



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act, 1956)
(Vide Notification No. F.9-5/2000 - U.3, Ministry of Human Resource Development, Govt. of India, dated 4th July 2002)



Phone : 044-22290742 / 22290125 . Telefax : 044-22293886
Website : www.bharathuniv.ac.in

173, Agaram Road, Selaiyur, Tambaram,
Chennai - 600 073. Tamil Nadu.

Ref. No.SMS-2015-O-08

Date: 27.02.2018

TO

Mr. Rajesh
Professor/Anatomy
BIHER

Thro: Concern Head of the Department

Greetings!!!

We are happy to announce that the Research Advisory Committee has approved your proposal for Seed Money Scheme-2015 which was presented by you. You are requested to complete the proposal and send the progress report to the Dean Research in the prescribed time period.

Title of the Project: Effectiveness of Video Assisted Teaching on Knowledge, Attitude and Practice among Primary Caregivers of children with Autism Spectrum Disorder

Seed Money Amount: Rs.1, 00,000/- (Rupees One Lakh Only)

Approved on: 21.02.2018

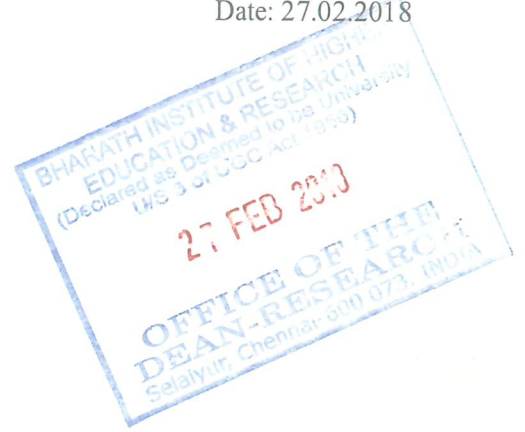
Payment details:

Voucher No.43

Dated: 02.03.2018

With Regards

Dean-Research



Sarath University

SELAIYUR, CHENNAI - 600 073, TAMIL NADU, INDIA.

CASH / PAYMENT VOUCHER

Date 02/03/2018
V.No. 43

Debit _____ Amount _____

Rs.

PAID TO Dr. B. Rajesh

RUPEES One lakh only

TOWARDS Seed Money Scheme - 2018



(Signature)

Authorised by

Finance Manager

Cashier/Accountant

Payee's Signature

(Signature)

PROPOSAL SUBMISSION

1. Details of Principal Investigator

Name : Dr. B Rajesh
Designation : Professor
Highest Qualifications : Ph.D.
Department : Anatomy
E-mail : anat_rajesh@rediffmail.com
Contact no : 9345575143
Date of Joining : 14.06.2010

2. Details of Principal Investigator

Name : N.Anandaramajayan
Designation : Assistant Professor
Highest Qualifications : M.Sc.,
Department : Anatomy
E-mail : anandaraman2006@gmail.com
Contact no : 9894343517
Date of Joining : 1-12-2010

Technical details

1. Introduction:

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder that affects a child's ability to communicate and interact with others. These children usually exhibit interests in particular subjects, repetitive behaviors and activities. Hence, their social and occupational areas of functioning are affected (The University of Iowa). ASD has a prevalence of about 1 in 59 US children, and it was found that the rate is significantly higher among boys (one in 42) than girls (one in 189) (Baio et al., 2014). In India, the number of Autism cases has increased rapidly over the last couple of decades with a prevalence rate of 1 in 500 or 0.20 per cent. They were 17.40 lakhs (1.73m) in 2005, 40 lakhs (4m) in 2006, and, at present, it would be nearly a crore (10m) (Merry Barua). Prevalence of ASD was found to be 0.15 per cent in the state of Himachal Pradesh of India among the children of one to ten years of age from rural, urban and tribal areas (Strock, 2007). ASDs occur in all racial, ethnic and social groups. In two of the recent reports where the study was conducted in Kolkata and Chandigarh, the prevalence rates were found to be 0.23 and 0.22 per cent, respectively (Arun and Chavan, 2018; Rudra et al., 2017).

In Tamil Nadu, among a selected study group of intellectually differentially abled children, the prevalence of autistic children were 23.7 per cent and among these majority were males (Ramanujam, 2016). ASD is a multifactorial disorder with a variety of causes. Among these, environmental factors like exposure to various toxic metal-based pollutants have a significant role in ASD aetiology. These pollutants can elevate the proinflammatory profile of cytokines and aberrant expression of nuclear factor kappa B (NF- κ B) (Bjørklund et al., 2018). ASD has also a strong genetic root. Genes that affect synaptic maturation are involved in ASD, resulting in disturbance in connectivity of neurons which, in turn, disturbs information processing in the brain by changing connection and organisation of nerve cells and their synapses (Misra, 2014). It is evident that each autistic child expresses a unique pattern of behaviour with a particular level of severity that is from low functioning to high functioning. The severity of this disorder is based on the nature of behaviour-restrictive and repetitive, or the level of impairment in social communication as well as how these can affect child's ability to function (Filipek et al., 1999). The unusual behavioural changes among children are first noticed by the parents or the caregivers. When an active and normally developed child all of a sudden shows behavioural changes such as causing injury to self, destructive or withdrawal from social interactions and unresponsive, parents consider it as something is wrong with their kids. Even though parents notice these changes, it is difficult for them to identify/realise the specific nature and degree of the problem of their children (Turkington and Anan, 2007). The severity of ASD, maladaptive behaviours of child with ASD as well as the level of general developmental delay and impairment in activities of daily living are challenging for parents who are the immediate caregivers of these children. Even if parents recognise the behavioural changes of their child, they should maintain a stable and positive attitude till they receive the diagnosis of the disorder

and find/develop a proper intervention service for the child. Improvement in child's behaviour depends on the active involvement of parents in those educational interventional programmes and they should ensure that the child practices those skills in home settings (Wang et al., 2012). Parents or primary caregivers of young children with autism play multiple roles in their children's life. Their level of motivation needs to be sustained with periodical updating of knowledge and sharpening of skills to deal with children in difficult circumstances. Knowledge, attitude and practice of primary caregivers towards children with ASD are important factors in promoting health and wellness of children. Hence, the researcher felt there is a need to improve the knowledge attitude and practice of caregivers of children with ASD.

2. Review of status of Research and Development in the subject

Bjørklund, G., Skalny, A.V., Rahman, M.M., Dadar, M., Yassa, H.A., Aaseth, J., Chirumbolo, S., Skalnaya, M.G. and Tinkov, A.A. (2018), "Toxicmetal(loid)-based pollutants and their possible role in autism spectrumdisorder", *Environmental Research*, Vol. 166, pp. 234-50, doi: 10.1016/j.envres.2018.05.020.

Parents or primary caregivers of children with Autism Spectrum Disorder (ASD) have important role in early recognition of the disorder as well as in the management of the disorder. Knowledge, attitude and practice of primary caregivers towards children with ASD are important factors in promoting health and wellness of such children. The purpose of this paper is to evaluate the effectiveness of video-assisted teaching regarding care of children with ASD on knowledge, attitude and practice among primary caregivers. Infectious disease is a major public health issue for both developed and developing countries. Among infectious diseases, tuberculosis (TB) is most prevalent in the developing countries. India is the highest TB burden country in the world and accounts for nearly one fifth (20%) of global burden of tuberculosis. A pre-experimental design where pre- and post-test without control group with experimental approach was undertaken in Kuchinda block of Sambalpur district (Odisha) with the objectives to assess effectiveness of Video-assisted Teaching Module (VATM) on knowledge of Accredited Social Health Activists (ASHAs) regarding Revised National Tuberculosis Control Programme (RNTCP) Data were collected from 52 ASHAs, selected by systematic random sampling technique through structured questionnaire. The overall mean score in pre-test was 23.31 ± 3.07 which is 58.27 percent of maximum score and good knowledge whereas it was 34.35 ± 3.56 while post-test it was 85.87 percent of maximum score during post-test showing a difference of 27.6 percent effectiveness. Highly significant ($p < 0.01$) difference was found between pre- and post-test knowledge score and no significant (> 0.05) association was found between post-test knowledge score when compared to all the demographic variables of ASHAs.

2.1. International Status:

Purpose Requests for increased support within mainstream school settings within the field of autism tend to take place across most international educational scenarios. In light of such

recommendation, the purpose of this paper is to outline how the implementation of a strengths, weaknesses, opportunities and threats (SWOT) analysis within educational settings might be beneficial in order to improve the support provided for learners on the autism spectrum (AS).
Design/methodology/approach Although a SWOT analysis framework is generally carried out in corporate domains for companies and firms to investigate their competitive impact within the marketplace so as to develop future concepts, this analysis structure may also be usefully applied within educational settings so as to inform practice. **Findings** If implemented in an effective manner, a SWOT analysis will potentially provide a comprehensive synopsis of the issues and concerns which are relevant for considering and evolving the provision of support for students. Indeed, it will enable educational environments to enhance their strengths so as to increase appropriate opportunities and address the weaknesses within their services in order to potentially overcome their barriers and enhance the quality of life of learners on the spectrum. **Originality/value** This paper includes the viewpoint of the author in relation to a SWOT analysis so as to inform practice for learners on the AS.

2.2. National Status:

NIL

3. Progress/ achievement so far, if any

- a) Reference papers was collected.
- b) Literature survey was studied.
- c). Materials and methods were designed

4. Work plan

4.1 Methodology

The purpose of this study was to assess the effectiveness of video-assisted teaching regarding care of children with ASD on knowledge, attitude and practice among primary caregivers from selected special school at Puducherry, India. Quasi-experimental research design (one group pre-test post-test design) was used for the study. The study was conducted as per the criteria laid by Institutional Human Ethics Committee, and the researcher got the permission from the committee. Population of this study consists of primary caregivers of children with ASD from five different centres of Satya special school at Puducherry. A total of 60 primary caregivers were selected through stratified random sampling technique. Sample size was calculated by power analysis with the 98% confidence. Primary caregivers who take care of child with ASD and who know to read Tamil or English were included in the study. A written consent was obtained from all the subjects who have participated in this study. Primary caregivers who have attended video-assisted teaching regarding care of children with ASD and temporary caregivers

were excluded from the study. Primary caregivers who have chronic physical or mental illness were also excluded because they will not be able to concentrate and grasp the content of the video, which may affect the outcome of the study. Video-assisted teaching regarding care of children with ASD were provided for the selected primary caregivers. Before and after the video-assisted teaching, the level of knowledge attitude and practice among these primary was were assessed using a structured questionnaire with the interview technique.

Description of tools

The structured questionnaire consists of two parts.

Part 1. The demographic data consist of 17 items seeking information about the primary caregivers and children. These include age, gender, and relation with child, marital status, religion, residential area, education, occupational income, of primary caregivers and age, gender, order, type of delivery and term of delivery of child. It also includes the number of siblings affected by autism, child's age, when concerns for the child was first suspected, and child's age at the time of diagnosis. Part 2. A structured questionnaire assesses the level of knowledge, attitude and practice regarding care of children with ASD. The knowledge questionnaire consists of 20 questions regarding what is autism, cause, signs and symptoms, diagnosis, treatment and home care management of autism. The attitude and practice questionnaires consist of ten questions each. Attitude refers to positive and negative responses given by primary caregivers regarding care of children with ASD measured by using a structured questionnaire. The attitude questionnaire consists of 10 questions which assess whether the primary caregivers feel stressed, irritated, afraid, and unsure about what to do for their child. It also contains questions that deal with their feeling of guilt and shyness to discuss their experience with others. Practice refers to practice of primary caregivers regarding care of children with ASD measured by using structured questionnaire. The practice questionnaire consists of ten questions which assess how the primary caregivers manage different situations that arise while caring their child.

Scoring criteria for the level of knowledge:

1. Inadequate below 50 per cent;
2. Moderate 50–75 per cent; and
3. adequate above 75 per cent.

Scoring criteria for the level of attitude:

1. Negative attitude 0–20; and
2. Positive attitude 21–40.

Scoring criteria for the level of practice:

- 1. Poor practice 0–15;**
- 2. Moderate practice 16–25; and**
- 3. Good practice 26–40.**

Video regarding care of children with ASD

The video was prepared with still and motion pictures, supported with audio (in local language – Tamil) explaining the definition, causes, symptoms, diagnosis and treatment of ASD. The video also consisted of various aspects of care of children with ASD like providing soothing environment, understanding autistic difference, promoting learning, adjusting attitude, etc. The research tools-structured questionnaire and video used in this study were validated by experts in

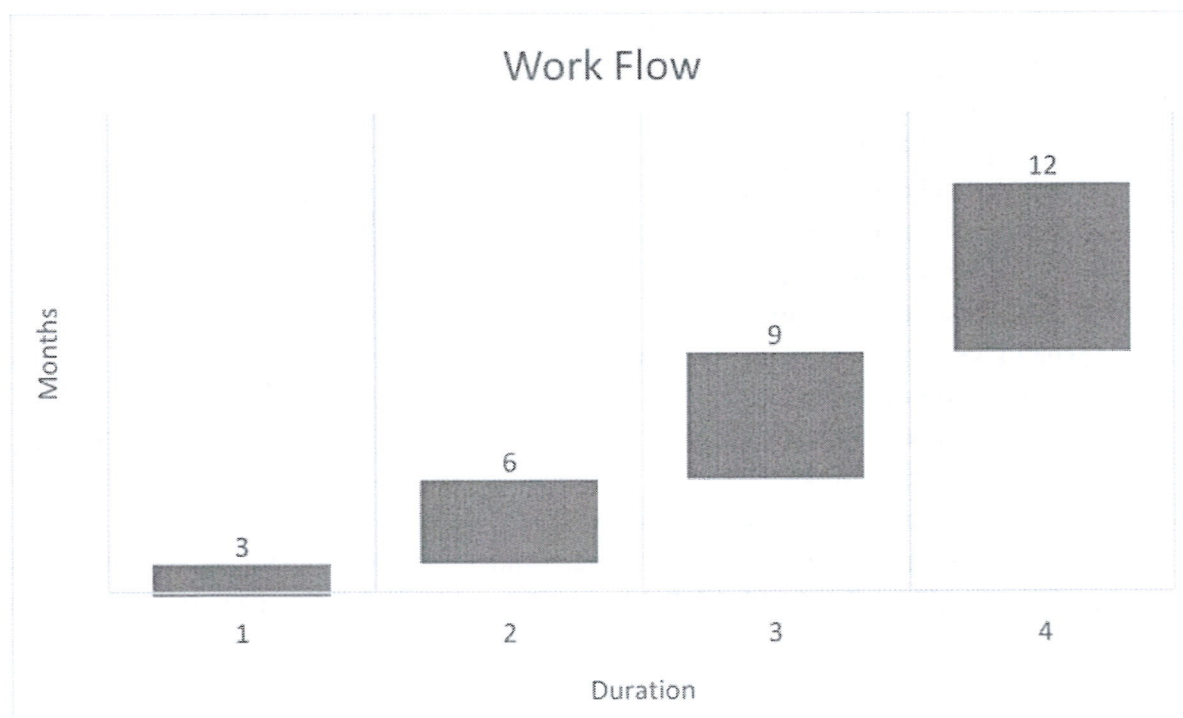
the field and modified as per their suggestions. Reliability of the tool was calculated, and the Cronbach's α scores of the structured questionnaire were 0.916, 0.897 and 0.809 for knowledge attitude and practice.

Data analysis

The collected data were analyzed through descriptive statistics (median, frequency and percentage) and inferential statistics (Wilcoxon Signed Rank test, Kruskal–Wallis, Spearman correlation).

Time Schedule of activities giving milestones through BAR diagram. (Maximum of 1/2 pages)

S. No	Activity/ mile stolen	1 st Year			
		1-3 month	4-6month	7-9 month	10-12
1	Literature review				
2	Analysis of existing work	-			
3	Designing & work initiated	-	-		
4	Statistics & Discussion with results	-	-	-	



4.2 Expected outcome within the time period of See Money Scheme

The present study assesses the effectiveness of video-assisted teaching regarding care of children with ASD on knowledge, attitude and practice among primary caregivers in selected special schools at Puducherry. Video-assisted teaching was given to 60 primary caregivers who were selected through stratified random sampling technique. The research tools used was a questionnaire comprising demographic variables with 17 questions and 40 questions to assess the knowledge, attitude and practice. Pre-test and post-test values were analyzed and the results revealed that the post-test level of knowledge (17), attitude (31) and practice (31) among primary caregivers of children with ASD was statistically significant ($p < 0.0001$) when compared to the pre-test level. It indicates that video-assisted teaching was effective in enhancing the knowledge attitude and practice regarding care of children with ASD among primary caregivers. Study also showed that there was a positive correlation between the age of primary caregiver and their knowledge score and practice score. The video-assisted teaching generates a positive attitude among primary caregivers towards caring children with ASD.

5. Suggested Plan of action stating the name of funding agency where the project will be communicated for financial support within the time period of project.

Nil

6. Bibliography: Nil

Nil

7. List of Projects submitted/implemented by the Investigators (Separate for Pi and Co-PI)

7.1 Details of Projects submitted to various funding agencies:

S.No	Title	Cost in Lakhs	Month of Submission	Role as PI/Co-PI	Agency	Status
	NA	NA	NA	NA	NA	NA

7.2 Details of Projects under implementation

Sl. No.	Title	Cost in lakhs	Duration	Role as PI/ Co-PI	Agency
	NA	NA	NA	NA	NA

7.3 Details of Projects completed during the last 5 years

Sl. No.	Title	Cost in lakhs	Duration	Role as PI/Co-PI	Agency
	NA	NA NA	NA	NA	NA

8. List of publications published by the Investigators, if any:

a) Principal Investigator

S. No	Author names	Title of paper	Name of Journal	Vol (issue)	Page no.	Year
1.	Arivalagan Arunkumar, Bhargavan Rajesh, V. Tamilalagan	Variations among foramen transversarium in cervical vertebrae and its clinical significance	Indian Journal of Anatomy	7(2)	144-148	2018
2.	Mary Hydrina D'Silva ¹ , Rijied Thompson Swer ² , J. Anbalagan ³ , Bhargavan Rajesh ⁴	Effect of Radiofrequency Radiation Emitted from 2G and 3G Cell Phone on Developing Liver of Chick Embryo – A Comparative Study	Journal of Clinical and Diagnostic Research	11(7)	AC05 - AC09	2017
3.	M. Senthil Murugan, ^{1,*} R. Sudha, ¹ and Rajesh Bhargavan ²	Clinical Significance of an Unusual Variation Anomalous additional belly of the sternothyroid muscle	Sultan Qaboos University Med J,	16(4)	e491–494,	2016
4.	Mary Hydrina D'Silva, ¹ Rijied Thompson Swer, ¹ J. Anbalagan, ¹	Effect of Ultrahigh	Advances in	10(2)	1-9	2014

	and Rajesh Bhargavan ²	Frequency Radiation Emitted from 2G Cell Phone on Developing Lens of Chick Embryo: A Histological Study	Anatomy			
5.	Vasudev Anand Rao, Subashini Kaliaperumal, Thanikachalam Subramanyan, Kotapalli Rachandra Rao, Rajesh Bhargavan	Goldenhar's sequence with associated juvenile Glaucoma in turner's syndrome	Indian Journal Of Ophthalmology	53(4)	267-268	2005

b). Co-Principal Investigator

S.No	Author names	Title of paper	Name of Journal	Vol (Issue)	Page No.	Year
1.	Jisha Phalgunan ¹ , Anandaramajayan ² Nallathambi	A Study on Bifurcation of Brachial Artery in South Indian Population (Tamil Nadu and Puducherry)	Indian Journal of Anatomy	7(1)	73-77	2018
2.	1N. Anandaramajayan *, 2K.C.Mallikarjuna.	Fused Typical Cervical Vertebra – A Case Report	Journal of Current Trends in Clinical Medicine & Laboratory Biochemistry	2(4)	64-66	2015
3.	1N. Anandaramajayan *, 2B.Rajesh.	Unilateral Renal Agenesis with variations in the vascular pattern of Testis, Supra Renal Gland And Diaphragm -A Case Report	Journal of Current Trends in Clinical Medicine & Laboratory Biochemistry	2(2)	66-72	2014
4.	1B. Rajesh*, 2N. Anandaramajayan , 2V.Sanathi, 3K.C. Mallikarjuna, 3S.I. Tolanur, 4R. Praveen Kumar	An abnormal radicle of Median Nerve from Musculocutaneous nerve in the Arm	Journal of Current Trends in Clinical Medicine & Laboratory Biochemistry	1(2)	34-36	2013

9. Budget

SI. No	Head	Amount in INR
1	BP Apparatus, Stethoscopes, Body weight weighing machine, SPSS version 16 Chicago, IL, USA, ECG machine	50000
2	Consumables (gels bottles, cotton, sprit, testing charges, tools, etc.)	5000
3	Travel support for the purpose of research work.	10000
4	Contingency	25000
5	Others consumables	10000
	Total	1,00,000

*In case of any joint proposal for purchasing a same equipment, each of the associated PLs is also required to give separate budget (without any clubbing) to avoid any ambiguity, if all the associated projects are not awarded by committee.

10. Name of at least two subject experts from the Institute and one from the outside Institute with their contact details:

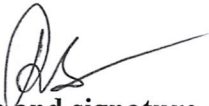
<p>1. Dr. M. Sivakumar Professor Dept. of Anatomy JIPMER, Puducherry Mobile No: 9994264019 E-mail id: sivakumar96@yahoo.com</p>	<p>2. Dr. J Anbalagan Professor of Anatomy Mahatma Gandhi Medical College and Research Institute, Pondicherry Mobile No: 9443500366 E-mail id: jayaramanbalagan@gmail.com</p>
--	--

CERTIFICATE FROM THE INVESTIGATOR

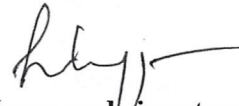
Project Title: Effectiveness of video assisted teaching on knowledge, attitude and practice among primary caregivers of children with autism spectrum disorder

It is certified that

1. I do hereby agree to submit a complete proposal for financial support to the external funding agency within the time period of SMS-2018.
2. I undertake that spare time on equipment procured in the project will be made available to other users.
3. I agree to submit a certificate from Institutional Biosafety Committee, if the project involves the utilization of genetically engineered organisms. I also declare that while conducting experiments, the Biosafety Guidelines of Department of Biotechnology, Department of Health Research, GOI would be followed in to.
4. I agree to submit ethical clearance certificate from the concerned ethical committee, if the project involved field trails/experiments/exchange of specimens, human & animal materials etc.
5. I agree to abide by the terms and conditions of SMS-2018, BIHER, and Chennai.



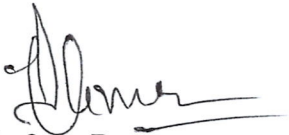
**Name and signature of
Principal Investigator**



**Name and signature of
Co-Principal Investigator**

Date: 19.01.2018

Place: Pondicherry



Forwarded by Head of the Department

Signature of the Head



DEAN
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
OSUDU, AGARAM VILLAGE,
KOODAPAKKAM POST,
PUDUCHERRY - 605 502

PROJECT EVALUATION FORMAT

Recommendation sheet

Name of the Principal Investigator	Dr. B Rajesh
Name of the Co-Principal Investigator	N.Anandaramajayan
Name of the Department	Anatomy
Title of project	Effectiveness of video assisted teaching on knowledge, attitude and practice among primary caregivers of children with Autism Spectrum Disorder
Recommendation of the evaluation committee (Recommended/Revision/Not Recommended)	<i>Recommended</i>
Financial allocation recommended	<i>Rs. 1,00,000/-</i>

SI. No.	Head	Amount
1	BP Apparatus, Stethoscopes, Body weight weighing machine, SPSS version 16 Chicago, IL, USA, ECG machine	50000
2	Consumables- Gel bottles, cotton, sprit, testing charges, tools, etc.	5000
3	Travel support for the purpose of research work.	10000
4	Contingency	25000
5	Others consumables	10000
	Total	1,00,000

Name and Signature of the Research Advisory Committee members with date



Dr. A Sugumaran
(Dr. A Sugumaran)