**From,**

Dr. Jayaprakash. R

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**To,**

Arti Chawla,

Administrative Officer,

For Director General and Secretary, DHR New Delhi.

**Sir,**

**Sub:** Report to ICMR about foreign short term research fellowship in Child Psychiatry, from 01.02.2015 to 02.05.2015, DHR/ICMR sanction letter no. and date DHR/HRD Fellowship/II (1)/13-14, dated03.09.2014. Regarding:

I hereby submitting the report to ICMR, about my foreign short term research fellowship training in Child Psychiatry, which was awarded to me by ICMR-HRD scheme of DHR, Ministry of Health and Family welfare, Government of India (DHR/HRD Fellowship/II (1)/13-14, Dated 03.09.2014). The fellowship period was three months from 01.02.2015 to 02.05.2015. My mentor was Prof (Dr) Valsa Eapen, Chair of Infant, Child and Adolescent Psychiatry, University of New South Wales, Academic unit of Child Psychiatry, South West Sydney, ICAMHS, Mental Health Centre, L1, Liverpool Hospital, Elizabeth Street, Liverpool, NSW 2170, Sydney, Austarlia.

It was very successful and gained a good research experience and training in Child Psychiatry in general and early detection of developmental disorders and intervention in particular. I was given a certificate of research fellowship in Child Psychiatry (see the attachment). The fellowship training had improved my research skills, clinical skills and teaching skills. Ultimately the fellowship will improve the quality service given to the people from my parent institution.

I thank ICMR for selecting and awarding me the research fellowship in Child Psychiatry.

Thanking you, yours sincerely,

 **Dr. Jayaprakash. R**

**Report to ICMR**

**Introduction**

* I, Dr. Jayaparakash. R, Additional Professor of Paediatrics, Child Psychiatrist, Unit Chief, Behavioural Paediatrics Unit, Department of Paediatrics, SAT Hospital, Government Medical College, Thiruvanthapuram, Kerala, had been awarded foreign short term research fellowship in Child Psychiatry by ICMR-HRD scheme of DHR, Ministry of Health and Family welfare, Government of India. This foreign research fellowship of HRD scheme of DHR is to develop faculty improvement among the medical colleges of India. Prof (Dr) Valsa Eapen, Chair of Infant, Child and Adolecsent Psychiatry, University of New South Wales, Academic unit of Child Psychiatry, South West Sydney, ICAMHS, Mental Health Centre, L1, Liverpool Hospital, Elizabeth Street, Liverpool, NSW 2170, Sydney, Austarlia, consented to ICMR and me to give training in research fellowship in Child Psychiatry. So I was posted to the research lab of Prof (Dr) Valsa Eapen. The fellowship period was three months from 01.02.2015 to 02.05.2015.
* Prof. Valsa Eapen is a Child Psychiatrist with special expertise in neurodevelopmental disorders. Her research interests include Tourette syndrome, autism, ADHD. Other areas of research include neurobiological underpinnings of attachment and separation anxiety disorder as well as metabolic syndrome among adolescents. She is a collaborator of international consortiums such as obsessive compulsive disorder foundation genetics and autism homozygous mapping. Prof. Valsa holds the National Health and Medical Research Council (NMHRC) and Co-operative Research Center (CRC) grants. She is a project leader for Autism CRC as well as research partner for the Child and Family Outcomes Strategy project funded by the Commonwealth government to build national evidence base on early intervention in Autism. Prof. Valsa has published over 175 publications in peer reviewed journal, over 15 book chapters and over 100 conference abstracts as well as 5 books including “Autism: A neurodevelopmental journey from genes to Behaviour’’ and “Where there is no Child Psychiatrist”.
* ICAMHS (Infant, Child and Adolescent Mental Health Service) is the academic unit of Child Psychiatry, UNSW, South West Sydney, Mental Health Centre, Liverpool Hospital, Australia. For the current year, it holds the research fund of 444,000 AUDS. It does both clinical and research activities. The clinical and research works are Co-morbidity clinic at Park house (mainly for children and adoescents presenting with developmental and complex mental health disorders), Consultation clinic at Carramar (were children with developmental disorders including autism, Tourette Syndrome etc. were referred to.), Hill top special school consultation service in collaboration with Park house, in collaboration with Weastmead Children’s Hospital, Disability clinic at Fairfield, joint consultation with Paediatric team, in patient units of Liverpool hospital, Campbeltown and Bowra hospital. The main areas of research are screening for perinatal mental health (like impact of a change in clinical practice, scoring accuracy of Edinburgh Postnatal Depression Scale, Anxiety Screening in Pregnancy, Empathy enhancement in new and expect etc.), infant mental health research (like sleep and settling in infants, parenting confidence, social withdrawal in infants, attachment disorder etc.), preschool children and developmental problems (universal developmental surveillance-‘’Watch Me Grow’’ study with Blue book), community Paediatrics, Liverpool (Developmental disorders), Autism spectrum disorder (KU Marcia Burgess Autism Specific Early Learning and Care Centre, Liverpool, where ESDM , Early Start Denver Model is given for children with autism and other developmental disorder and ESDM training for clinicians and therapists), intellectual disability and mental health service, gender identity disorder, child and adolescent research (like adolescent re admission rate to Gna Ka Lun adolescent in patient unit, parents’ concern questionnaire development, client satisfaction research, parenting programs etc.).
* Deputation was sanctioned with all deputation benefits with fellowship period was treated as on duty (GO (Rt)No.3085/2014/H&FWD dted 16.08.2014, Thiruvanathapuram) by the state government as per the terms and conditions of the ICMR. I was relieved from duties from my parent institution and department on 28.1.2015 by the Principal (Order no.E1/21593/2014/MCT DTED 24.01.2015). I joined back the parent institution after successful training and obtaining research fellowship in Child Psychiatry including the area of autism on May 7th2015.
* I thank the entire ICMR faculty for awarding the research fellowship in Child Psychiatry and Prof. Valsa Eapen and the ICAMHS faculty for obtaining successful training in research fellowship in Child Psychiatry including the area of autism. Prof. Valsa Eapen awarded a certificate of research fellowship in Child Psychiatry after completion of training.

**Clinical and research activities at ICAMHS and experience and skill gained**

* I reached Sydney, Australia on January 31stSaturday by AIR India flight.On February 2ndMonday morning I went to ICAMHS and met Ms. Glenda, private secretary of Prof. Valsa. Prof. Valsa was in the UNSW in the morning. But she entrusted everything to her private secretary Ms. Glenda. I had given the introductory letters. Ms.Glenda taken me to Ingham research institute, where a research lab room was allotted to me by Prof. Valsa. The research lab was well equipped with all new facilities including the internet facility. It was connected to UNSW library, where I was accessible to all international and national journals and literature. There was in built printing facility with computer network. I attended an introductory session in the Ingham, which is mandatory to everybody who works there. The briefing was about how to work in the lab and to act if a fire comes. After that a form was given which have to be filled and given back.
* In the afternoon I went back to ICAMHS and met Prof. Valsa. Prof. Valsa discussed and briefed about the preliminary requirements like insurance to be taken and to get permission for working with children to work in the Liverpool hospital and ICAMHS. We planned the research activities for the entire fellowship period.
* As per initial planning, I was posted in various research clinic as well as other child and adolescent psychiatry hospitals. Weekly appointment and discussion were fixed with Prof Valsa apart from routine meetings in research clinics. In the meeting last week activities were reviewed and evaluated and coming week activities were planned. On days without clinical research appointments I was posted in the research lab in Ingham, where I had done a very good library reference and planning. I had collected very good amount of research articles in the area of Child Psychiatry broadly and developmental disorders including autism in particular for planning the future research project proposal.
* On second day, an appointment was arranged with Olivia, the family health nurse of south western Sydney by Prof. Valsa. We had a very detailed discussion about Universal developmental surveillance program in Australia. This helped me to get an idea about the Universal developmental surveillance program in Australia. Prof. Valsa is part of the program. Each family health nurse do the post natal family visits in their territory, discuss with parents about early child rearing practice, and hand over a Blue book (My first health record). The Blue book contain details of the child, growth charts, notes to parents at each developmental stages, queries which may arise and answer to them etc at 1-4 week, 6-8 week, 6th month, 12th month and then 6 month intervals up to 4th year. The Blue book also gives space for questions to be written, which can be asked in next visit. From 6th week onwards, the parents are supposed to do the visit to child clinic run by family health nurse. They will check for vision, hearing and growth and development monitoring. PEDS questionnaire (Parental Evaluation of Developmental Status) contains 10 questions, which will be asked to each parents and scoring will be done. If any concern, it will be dealt with. If any developmental delay, they will do screening using ASQ (Ages and Stages Questionnaire). If speech delay is present, child will be referred to speech pathologist or occupational therapists (Multi-disciplinary clinic), who in turn may refer to GP (General Practitioner) if needed. The GP may refer to developmental Pediatricians or Child Psychiatrist if needed.
* On alternate Tuesdays I attended Community Paediatrics clinic at Liverpool health service, Near to Ingham. Dr. Roger Blackmore was in charge of clinic. Here also children with developmental problems were brought for early detection, diagnosis and intervention. Both smaller and older children were referred from GPs as well as school counselors. Here they mainly use Griffiths scale for developmental assessment. It gives score such as developmental quotient.
* On Tuesdays at 12 noon there was research seminar in Ingham. Original research papers were presented by senior faculties as well as PhD scholars. All research projects were regularly presented in the seminar. It helped me to get a world level research exposure and experience and was a good inspiration.
* On Tuesdays afternoon, I attended Child and adolescent clinic at Park house. Dr. Rajeev was in charge of the clinic. Here relatively older children and adolescents were brought. They had depression, conduct disorder, substance abuse, bipolar disorder or psychosis. They were mainly referred by GPs and school counselors.
* I attended Fairfield disability research clinic on alternate Thursdays. It was about 15 kilometers away from ICAMHS, Mental Health Centre, Liverpool Hospital, Sydney. Fairfield disability research clinic does early screening, detection and intervention of developmental disabilities including autism, intellectual disability, expressive speech delay etc. Developmental Paediatrician, Dr. Natalie was in charge of Fairfield disability clinic. Prof. Valsa visit as a consultant and researcher. We had discussion about screening tools which are used at parental level (eg. PEDS), health worker level (ST, CARS etc) and at expert level (eg. ADOS).
* On Fridays, I attended lunch seminar conducted by Psychiatry department in the Liverpool Hospital itself. It was from 12.30 to 1.30 PM. It was like clinical clubs in our part of country. Residents will present clinic and discussed by faculties. Theory, phenomenology and management were discussed.
* On every Fridays at 2.30 pm at Campbell town Hospital (Gna Ka Lun adolescent research clinic and in patient unit) we had topic presentation on Child Psychiatry by advanced trainees in Psychiatry. Dr. Praveen Dullur, senior staff specialist was in charge of this unit. I had visited this hospital and attended this program. It was nice experience to see the inpatient facility. Children and adolescent alone were admitted there. Care takers, nurse, occupational therapist, clinical psychologist were in charge of children. They had dining room, study room, recreation room with all facilities for recreation. The parents and visitors were allowed in the evening, but have to go back in the night.
* On April, I visited mainly Kartine Hospital. It does research in developmental disorders and deliver service in the area of family and children and parenting service. It was about 30 kilometers from Liverpool Hospital. Every day I went by train. Kartine research developmental clinic were on Mondays and Thursdaysand Toddler clinics on Wednesdays. Dr. Veena and Dr. Azadeh, advanced Psychiatry trainees were in charge of Developmental clinics. Prof. Valsa does visits on these days and sees referred case and supervise the clinical and research activities. Here also children with developmental delay are referred by GPs. I got training and experience in using DDST (Denver Development Screening Test) to assess the developmental evaluation apart from other diagnostic tools including ADOS. It was a video based training of DDST. Also I was provided with a copy and manual of DDST.
* Dr. Sarrah Mares was in charge of Toddler clinic.I attended the toddler clinic on Wednesdays. In toddler clinic mainly children belo 4 yrs were referred to for temper tantrums and behavioural problems. Here Parent Child Interaction Therapy (PCIT) was the main behavioural intervention. The parents (either father or mother at a time) and the child will be given specified time to play and interact in a play room. In the first half, it is mainly child directed play and parent will be asked to participate as the child’s wish. In the second half, parent will be given instruction how to interact in the play through a microphone attached to them in the beginning of PCIT itself. The therapist will sits in nearby room, with glass window separates both rooms. Finally feedback will be given. It will be continued for many sessions over subsequent visits. It was a nice learning experience. These kinds of service can be replicated in our circumstance also if we got the physical infrastructure.
* I also visited Residential family care units in Karitane. It is for families with children in toddler stage who are experiencing persistent parenting difficulties. Assessment and management planning, education, support, and guidance are provided by a multidisciplinary team comprising of child psychiatrist, clinical psychologist etc on an inpatient basis. For this parent with child will be admitted. Most important thing I observed was that there was no hospital feeling or environment, but maintained in a homely environment with play room, garden etc.
* I also attended Jade house, which is a perinatal mood disorder clinic for mothers. One interesting case was a mother presented with classical depression. She is the daughter of a refuge from Cambodia settled in Australia. She was prescribed antidepressant apart from the psychosocial intervention.
* I attended five day work shop on ESDM (Early Start Denver Model) for children with autism in KU Marcia Burgess Autism Specific Early Learning and Care Centre, Liverpool by Liz Fulton. Liz Fulton is an international trainer of ESDM having many publications in the area. ESDM is an early intervention training program for children with autism. It can be implemented in our parent institution if provided with additional infrastructure and manpower.
* I visited KU Marcia Burgess Autism Specific Early Learning and Care Centre, Liverpool to attend the ESDM intervention to children with autism and the setting, play rooms, instruments, toys etc. The clinical psychologist, Niclole Lees in charge of ESDM is a very skilled person and very cooperative. She demonstrated everything and given the list of toys. I was allowed to video monitoring of the demonstration and the setting. In our country we are very behind in understanding and diagnosing autism as well classical training centers.
* I accompanied Ms. Feroza, the clinical psychologist of ICAMHS to KU Marcia Burgess Autism Specific Early Learning and Care Centre, Liverpool to see and learn the assessment of autisticchildren by using ADOS and Mullen’s early learning skills. ADOS is a tool for diagnosing children with autism. It is by play method. Mullen’s early learning skill assesses the developmental status and intelligence of the child. Ms. Feroza is a very good demonstrator and she explained in detail about ADOS and other evaluation.
* I visited NeuRA (Neurology Research Center, Australia), which is world famous center where functional brain imaging studies and research. Prof. Roshel was in charge of the center. She was also very cooperative. She discussed about fMRI in children with autism. I also witnessed fMRI of many children and the process. It was a nice experience and it was a life ambition to see it.
* I attended an international seminar on ABC of behavioural disorders hosted by ICAMHS, Mental Health Centre, Liverpool Hospital, Sydney, Australia.
* On April 27th I visited Caroline Chisholm Special school to see the special school activities for children with special needs including autism. It was a very large school with 118 children with different disabilities mainly intellectual disability, autism spectrum disorders, cerebral palsy, various metabolic disorders etc. All children are well evaluated medically. They undergo psychosocial, physical, emotional, behavioural, numerical, literacy and life skill training. There were special educators, occupational therapists, counselors, physical educators. For 5-6 children there was one teacher for taking care of and training. All children get individual care and training.
* All staff in ICAMHS, namely Glenda (private secretary of Prof. Valsa), Feroza (clinical Psychologist), Amelia Walter (clinical Psychologist), Stephen Mathew (clinical Psychologist) Mona, Trinha and research assistants Laura Nicholes were very cooperative and helpful. They helped me in training as well as collecting the reference of various tools, scales and literature.

**Outcome and follow up actions of visit and research fellowship training.**

**Outcome of visit and research fellowship training.**

* Exposure, training and experience gained from international level research and clinical service centers in the area of infant, child and adolescent Psychiatry.
* Posting in Research Institute Ingham helped me to do a vide literature review in the area of infant, child and adolescent psychiatry in general and developmental disorder in particular.
* Done a good amount of collection of literature and research articles in child psychiatry in general and developmental disorder in particular from world class and indexed international journals in child psychiatry.
* Research methodology exposure gained by attending many presentation of many research papers by research scholars at Ingham seminar
* Postings in developmental disability, community Paediatrics and Kartine research clinics, helped me to gain research experience and training in early screening, diagnosis and intervention of developmental disorders including autism.
* Gained good research exposure and training in a number of different types of developmental screening tools which can be used at parental, trained health worker and expert level.
* Able to collect the copies of the above mentioned developmental screening tools which are validated in India and can be used in Indian setting.
* Gained training in early intervention therapy (ESDM). It will help to improve the quality of service namely early intervention of developmental disorders given by the parent institution Behavioural Paediatrics Unit (BPU), Department of Paediatrics, Government Medical College, Thiruvanathapuram.
* The training in parent child interaction therapy (PCIT) will help to do parent child interaction therapy to toddlers, where a large number of toddlers were brought for behavioural problem in our BPU, Department of Paediatrics, Government Medical College, Thiruvanathapuram.
* The NeuRA centre visit helped me to get an understanding of the functional brain imaging studies of typically developing and developmental disorders. It will help me to improve my teaching skill in the area of child development and developmental disorders to undergraduate and post graduate training to both medical and nursing students in our institution.
* Exposure and training in residential family care unit, toddler clinic and Jade house for perinatal depression will help me to improve the quality of service given to children, adolescents and the parents who visit our institution.
* The many visits to KU Marcia Burgess Autism Specific Early Learning and Care Centre, Liverpool helped me to get exposure and experience to set up an advanced training center for developmental disorders including autism, if needed. I can provide expertise to school education system in the state in this regard, since I am invite to many of the state programs like IED and IEDSS in the state.
* The Caroline Chisholm Special visit helped me to gain experience in how an ideal special school should be set up and do the training for children. Here also I can provide expertise to school education system in the state in this regard, since I am invite to many of the state programs like IED and IEDSS in the state.
* Attending of the international conference, ABC of behavioural disorders helped me to understand the new research activities going in the area developmental and behavioural disorders. There were papers on brain behaviour research. The speakers were international faculties and researchers with well repute and publications.
* The whole research fellowship program in Child Psychiatry helped me to plan a research project proposal for early identification and intervention of developmental disorders including autism which can be conducted in my parent institution. It will ultimately improve the quality of service given to children attending Behavioural Paediatrics Unit (BPU), Department of Paediatrics, Government Medical College, Thiruvanathapuram.

**To conclude the outcome of the research fellowship are,**

* + It helped me to gain research experience and training in the child psychiatry in general and developmental disorder in particular.
	+ Exposure and research experience in using various tools and scales for early screening, diagnosis and intervention evaluation. It equipped me to do planning and carry out research activities in the area of child psychiatry in general and developmental disorders in particular.
	+ The visit and interaction to various international research and service institute and training in various new psycho social and behavioural interventions (ESDM, PCIT etc.) will help me to carry out similar activities and improve the quality of service given to children and their parents in the area of child and adolescent mental health. But a lots of infrastructural and manpower facilities are to be build up in parental institute for this purpose.
	+ It also helped me to improve my teaching skills, so the UG/PG students of both medical and nursing students will be benefited out of it.

**Follow up actions of visit and research fellowship training.**

* Based on the research experience and skill attained, I would like to start research activities in the area of child psychiatry in general as well as developmental disorders in particular.
* To prepare a research proposal in the area of developmental disorders, Early detection and intervention of developmental at my parent institutional level Behavioural Paediatrics Unit (BPU), Department of Paediatrics, Government Medical College, Thiruvanathapuram. I am planning to submit this proposal to ICMR for approval and funding. Aim of the project is to do research in the developmental disorders early detection and do early intervention at the same time so that quality of service to the children given by the parent institute will be improved.
* To continue the relationship which was build up with the ICAMHS, Mental Health Centre, Liverpool Hospital, Sydney, Australia at expert level, so that it will help to improve our research and service at parent institutional level
* To develop infrastructural facility and faculty in the parent institute (Department of Paediatrics, BPU) accordance with the training obtained, so that service to children by parent institute can be improved. In this regard, a proposal for building up infrastructural facility and faculty will be submitted to state government.
* I will also do follow up and measures to improve the teaching modalities to UG/PG students of both medical and nursing students.