



AN OBSERVATIONAL STUDY TO ASSESS THE STATUS OF OJUS IN PARENTS OF DEVELOPMENTAL DELAY CHILDREN WITH NORMAL CONTROL

Parvathy. S*

PG Scholar, Department of Kriya Sharira, Govt. Ayurveda College, Kannur, Kerala, India. *Corresponding Author

Anjali Sivaram

Associate Professor, Department of Kriya Sharira, Govt. Ayurveda College, Kerala, India.

ABSTRACT *Ojus* is the supreme essence of *sapthadhatus* and is the entity which provides both physical and mental strength to the individual. Parents of developmentally delayed children are at increased risk of experiencing psychological stress due to increased anxiety about their kid. Psychological conditions such as anger, tension, sorrow etc. are mentioned among the *kshaya karanas* of *ojus*. So the parents of children with developmental delay have chances of developing *oja kshaya* which can adversely affect their health. To assess the status of *ojus* among parents of children with developmental delay and parents of children with normal control. The sample consisted of 30 parents (15 parents of children with developmental delay 15 parents of normal children) were selected from OPD of Govt. Ayurveda College Kannur and in and around Govt. Ayurveda College. The status of *ojus* in parents of both group were assessed with a validated questionnaire developed in the Department of Kriya sarira as a part of MD research work. Data was statistically analysed. Findings of the study indicated that parents of children with developmental delay were having more *oja kshaya* as compared to parents of children with normal control.

KEYWORDS : *Ojus*, Developmental delay, Stress

INTRODUCTION

Ayurveda is basically the science of life. One of the basic fundamental concept or view of Ayurveda is *ojus*. Ayurveda stands for both preservation of health in healthy and treatment of diseases in morbid and it ultimately point towards the preservation of strength through maintaining proper quality and quantity of *ojus*. *Ojus* is considered as the supreme essence of the *dhatus* from *rasa* to *sukra*. Though located in *hridaya*, it pervades all over the body and control working of the body¹. It is also called as *Tejas* of all the *dhatu*. As *sarpi* is present in *kshera* in the same way *Ojus* is present in the body. *Ojus* is of 2 types *Para ojus* and *Apara ojus*². The optimum functioning and qualitative adequacy of *ojus* are inferred by wellbeing of body and mind, well –built physique, un obstructed movements, clarity of voice and complexion and normal functioning of motor and sensory organs³. Pathological states of *ojus* or *ojo vikriti* are of three types *Ojovisramsa*, *Ojovyapad*, *Ojakshaya*⁴. Among them decrease in *ojus* (*ojakshaya*) is due to several causes like injury, anger, grief, constant worry, exertion, hunger etc. *Ojus* is the determinant factor of immunity, resistance to diseases and ultimately health state of a person.

Developmental delay exists when a child does not reach developmental milestones at the expected age. Developmental delay may occur in any or all the major area of child development, gross motor, fine motor, language and social. When more than one domain is affected it is termed as global developmental delay⁵. Developmental delay might be short term or it might be the first sign of a long term problem. Long term developmental delay also called developmental disabilities examples learning disabilities, cerebral palsy, intellectual disability and autism spectrum disorder. Parents of children with developmental delays report higher levels of parenting stress compared to typically developing children⁶. Even though many aspects of family life might contribute to such stress, behavioural problem in children have often been selected as a critical contributor. Children with developmental delay often show more problematic behaviour's than their typically developing ones and the behaviour problems often leads to multiple adjustments on the part of parents. Psychological stress experienced by the parents results in release of neuro- endocrine mediators from CNS and endocrine gland that directly impact immune system⁷. The main neuroendocrine pathways activated in response to stress that control the immune function are the HPA axis, which results in the release of glucocorticoids and the sympathetic nervous system which result in release of catecholamine's, epinephrine and nor epinephrine. The effects of these hormones on immune function are reduced NK cell activity, alterations in peripheral lymphocyte subsets and cell proliferation, diminished antibody production etc. In all parents a certain level of stress is considered normal and adaptive, but parents with developmental delay children tend to report greater than average levels of stress during their child infancy, early childhood and adolescence. In parents of children with developmental delay the stresses levels have been remain stable or increase gradually. So researches in parenting stress attain more

focus as it is associated with other aspects of parent wellbeing including depression, marital conflict and poor physical health.

The prevalence of children with any developmental disability increased from 2014 to 2016. The prevalence of children always diagnosed with a developmental delay other than autism spectrum disorder or intellectual disability also has increased from 3.5 % in 2014 to 4.55% in 2016⁸. For the past 30 years there has been a vast amount of research was done in exploring the stressors have on the parent wellbeing⁹. Depression, anxiety, excessive stress etc. are considered as some of the causes for *oja kshaya*. So the parents of children with developmental delay/disabilities have chances of developing *oja kshaya* which can adversely affect their health which is highly mandatory for caring their child. Hence early assessment of *oja kshaya* in these parents helps them to take preventive measures. This study was intended to observe the status of *ojus* in parents of children with developmental delay compared with the parents of normal children.

MATERIALS AND METHODS

Study design

This was an observational study
Consecutive sampling technique was used for selecting samples. Total 30 individuals were selected for this study according to inclusion and exclusion criteria. Written informed consent was taken from the individual before study.

Source of data

15 parents of children with developmental delay were consecutively selected for study group from OPD of Govt. Ayurveda College, Kannur. 15 parents of healthy children were selected for control group from in and around Govt. Ayurveda College Kannur. In parents of both groups 10 were females and 5 were males.

Method of collection of data

Inclusion criteria for parents with developmental delay children

1. Parents of children diagnosed with developmental delay /disabilities
2. Children of either sex

Inclusion criteria for parents of normal children

1. Parents of children without developmental delay/disabilities
2. Children of either sex

Exclusion criteria for parents with developmental delay children and of normal children

Parents having any chronic physical illness or intellectual disability

Assessment criteria

The status of *ojus* in parents of both groups was assessed using a tool for clinical evaluation of status of *ojus* which was developed in Dept.

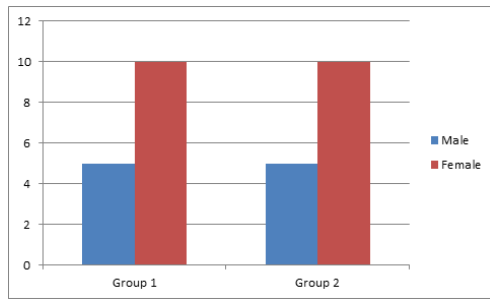
of Kriyasaareera, Kannur as a part of MD research work. Scoring of *ojus* was done as per the tool. The collected data was tabulated and appropriate statistical test were done using SPSS 16.0. Both groups were compared using Mann Whitney U test. P-value less than 0.05 (< 0.05) was considered as statistically significant.

Study tool

The tool for the assessment of status of *ojus* was developed in the form of a structured close ended questionnaire. The questionnaire has 37 questions measuring 18 variables under 3 domains and 7 sub domains. Status of *ojus* can be assessed in an objective way, grading from high score to low score is possible. Any score less than 30% are likely to have problems pointing towards severe *oja kshayam*.

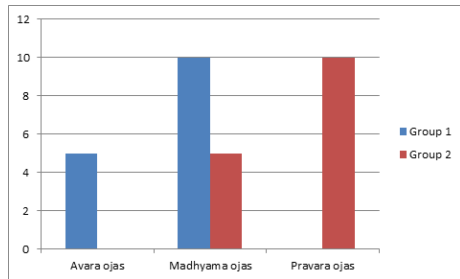
OBSERVATION AND ANALYSIS

Out of the 15 parents in both groups 10 were mothers and 5 were fathers (Fig 1)



Among the two groups *Avara & Madhyama ojus* were seen in parents with developmental delay children and *Madhyama and Pravara ojus* were seen in parents with normal children

(Fig 2)



RESULT

The comparison of status of *ojus* in parents with children having developmental delay and parents having normal children using Mann Whitney U test indicated that there were significant difference in status of *ojus* in both group. Mean rank of *ojus* in the group of parents of developmental delay children is less than mean rank in the group of parents of normal children. P-value obtained was 0.00 showing that the status of *ojus* was high among parents of normal children. Lower status of *ojus* was among parents having children with developmental delay. Their *ojus* status was *Madhyama* or *Avara* type. The status of *ojus* in parents of normal children was *Uthama* and *madhyama* type.

DISCUSSION

A big responsibility for the parents is raising their child. This responsibility increases if the child has a disability. The parents of developmental delay children experience a high level of anxiety, depression and psychological stress than parents of normal children. This anxiety, depression and psychological stress are considered as the causes for *oja kshaya*. This assessment was done to compare the *oja kshaya* in parents of developmental delay children and of normal children. *Ojus* is essential for the maintenance of health. Though located in the *Hridaya*, it pervades all over the body and control working of the body. Diminution of *ojus* is said to result from fear, weakness, grief, anger, fatigue, starvation etc. This study revealed that Lower status of *ojus* (*Avara* and *Madhyama ojus*) is more among parents of developmental delay children than parents of normal children. Atichinta (Excessive stress) is one among the causes of *rasavahasroto dushti*. So the *rasavahasroto dusti* leads to decreased formation of *rasa dhatu* further leads to improper formation of other *dhatu*s. Also “*vyayama anashanam chinta rukshya alpa pramitashanam*” (Ca.su 17/76) are considered as the causes for *rasa*

kshaya. As *ojus* is considered as the essence of all the *saptadhatus*, the impaired formation of *dhatu*s leads to impairment in *ojus* formation also. The central nervous system, endocrine system and immune system are the complex system that acts together. Stressful life events and negative feelings they generate can unbalance the immune response by disturbing the interaction among these systems. There are mainly two major stress signalling pathways, the Autonomic nervous system and hypothalamic pituitary adrenal axis that contribute to immune dysregulation. Experiencing a stressful situation, activates the HPA axis and sympathetic adrenal medullary axis which cause the release of hormones such as adrenocorticotrophic hormones (ACTH), cortisol, Growth hormone, prolactin, epinephrine and norepinephrine which modulate immune system. Parents of children with developmental disability experience many problems which are related to employment, family issues, less social participation while parents with normal child face comparatively less issues¹⁰. Among the parents of developmental children *ojus dushti* is more among female parents. Parents who spent more time with the child were either housewives or unemployed. So it is quite natural that the needs of a child with disabilities are often compound and a single parent at home face enormous problem in child care.

CONCLUSION

Present study was done to compare the status of *ojus* in parents of developmental delay children with parents of normal children. Findings of this study suggest that Lower status of *Ojus* is more among parents of children with developmental delay than normal controls. The emotional challenges experienced by the parents lead to diminution of *ojus* in them .As their health is highly mandatory for caring their child, early assessment of *oja kshaya* and timely management is highly mandatory in current scenario.

Questionnaire to assess the status of ojus

1. Are you afraid to have a visit to a hospital?
a) Always afraid b) sometimes afraid c) never afraid
2. Do you have the feeling of fear when you are being watched by someone else?
a) Always b) sometimes c) never
3. Do you feel any anxiety about misfortunes that will befall on you?
a) Always b) sometimes c) never
4. Do you get tense about travelling outside alone?
a) Always b) sometimes c) never
5. Do you have the feel of easy dislocation of joints
a) Always b) sometimes c) never
6. Do you feel weary?
a) Always b) sometimes c) never
7. Do you feel any difficulty in moving your body?
a) Always b) sometimes c) never
8. Do you feel heaviness in your body?
a) Always b) sometimes c) never
9. Do you feel any change in complexion during the last six months?
a) Always b) sometimes c) never
10. Do you feel exhausted even in the beginning of a heavy work?
a) Always b) sometimes c) never
11. Do you always feel lazy?
a) Always b) sometimes c) never
12. Do you feel drowsy while doing things?
a) Always b) sometimes c) never
13. Do you often yawn?
a) Always b) sometimes c) never
14. Do you feel sleepy even after having a sound sleep?
a) Always b) sometimes c) never
15. Have you been losing consciousness frequently during the last six months?
a) Always b) sometimes c) never
16. Do you feel that your body is getting slim during the last six months?
a) Always b) sometimes c) never
17. Are you not able to enjoy even joyful moments?
a) Always b) sometimes c) never
18. Do you feel that your body is dry?
a) Always b) sometimes c) never
19. Do you feel that your lips are always dry?
a) Always b) sometimes c) never
20. Do you feel thirsty even after drinking enough water?
a) Always b) sometimes c) never
21. Do your nails break easily?
a) Always b) sometimes c) never

22. Do you have hair loss?
a) Always b) sometimes c) never
23. Do you have constipation?
a) Always b) sometimes c) never
24. Does your body have inflammation that appears and disappears abruptly?
a) Always b) sometimes c) never
25. Do you feel you don't have the required firmness in your body?
a) Always b) sometimes c) never
26. Do you feel difficulty in doing daily chores?
a) Always b) sometimes c) never
27. Can you bend down and straighten up with ease?
a) Always b) sometimes c) never
28. Do you feel any difficulty in lifting even one kilogram weight?
a) Always b) sometimes c) never
29. Do you feel any difficulty while getting up from armless chair?
a) Always b) sometimes c) never
30. Do you feel any difficulty in getting from bed?
a) Always b) sometimes c) never
31. During the last six months have you felt having reduced voice while talking?
a) Always b) sometimes c) never
32. In the past six months have you felt any strain in talking?
a) Always b) sometimes c) never
33. Is your daily routine disturbed due to lack of memory?
a) Always b) sometimes c) never
34. Do you find any difficulty in talking decisions regarding day today matters?
a) Always b) sometimes c) never
35. Do you find situations in which you don't remember the tasks to be done one after another?
a) Always b) sometimes c) never
36. Are you able to pray with concentration?
a) Always b) sometimes c) never
37. Are you able to do things with concentration?
a) Always b) sometimes c) never

Total score status of Ojus

0-30 Avara ojus

30-60 Madhyama ojus

60-90 Pravara ojus

Scale	Positive questions	Negative questions
Always	2	0
Sometimes	1	1
Never	0	2

REFERENCES

- Acharya Agnivesa, Charaka Samhita (Vol 2). Reprint edition. Translated by Dr.Ram Karan Sharma, Vaidhya Bhagwan Dash. Varanasi: Chaukhamba Sanskrit series Office; 2015. Charaka sutram 7/76
- Prof. K. R. Srikantha Murthy. Ayushkamyam. Vagbhata's Ashtanga hridayam. Varanasi: Chaukhamba Krishnadas Academy; 2014. pp. 72
- Prof. K. R. Srikantha Murthy. Doshadivijnaneeyam. Vagbhata's Ashtanga hridayam. Varanasi: Chaukhamba Krishnadas Academy; 2014. pp.163
- P.V. Sharma. Doshadhatumalakshayavidhivijnaneeyam. Susruthasamhita. Varanasi: Chaukhamba Viswabharati publishers; 2013. pp.105
- A Parthasarathy. *Developmental delay*, 5th ed. New Delhi: Jaypee Brothers Medical Publishers; 2013
- Ashley, C. Helena. P. Parenting stress and child behaviour problem with developmental delay. <https://www.ncbi.nlm.nih.gov/pmc> (accesses 8 Nov 2014)
- Dennis D. Taub. Neuroendocrine Interactions in the Immune system. www.ncbi.nlm.nih.gov (accessed 10 July 2008).
- Estimated prevalence of children diagnosed developmental disability in United States 2014–2016*. <https://www.cdc.gov/> (accesses 29 November 2017).
- Sudha Suresh, Vijayakumar, Sahana Umesh. Effect of cyclic meditation on caregivers stress among families of children with developmental disability. *International Journal of Ayurveda and Pharma Research* 2018; 6(3): 25.
- Nishant Kumar, Lokesh Kumar Ranjan, Rishi Panday. Parenting stress among mentally retarded children with normal control. *Open Journal of Psychiatry & Allied Sciences* 2018; 2(9):