square
A Group	Urban area	97.70	X^2
B Group	Rural area	96.42	3.75

Moderation and comparison of shoulder size

Group	Area	Moderate of Shoulder size	Kay square
A Group	Urban area	15.87	X^2
B Group	Rural area	14.73	6.07

Weight, height, and shoulder size of urban children are respectively found 16.15, 97.70, and 15.87. Rural children's weight, height, and shoulder size are respectively found 14.93, 96.42, and 14.73. And the difference was found as per the Kay square.

Discussion and Analysis:

According to the above data, the method which was used to determine the diet status of the urban and rural area children as per its conclusion it's found that the diet status to be degraded in a rural area.Because, while determining diet status through the medical examination, it was found that there were deficiencies in it. It means that, they don't have a balanced and good diet for their children. Parents of rural areas work in the fields for entire day and unable to pay proper attention toward their children. Their children mostly eat chocolates and biscuits, that's why they have more chances of decayed teeth. There is also found iron deficiency among these children. Torn lips, swollen gums and easily broken hair, all these symptoms are found in huge number on their body. Therefore, it seems that, because of poverty, ignorance, and lack of time, parents of rural areas are unable to provide a good diet to their children.

Parents in urban areas seem to be more aware.If we make the economical comparison between urban and rural areas, it would be found that the economic status of the urban areas is good than the rural area. And all type of facilities are available easily in urban areas. Parents are also pay full attention toward an infant from the pregnancy. They have good eating habits. They also get an information about health through the various sources. When they bring their children into hospitals then they also get information about the good diet. Due to all these things, the qualities of nutrition is better in urban areas.

Conclusion:

1. The nutritional status of children in rural areas was found to be degraded.
2. Malnutrition was seen in children in rural areas.
3. Their immune system was found to be weak.
4. The health of children in urban areas was found to be better than rural areas. This means that the nutritional level of children in urban areas is found to be good.
5. Nutritional quality affects physical development.
6. If the nutritional level is low then the holistic development of children is not possible.
7. Children with good nutritional quality are good in all respects like intelligence, socialization capacity and ability skills, etc.

Remedies :

1. Parents need to maximize the use of jaggery, peanuts, beetroot, and green leafy vegetables for feeding their children.
2. The diet should be changed regularly so that all pulses and cereals should be used intermittently without using a single pulse or cereal.
3. Though there is an insufficiency of food then if we avoid food cooking in the wrong way, it can lead to better health. For example, the wrong practices like flour using without cleaning, washing vegetables after cutting, overcooking vegetables, etc. still exist in rural areas and need to be changed

4. Anganwadi workers or Asha workers should be sent by providing training in dietary guidance for public awareness.
5. There are government schemes for the children, we have to try for its implementation.
6. With good diet vaccination, personal or surrounding cleanliness, and women literacy all these measures are also important for healthiness.
7. With all kinds of ingredients in the diet, at least a single fruit throughout the day is essential.

References:

Pramita Sengupta (2001), "Epidemiological correlates of under Nutrition in under syeurs Children in an urban slam of Ludhiyana," Health and Population, perspectives and Issues, 33 (I) PP-1.

Simran Bisai, (2011), "Preyalence of under nutrition among Koramudi children aged 2-13 years in paschinsnedinipurDistric, West Bengol, World Journal of Pediatric, 7 (1) PP-31.

Sadruddin Biswas, Kaushik (2011), "Effects of social factors on nutritional status among rural Banglore, pre-school children from Eastern India, Enter: Journals of H. Sci. 8 (1), PP-3.

Shobha Waghmare (2010), AaharopcharaniSamajPoshan, Vidya Book Publishers, Aurangabad, PP-126,149,150.

Triveni Farkade (2007), PoshananiAaharshastra, Pimplapur Prakash, Nagpur. PP-9.

Horizons of Holistic Education **p ISSN : 2349-8811**
January-March.,-2022, 9 (5), 33-37 **e ISSN : 2349-9133**

Indigenous Knowledge and its Preservation in Modern Times

Prof. Manoj K. Saxena
Campus Coordinator
Dhauladhar Campus - I
Central University of Himachal Pradesh, Dharamshala (HP)

Aakriti Singh
ICSSR Doctoral Fellow
School of Education,
Central University of Himachal Pradesh, Dharamshala (HP)

Received: 02/03/2022 Accepted: 24/03/2022

ABSTRACT

Indigenous knowledge refers to the information which is unique and belongs to a specific culture or civilization. It is also known as local knowledge or tribal or traditional knowledge. This knowledge has developed with the enormous amount of time and civilizations. Different communities preserve their own knowledge. However, with undergoing enormous environmental, social and economic changes and a lack of official documentation of their cultural beliefs and knowledge, this wisdom of our ancestors is at risk of being lost forever.Intellectual property rights and other legal measures should be emphasized in order to protect indigenous knowledge and systems in our country. This paper explores the importance of indigenous knowledge as well as the various conversations and issues that it confronts.

Keywords: Indigenous knowledge, Threats, Protection.

Introduction

India's culture is one of the world's oldest cultures, dating back 4,500 years. India must take a balanced and inclusive approach to have a global standard in the twenty-first century. In the post-COVID-19 era, the natural resources of our world are rapidly diminishing. Our Indigenous Knowledge holds the spirit of nature and help to regenerate our nature and contribute to sustainable development.

Throughout history, especially during the colonial period, a sense of absolute superiority has always dominated indigenous knowledge.Indigenous knowledge that Indians have inherited and long prevailing has been referred to as superstition by western science. The solitary, tribal culture is closely linked to their way of life and environment. People have been able to live sustainable lifestyles by watching natural patterns over extended periods of time and then implementing them (Mandikonza, 2019). Indigenous knowledge is passed down through the generations, mainly through word of mouth and traditional rituals, and serves as the foundation of agriculture, health care, education etc. and helps to sustain a healthy

environment (Senanayake, 2006). Because they are isolated, they are in a disadvantaged group and have no power when it comes to their claim to indigenous knowledge.

With a spiritual element, indigenous knowledge has been passed down to generations through traditional storytelling and imitation among particular clans. Many modern scientists have criticized indigenous people's emotional attachment to their culture. Most manufacturing procedures have been largely replaced by modern technologies, but indigenous knowledge has grown in popularity over time as a result of its eco-friendly, time-proven technology, techniques, and underlying culture.

The Hon'ble Prime Minister of India Shri Narendra Modi, emphasized the importance of disseminating knowledge of Ayurvedaand home remedies, which have been used practically in every Indian household. To enhance this ancient knowledge as per modern needs, Ayurveda and other traditional medical and environmental practices must be examined in light of the daily medicine system.

Indigenous knowledge has been labelled primitive, backward, rural, unscientific, and other derogatory terms. But in the present time many foreign companies trying to invent strategies to describe a finding as an innovation without providing fair credit to persons or communities, who possess that knowledge for generations, leads to intellectual dishonesty. The indigenous knowledge is based on tribes and ancient Indian culture and for decades, indigenous peoples have relied on their immediate environment for life and identity (Mazzocchi, 2006).

As more research and information are dug into in the field of environmental studies more ethical debate has been revealed. Many biopiracy instances have come to light which shows the exploitation of traditional knowledge.

The Scope of Indigenous Knowledge in India

Biotechnologists believe that the indigenous knowledge of nature could be the key to future medicine and pharmaceutical research but the global ecology and environment are gravely endangered due to the unbalanced approach of industrial society (Chakrabarty& Kaur, 2021). India's economic policy in the early years after independence aimed to maximize resource extraction for export, large-scale conversions from food to cash crop production, and expanded industrialization. The green revolution, which began in India in 1960, has resulted in the extinction or reduced productivity of several local crops (Nelson et al., 2019). The implementation of industrialization exploited the environment and caused different issues such as growing pollution problems, and the depletion of soil, water, and other natural resources. Due to this industrialization, small farmers and indigenous/tribal peoples were affected the most by losing their lands, livelihoods and fighting for survival.

Indigenous knowledge can be found in every aspect of life, including the arts, food, sciences, health, and technology. Such knowledge could be useful for the concept of sustainable development. India is the birthplace of Ayurveda and Yoga. It has rapidly expanded over the world at this time. The importance of Ayurvedaand Yoga is recognized by people all around the world. Haldi has been used from ages as an antibacterial medicine in India (Mir, 2014) with other organic products like kapoor, doob grass, and other commonly accessible items, which have traditionally been recommended in Ayurveda to treat physical injuries.

Even in agriculture, substances from some plants and animals such as cow dung are utilized to increase productivity and protect certain crops. The concept of rainwater harvesting is also not new in India. There are systems to retain rainwater for future use in several places of India having low water rains, such as step wells and tankas in Rajasthan are a part of their

ancient culture. Indigenous knowledge provides us with an opportunity to interact with the environment without exploiting it.

Threats to Indigenous Knowledge

The modern scientific approach and industrialization have adversely affected the indigenous culture and knowledge. With the industrial progression, indigenous peoples are losing their ancestral lands, as well as physical and cultural resources and losing their ability to cope with natural and man-made hazards (Scott et al., 2013). A significant portion of the world's wild and cultivated biodiversity area is traditionally maintained by local communities and indigenous people (Toledo, 2001). These areas are crucial for ecological capacities and maintain human and non-human prosperity, as well as reducing carbon emissions. With the increase in human dependency on machinery and technology, indigenous people are facing unbalanced social and natural challenges (Jerez, 2021). These struggles pose some threats to the indigenous knowledge system, which are as follows-

Change in Religious Beliefs:

Several studies have documented the extinction or modification of indigenous religions among the present generation. They are not much aware of the traditional practices or the culture. This is one of the major reasons for the extinction of indigenous culture.

Change in Ecology and Biodiversity:

Ecological change can affect the population, overuse of resources and exploitation of native lands belonging to indigenous people. The results of such change can cause the migration of the local community.

Mixing with Other Cultural Groups:

Intercultural communication from non-indigenous communities may affect the Indigenous knowledge transmission systems. It causes different changes in traditional institutions, livelihood practices, and beliefs.

Intellectual Property Rights for Indigenous Knowledge:

The ancient knowledge system of India has a history as long as human civilization. In our ancient culture, there was no formal concept of property rights or patent of knowledge. However, in the present time, IPR is essential for securing the rights of inventors. Indigenous peoples from all over the world are lobbying for policies and practices that will help them to maintain their traditions and knowledge systems. It gives them a core identity that is based on their past, present, and future. Our culture and traditional knowledge are essential for human survival. Traditional knowledge is preserved, protected, and used through Intellectual Property rights systems. In recent years, intellectual property rights awareness of indigenous knowledge has grown in a number of worldwide forums on topics ranging from food and agriculture to the environment, health, human rights, and indigenous issues. The intellectual property rights in relation to Indigenous knowledge can be divided into two main parts i.e.

1. **Positive Protection** which enables indigenous communities to take the right action or seek compensation if the knowledge belonging to their community is misused. Under this protection, Communities are able to promote their traditional knowledge, manage its usage, and earn profit from its economic use.
2. **Defensive Protection** which prevents others from obtaining illegal IP rights over indigenous knowledge and subject matter which belong to a particular community or country. To gain this protection it is necessary that the local authority or the community must have proof that traditional knowledge is practised in their area for a long time.

To protect indigenous knowledge, the Indian Government took the initiative to open the Traditional Knowledge Digital Library. This project of India aimed to protect and conserve the traditional knowledge of medicine and prevent its exploitation in international patent offices (Kalbande & Suradkar, 2021). It was intended to organize the contents of old medical books of India in a systematic and scientific manner.

Integrating Indigenous Knowledge in Education

Indigenous Knowledge can be a good supporter for building relationship with schools and communities. The elders in tribal and local communities are more crucial and responsible for such public education system. To elevate and develop the status of Indigenous Knowledge the Indian teacher needs to be more attentive to integrating Indigenous Knowledge into education. India's youth population is fascinated with social media's charm (Saxena & Singh 2020), and they use technology to keep up with global news. They can investigate and grasp the relevance of Indigenous knowledge with the help of media and education. Combining indigenous education with other local knowledge sources can improve students' ability to contribute to sustainable development (Demssie et al.,2020). The capacity to apply indigenous knowledge helps students in their pursuit of a more sustainable lifestyle.

Indigenous Knowledge can generate a new vision of education practices. The Indigenous Knowledge varies with the local community and people. In our country diverse communities have different expertise in doing the same work. An example of this is the same cotton is differently used in a different regions of the country and prepare a variety of textile/fabric. Our country has a vast and multicultural history of education; our future should be built on our glorious past. This knowledge can guide us in our future education. Not only India but the whole world has realized the importance of their indigenous knowledge in education, countries like Australia, the U.S. etc. have also taken many initiatives to integrate their local knowledge into education such as native languages, promoting the native tradition and customs etc.

Conclusion:

In the Indian education system, it is crucial to include tribal, history and indigenous knowledge with the scientific knowledge and culture. We must teach our future generation to respect our ancestral knowledge and value our tradition with the modern scientific approach. The indigenous knowledge has the ability to sustain nature without hampering it. It is one of the main reasons that it has survived from era to era but the present consumerism approach is focusing only on productivity and exploits the natural resources which is a short-term growth or can be known as false development. Due to our dependency on the western approach, there is a greater risk of extinction for some valuable indigenous knowledge that was preserved by our ancestors for so long. The solution for this is to develop an understanding and respect for our traditional knowledge and culture in our youth and encourage them to explore this wisdom with new possibilities.

References:

Chakrabarty, S. P., & Kaur, R. (2021). A Primer to Traditional Knowledge Protection in India: The Road Ahead. *Liverpool Law Review*, *42*(3), 401-427.

Demssie, Y. N., Biemans, H. J., Wesselink, R., & Mulder, M. (2020). Combining indigenous knowledge and modern education to foster sustainability competencies: towards a set of learning design principles. *Sustainability*, *12*(17), 6823.

Nelson, Eliazer A. R. L., Ravichandran, K., & Antony, U. (2019). The impact of the Green Revolution on indigenous crops of India. *Journal of Ethnic Foods*, *6*(1), 1-10.

Jerez, M. M. (2021) Challenges and opportunities for Indigenous Peoples' sustainability. retrieved from https://www.un.org/development/desa/dspd/2021/04/indigenous-peoples-sustainability/

Kalbande, D. T., & Suradkar, P. A. (2021). Traditional knowledge digital library: A Magic bullet in the war against biopiracy. *Library Philosophy and Practice*, *1*(1), 1-15.

Mazzocchi, F. (2006). Western science and traditional knowledge: Despite their variations, different forms of knowledge can learn from each other. *EMBO reports*, *7*(5), 463-466.

Mandikonza, C. (2019). Integrating indigenous knowledge practices as context and concepts for the learning of curriculum science: a methodological exploration. *Southern African Journal of Environmental Education*, *35*. https://doi.org/ 10.4314/sajee.v35i1.13.

Mir, M. Y. (2014). Indigenous knowledge of using medicinal plants in treating skin diseases by tribal's of Kupwara, J&K, India. *Int J Herbal Med*, *1*(6), 62-68.

Saxena, M.K. & Singh, A. (2020). The wireless communication and rising state of unrest among Indian youth. *International Journal of Information Dissemination and Technology*, 10(3),159-161.

Senanayake, S. G. J. N. (2006). Indigenous knowledge as a key to sustainable development. retrieved from http://repo.lib.sab.ac.lk:8080/xmlui/handle/123456789/812.

Scott, J., Llamas-Cabello, D., & Bittner, P. (2013). Engaging indigenous peoples in disaster risk reduction. A white paper prepared for the United Nations Permanent Forum on Indigenous issues. *Center for Public Service Communications, Claiborne*, *16*.

Toledo, V. M. (2001). Indigenous peoples and biodiversity. *Encyclopedia of biodiversity*, *3*, 451-463. https://doi.org/ 10.1016/B978-0-12-384719-5.00299-9

Horizons of Holistic Education (HHE)

SUBMISSION GUIDELINES FOR AUTHOR

General

All submitted manuscripts should contain original work neither published previously nor under consideration for publication elsewhere. Articles shall be accepted from any country provided submitted in English language only. There is no page limitation for articles up to twenty pages; the authors must strive to present their results as clearly and concisely as possible. Authors, in their cover note to Editor, shall have to clearly mention whether the manuscript is to be considered as a Research article, Short communications or a Review article.

Peer review policy

'Horizons of Holistic Education' journals aims at rapid publication of articles while maintaining rigorous peer review process, each article will be subjected to a minimum of two reviews by two individual reviewers. Reviewers will be insisted to review the paper within 15 days time and if he/ she fail to return will be sent to other reviewer for review. All authors are requested to send one copy of manuscript to suggested one reviewer by electronically to review the manuscript not of authors' institution or affiliation and the editorials shall send second copy to enlisted reviewer for reviewing the article. The reviewer shall reviewed the article as per instruction to author, special emphasis on spelling, format of references in text and reference section, methodology, citation of journals cited, and summary and findings.

Manuscripts shall go through a peer review process to adjudge their suitability and authenticity, for publication in the journal. A confirmation about the acceptance of the manuscript will be sent to e-mail address of the corresponding author. Please check your e-mail account frequently, because you will receive all important information about your manuscript through e-mail only.

Submission of Manuscript:

Authors may submit the articles only through the online manuscript submission system. Authors are advised to submit the articles as MS Word 2003 or 2007 format only with the pdf copy of letter for publication and copyright form duly signed by author/(s), scanned.

File type

Authors should submit the articles only in MS-word 2003 or 2007 format, no other format is accepted. If equations were used it should be converted by using MS Office equation editor and pasted as image at proper place. All equations should be grouped or may be prepared using equation editor software.

File size

No article should exceed more than 15 pages unless necessary, authors will be requested to substantiate the need if it exceeds the maximum number of pages. The file size of the MS word format may not exceed 5 MB size for submission through submission form and 10 MB if it is submitted as attachment over Email editorhhecu@gmail.com

Language

Language of the articles should be only in English, we are not processing articles in any other languages

Font type

Articles should be typed in single line spacing with the following font pattern

Font type

Times new roman

Size

For heading or title: 14 points and Bold (Small Letters, No capitalize, apart from abbreviation)

Author/ Co-authors name: 12 points and Bold

Affiliation/ Institute name: 12 points

For subtitles: 12 points and Bold

Content of article: 12 points

Table title and Content: 10 points

Submission order

The following order should be strictly followed while submitting the article.

Front page

(Page-1) Title of article, authors' names, authors' institutional affiliations only and leave other spaces empty

On second page

(Page-2) Start with abstract of about 300-500 words exactly conveying the content of the article, Keywords (at least **5 words**)

On third page

(Page-3 onwards) Main content text with all tables and figures aligned in their proper place (do not send tables and figures separately unless requested), List of symbols and Abbreviations, Acknowledgement, References (APA Referencing Style)

PREPARATION OF MANUSCRIPTS

Manuscripts should be submitted as per order: Title Page, name of author (s), Abstract, Key words, Introduction, Material and Methods, Results, Discussion, Acknowledgements (if necessary) and References. If the Result and Discussion sections are combined, then a Conclusion section should be added.

Discussion

This part must be written with reference to the tables and figures and by considering information from the literature. Statements made in the Introduction and Results sections should not be repeated here.

Title Page

The first page should contain a concise and informative title, the names and addresses of the authors and contact details of the corresponding author (postal address, e-mail, and fax and telephone numbers). If necessary, a brief Acknowledgements section may be included.

Abstract

It should be about 300-500 words. Key words: A maximum of 5 key words must be given at the end of the Abstract. In the abstract should not mention any references.

Introduction

This part should define the background and significance of the study by considering the relevant literature, particularly the most recent publications.

Material and Methods

Please provide concise but complete information about the material and the analytical, statistical and experimental procedures used. This part should be as clear as possible to enable other scientists to repeat the research presented.

Results

In this part, the same data/ information given in a table must not be repeated in a figure, or vice versa. It is not acceptable to repeat extensively the numerals from tables into text and give lengthy and unnecessary explanations of the Tables and Figures.

Discussion

This part must be written with reference to the tables and figures and by considering information from the literature. Statements made in the Introduction and Results sections should not be repeated here.

Acknowledgements

If necessary, a brief Acknowledgements section may be included.

References

References should be cited in the text in American Psychological Association (APA) referencing style. The references should be cited at the end of the manuscript in the order of their appearance in the text. For more in depth explanation of formatting and preparing works cited lists, please consult the 6th edition (2009) of the Publication Manual of the American Psychological Association. References to journal articles, books, chapters in books, etc. should be cited, as follows:

Journal Articles/ Electronic journal article/ World Wide Web:

Daniels, E. (2010). Welcome to the classroom: Ten tips for teaching college freshmen. College & Research Libraries News, 71(8), 424-425.

Milton, C. L. (2009). Leadership and ethics in nurse-nurse relationships. Nursing Science Quarterly, 22(2), 116-119. doi:10.1177/0894318409332569

Takeuchi, H., Osono, E., & Shimizu, N. (2008). The contradictions that drive Toyota's success. Harvard Business Review, 86(6), 96-104. Retrieved from http://www.hbr.org

Book

Marzano, R. J., & Marzano, J. S. (1988). A cluster approach to elementary vocabulary instruction. Newark, DE: International Reading Association.

Sander, M. R., Downer, J. L., Quist, A. L., Platmann, L., Lucas, C. L., Cline, J. K., & Campbell, D. R. (2004). Doing research in the university library. Chicago, IL: Corbin Press.

Book Chapter

Hawthorne, J., Kelsch, A., & Steen, T. (2010). Making general education matter: Structures and strategies. In C. M. Wehlburg (Ed.), Integrated general education (2nd ed.) pp.23-34. San Francisco, CA: Jossey-Bass.

Figures:

Photos or drawings must have a good contrast of dark and light. Legends of figures should be brief, but complete and self-explanatory so that the reader can easily understand the results presented in the figure. Figure legends should be attached to the figures. All figure number should be arranged orderly, the figures should not be supplied separately but pasted in the proper place. Figure number and title should be given below the figure, the content of the figure should be explained in the title of figure.

Tables:

All tables should be numbered in order with grid lines. The table number should be properly given, large size tables should be split into two or more tables so that it can be accommodated within the page size. Table width and cell sizing should be even and all the content should be left side aligned. Number of the

tables and title should be given above the tables and without any border, shading. Do not give on separate page. The table should with a brief but complete and self-explanatory caption so that the reader can easily understand the results presented in the table. Please do not duplicate material that is already presented in the figures.

Ethics and Consent

When reporting experiments on human subjects, authors should indicate whether the procedure follows were in accordance with the ethical standards of the responsible committee on human experimentation. Do not use patients' names, initials, or hospital numbers, especially in illustrative material. Papers including animal experiments or clinical trials must be conducted with approval by the local animal care or human subject committees, respectively.

Paper acceptance

Final decision on acceptance of the paper is with the editorial team, promotion in any form will disqualify even qualified papers. Selected papers will be put in queue for publication, once the article is published author will get a confirmation mail from the corresponding editor.

Publication Charges

There is no processing fees or publication charges for *Horizons of Holistic Education*.

Copyright

Horizons of Holistic Education journal follow creative commons copyright policies, authors are instructed to send a copyright form attached with article while submission. Click here to download the copyright form, please sign the copyright form and scan it. If the form cannot be scanned, please submit the article through this form by accepting the copyright transfer details.

Please send your submission to the editor at the address given below :

Dr. Jignesh B. Patel

The Editor in Chief, Horizons of Holistic Education,

Children's University, Subhash Chandra Bose ShikshanSankul,

Nr. Chh-5 Children's University Circle, Sector-20,

Gandhinagar-382021. (Gujarat) India.

Email: editorhhecu@gmail.com, Contact No. 9429429550

Website: hhe.cugujarat.ac.in

***** All correspondence should be addressed to The Editor in Chief, *Horizons of Holistic Education (HHE)*, It is essential to mention the manuscript number specifically given to your research article for further correspondence.

HORIZONS OF HOLISTIC EDUCATION (HHE)

An International Quarterly Peer Reviewed Journal

COPYRIGHT FORM

Mail Scanned copy of this form to **editorhhecu@gmail.com**

You are requested to complete and sign this form and send it back to Chief Editor of HHE. We need a written confirmation from authors in order to acquire the copyrights for papers published in ***Horizons of Holistic Education***.

Manuscript No. : .....

Title of the Paper : .....

.....

Name of the Authors : .....

.....

Copyright Transfer Statement

The Copyright to this article is transferred to ***Horizons of Holistic Education*** (HHE) if and when the article is accepted for publication. The Undersigned hereby represents and warrants that the paper is original and that he/she is the author of the paper, except for material that is clearly identified as to its original source, with permission notices from copyright owners where required. The Undersigned represents that he/she the power and authority to make and execute this assignment.

We declare that:

1. This paper has not been published in the same form elsewhere.
2. It will not be submittedanywhere else for publication prior to acceptance/rejection by ***Horizons of Holistic Education***.
3. A copyright permission is obtained for materials published elsewhere and which require this permission for reproduction.

Furthermore, I/We hereby transfer the unlimited rights of publication of the above mentioned paper in whole to Horizons of Holistic Education. The Copyright transfer covers the exclusive right to reproduce and distribute the article, including reprints, translations, photographic reproductions, microform, electronic form (mobile, off-line, online) or any other reproductions of similar nature. The corresponding author signs for and accepts responsibility for releasing this material on behalf of any and all co-authors.

Corresponding Author's Full Name : .....

Address : .....

.....

Email: ..... Mobile No. : .....

Date : Signature

Mail scanned copy of this form to editorhhecu@gmail.com