



Project Proposal for Ph.D.

Project Details (The research problem must clearly indicate the need for an interdisciplinary approach)

Project Title	Reward-related decision making in affective disorders and their clinical implications for health (PCOS, post-partum and premenopausal obesity)
Project Summary (Minimum 500 and maximum 2000 characters)	Introduction: Sex-differences studies indicate that reward processing and decision making differs between men and women with possible role of sex and stress hormones. Reproductive stages cause hormone alterations but their effect on rewards and decision-making processes remain poorly understood. Alterations in hormones and in cognitive and affective processes might account for post-partum obesity and require interdisciplinary approach to address this growing problem affecting women's health specifically in Indian population. This project aims to combine expertise in cognitive psychology and medical sciences to examine the cognitive and neurobiological changes in women diagnosed with PCOS, post-partum and premenopausal obesity and depression. Tentative work plan: (a): Assess executive functions, decision making and affect response in clinical patients (e.g., PCOS, post-partum and premenopausal obesity). (b) Assess hemodynamic response (functional near infrared spectroscopy: fNIRS) to cognitive and affective challenges in healthy and clinical patients.

Ph.D. Supervisors*
(Supervisor 1 and Supervisor 2 cannot be from the same department of IITD)

Role	Name of Faculty	Academic Unit in IITD/Institute/University	Email ID (Official)
Supervisor 1*	Prof. Varsha Singh	Psychology, HSS, IIT Delhi	vsingh@iitd.ac.in
Supervisor 2	Dr. Piyush Ranjan	Medicine, AIIMS, New Delhi	drpiyushdost@gmail.com

*Supervisor 1 must be from IIT, Delhi.

+All cells in this table are mandatory fields that need to be filled by faculty for consideration of proposal.

\$The date of superannuation of supervisors should be at least three years from the date of registration of selected candidates.

Project requirements (Student qualifications, experience required, etc)

*The candidate will be shortlisted based on common shortlisting criteria decided by ScRC (SIRe)

- Master's in Clinical Psychology, Masters in Neuroscience or Masters in related field (JRF preferred)
- Knowledge and experience with neuropsychological tests
- Preference will be given for experience in working on interdisciplinary projects and multi-institutes collaborations
- Candidate is expected to have a good understanding of research design, statistical analysis, research writing and an ability to follow timelines.

Source of fellowship/funding and project number
(CSIR/UGC/DBT/ICMR/ICAR/NEET-PG/DST-INSPIRE/IRD/FITT Project details, if any)

UGC, ICMR, CSIR

Role of Faculty Members involved:	
Supervisor-1	Varsha Singh: Cognitive-affective assessments, research supervision, ethics approval at IITD
Supervisor-2	Piyush Rajan: Access to patients, clinical supervision, ethics approval at AIIMS.

Note :-

1. Approval from the respective DRC/CRC/ScRC of your Department/Centre/School will be required for using the "Full-time Institute Assistantship (Category-wise) (FIA)" for selecting the students in SIRe.
2. Declaration:- Faculty members, please ensure that you have at least 3 years of service left before superannuation along with adequate sitting space & lab facilities for the SIRe student.
3. PI/s are also encouraged to submit joint proposals with AIIMS, NII, JNU and institutes with which IITD has an existing MoU. If the Co-PI (Supervisor 2) is from outside IITD, kindly share his/her detailed CV.
4. If a research scholar is to be considered for selection under the project fellowship, then the project should have a minimum of two-year duration remaining.
5. A candidate applying with a valid JRF/INSPIRE/any national level fellowship should have at least two-year validity from the date of joining the Ph.D. program.
6. The third supervisor’s name (if required) can be added only after the formation of Student Research Committee (SRC) subject to a strong recommendation of SRC and subsequent approval from the competent authority.
7. If Institute fellowship is being sought, then DRC approval of the parent department of Supervisor 1 is required at the time of selection.