NATIONAL AYUSH MISSION KERALA

IMPACT ASSESSMENT REPORT

2024-25

FLEXIPOOL PROJECTS

Impact Assessment Report 2024-2025

Flexipool Projects

National AYUSH Mission Kerala

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AYURVEDA INFERTILITY CLINIC

Introduction

The Ayurveda Infertility Clinic is a visionary initiative dedicated to providing cost-effective and holistic infertility management through the time-tested principles of Ayurveda. Rooted in Kerala's rich Ayurvedic heritage, the project aims to offer authentic and accessible care for individuals and couples facing fertility challenges. This initiative emphasizes natural healing by utilizing personalized herbal remedies, dietary and lifestyle modifications, and detoxification therapies such as Panchakarma. These treatments are designed not only to enhance reproductive health but also to support overall physical and emotional well-being.

The primary aim of the clinic is to deliver affordable and effective infertility care through Ayurvedic methods, thereby reducing dependence on modern, often invasive, hormone-based treatments and their associated side effects. The project also seeks to reduce the financial burden on couples seeking infertility solutions and to increase public awareness about the potential of Ayurveda in addressing reproductive health issues.

Initially, the project was conceptualized to operate across four dedicated centers in Kerala GAD Pathanamthitta, GAD Valiyaparamba in Kasargod, GAD Attipra in Thiruvananthapuram, and GAD Thenkara in Palakkad. These centers serve as specialized hubs for holistic fertility care, offering comprehensive, patient-centered services while promoting the broader adoption of Ayurvedic approaches in modern reproductive healthcare.

Understanding Infertility: Causes, Impact, and Management

Infertility is a condition of the male or female reproductive system defined by the inability to achieve pregnancy after 12 months or more of regular, unprotected sexual intercourse, as per the World Health Organization (WHO). This one-year threshold is based on biological and statistical evidence indicating a declining likelihood of live birth with increasing age and duration of infertility. Infertility is not merely a medical issue; it has profound emotional, psychological, and social implications, particularly in cultures where parenthood is closely linked to personal fulfilment and social standing.

Infertility arises from a range of factors affecting either partner, and in some cases, the underlying cause remains unexplained despite thorough medical evaluation. In females, common causes include tubal disorders, uterine abnormalities, ovarian dysfunction, and endocrine imbalances. Tubal disorders, such as blocked fallopian tubes, often result from untreated sexually transmitted

infections (STIs), complications from unsafe abortions, postpartum infections, or prior abdominal surgeries leading to adhesions. Uterine disorders, including inflammatory conditions, congenital abnormalities, and benign tumors like fibroids, can impair implantation and fetal development. Endometriosis, a condition where uterine tissue grows outside the uterus, often leads to severe inflammation, scarring, and fertility challenges.

Ovarian disorders, particularly polycystic ovarian syndrome (PCOS), significantly contribute to infertility by causing hormonal imbalances, irregular ovulation, and metabolic disturbances. Other ovarian conditions, such as premature ovarian insufficiency (POI) or ovarian cysts, further hinder reproductive function. Additionally, endocrine disorders affecting the hypothalamus, pituitary, thyroid, or adrenal glands can disrupt the delicate hormonal balance required for ovulation and pregnancy maintenance. The prevalence of these conditions varies globally due to genetic, environmental, lifestyle, and healthcare-related factors. In developing regions, tubal infertility due to STIs and infections is more common, whereas in developed nations, delayed childbearing, obesity, and stress-related hormonal dysfunctions are significant contributors. Although advancements in diagnostics and assisted reproductive technologies (ART) have improved infertility management, early intervention, preventive care, and lifestyle modifications remain critical.

Male infertility stems from physiological, hormonal, and lifestyle-related factors affecting sperm production, function, and delivery. A major cause is obstruction of the reproductive tract, which can prevent sperm from being included in semen. Blockages in the ejaculatory ducts, seminal vesicles, or vas deferens may result from infections, injuries, congenital abnormalities, or surgical procedures like vasectomy or hernia repair. Conditions such as epididymitis, prostatitis, and STIs can lead to scarring and hinder sperm transport. Hormonal imbalances are another key factor, as sperm production relies on a complex interaction between the hypothalamus, pituitary gland, and testicles. Disorders such as pituitary tumors, hypogonadism, or testicular cancers can impair sperm production and quality. Testosterone deficiency, whether caused by medical conditions or external factors like anabolic steroid abuse, also affects fertility.

Testicular failure, where the testes fail to produce adequate sperm, is another concern. Varicocele, a condition characterized by enlarged veins in the scrotum, increases testicular temperature and reduces sperm quality. Additionally, cancer treatments like chemotherapy and radiation can permanently damage sperm-producing cells. Sperm abnormalities, including poor motility, abnormal morphology, and low count, further impact fertility. Lifestyle choices, such as smoking, excessive alcohol consumption, drug use, and obesity, are linked to decreased sperm health. Anabolic steroids, often used for muscle enhancement, can cause testicular shrinkage and severely

diminish sperm production. Environmental toxins, including heavy metals, radiation, and industrial pollutants, contribute to genetic damage and increased miscarriage risk.

Given the rising prevalence of male infertility globally, awareness and early intervention are crucial. Regular health screenings, lifestyle modifications, and medical treatments, including ART techniques such as intrauterine insemination (IUI) and in vitro fertilization (IVF), offer hope for affected individuals. Addressing both medical and lifestyle-related factors is essential for improving reproductive health and achieving successful conception.

Impact Assessment 2024-2025

This report presents the impact assessment of Ayurveda-based infertility management for the year 2024-2025. The assessment evaluates the effectiveness of the program, its benefits for individuals undergoing treatment, and its broader implications for society. By analysing health outcomes and quality of life improvements among beneficiaries, this report aims to provide a comprehensive understanding of Ayurveda's role in infertility management. The findings will help in measuring the program's success and identifying areas for further enhancement to support holistic reproductive health and well-being.

Aim

To evaluate the impact of Ayurveda-based infertility management by analysing its effectiveness, benefits, and overall contribution to individuals' well-being and societal health.

Objectives

- To retrospectively analyse the prevalence of different types of infertility and assess the contributing male and female factors in infertility cases from the 2024-2025 program.
- To assess the effectiveness and outcomes of the infertility management program for its beneficiaries.
- To evaluate the quality of life of individuals, ensuring a holistic understanding of their overall health, well-being, and life satisfaction.

Methodology

To meet the objectives of this impact assessment, we carried out a retrospective analysis to identify the prevalence and types of infertility, as well as the various factors associated with both male and female infertility. This analysis involved the consolidation of data on all new infertility cases reported during the period 2024–2025, providing a comprehensive overview of infertility trends within the population. Following the retrospective analysis, we conducted a cross-sectional study among 84 cases selected from two centers, namely GAD Pathanamthitta and GAD Kasaragod.

This component enabled us to collect detailed, individual-level data to further examine the contributing factors and demographic characteristics related to infertility.

Results

Retrospective Analysis of total new beneficiaries of 2024-2025

During the year 2024–2025, 15% of the infertility project beneficiaries were new cases, while 85% were follow-up cases. Among the new cases, primary infertility was the most prevalent, accounting for 69%, while secondary infertility was observed in 31% of cases (Fig 1).

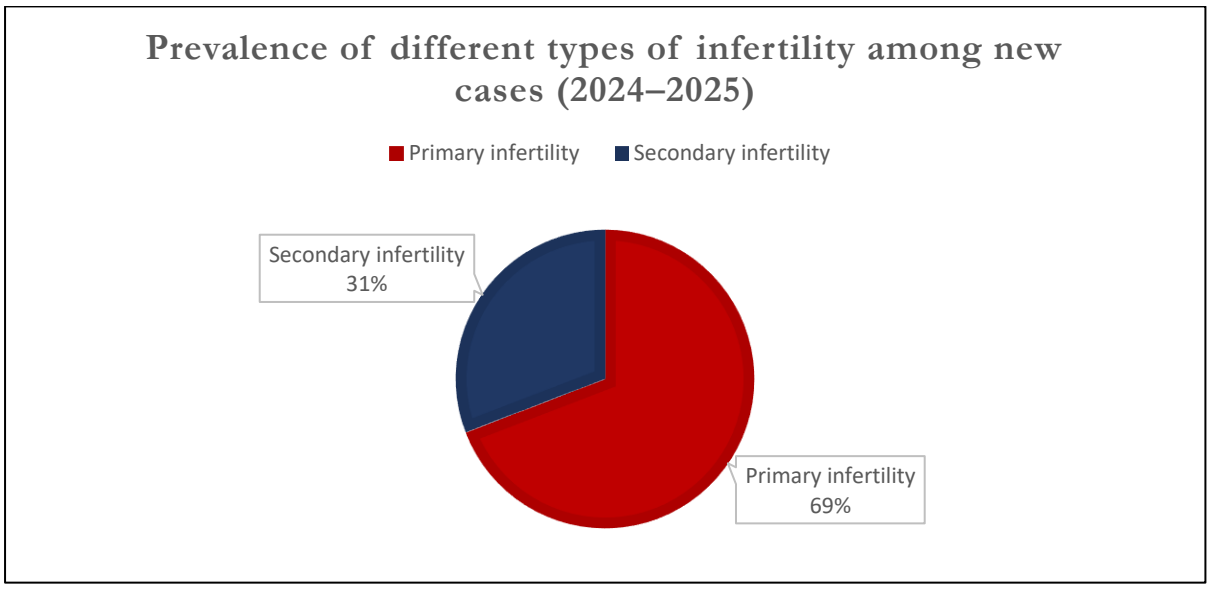

Fig 1: Prevalence of Different Types of Infertility Among New Cases (2024–2025)

Analysis of the infertility factors among new cases revealed that 47% of beneficiaries had a combined factor, while 42% had a female-related factor. Additionally, 11% of cases were attributed to male-related factors, and 4% were classified as idiopathic infertility, where no identifiable cause was determined (Fig 2).

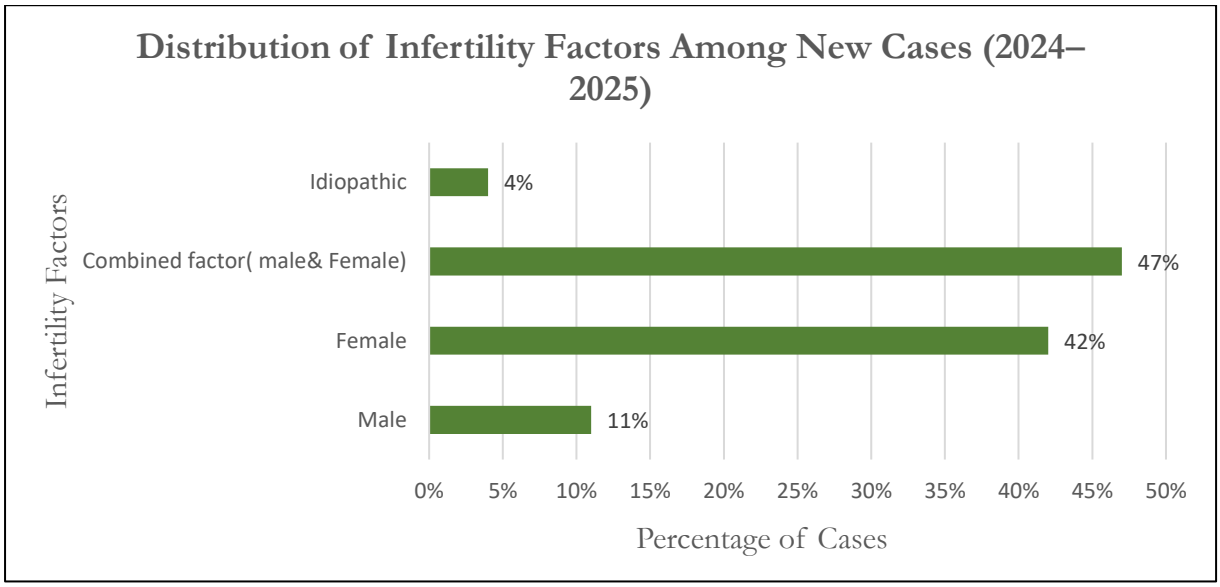

Fig 2: Distribution of Infertility Factors Among New Cases (2024–2025)

Female factors in infertility

Among the various causes of **female infertility as shown in Fig 3, Polycystic Ovary Syndrome (PCOS) emerges as the most common, contributing to approximately 37.07% of cases.** This high prevalence highlights the significant role of hormonal imbalances and ovulatory dysfunction in affecting fertility.

Endometriosis is another major factor, accounting for around 24.7% of cases. Its presence underscores the impact of inflammation and structural abnormalities in the reproductive system. Fibroids contribute to 14.60%, further reflecting the importance of uterine health in fertility outcomes.

Other notable contributors include adenomyosis and pelvic inflammatory disease (PID), each responsible for about 6.7% of cases. These conditions are often linked to chronic inflammation and uterine changes that can hinder conception.

Ovulation disorders, such as those caused by hypothyroidism or premature ovarian insufficiency, represent a moderate share, pointing to the influence of endocrine and metabolic health on reproductive function.

In addition, dysmenorrhea (painful menstruation) is reported in 7.8% of cases, suggesting that menstrual health is another important factor in evaluating and managing infertility in women.

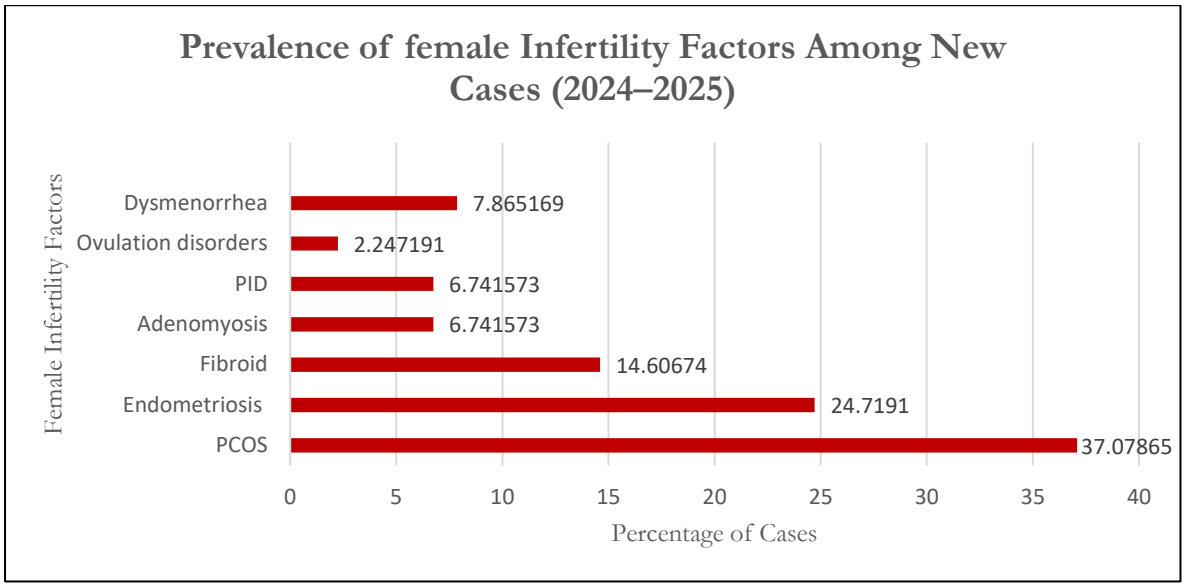

Fig 3: Prevalence of female Infertility Factors Among New Cases (2024–2025)

Male Infertility Factors

An analysis of **male infertility factors for the year 2024–2025 reveals that Asthenozoospermia is the most prevalent condition, accounting for 44.23% of cases,** indicating significant issues with sperm motility. Oligospermia follows, contributing to 11.54% of cases, highlighting concerns related to sperm count and function (Fig 4).

Several other factors contribute equally to male infertility, with Pyospermia, Asthenozoospermia combined with Pyospermia, Oligozoospermia, and other unspecified conditions each representing 9.62% of cases. Additional conditions such as Teratozoospermia, Testicular Microlithiasis, and Testicular Microlithiasis combined with Varicocele and Azoospermia suggest minor structural abnormalities that may impact fertility. Endocrine and metabolic disorders, including Hypothyroidism and Diabetes Mellitus, are also observed but appear to play a minimal role in male infertility in this dataset.

A notable contributing factor is Varicocele, which is known to elevate testicular temperature and impair sperm production, accounting for 5.77% of cases. Though less frequent, it remains a significant cause of male infertility.

Overall, the data indicates that sperm motility issues, infections, and sperm count abnormalities are the predominant causes of male infertility, while structural abnormalities and endocrine disorders play a comparatively smaller role. The presence of multiple contributing factors in several

cases underscores the complex nature of male infertility, often resulting from a combination of conditions rather than a single underlying cause.

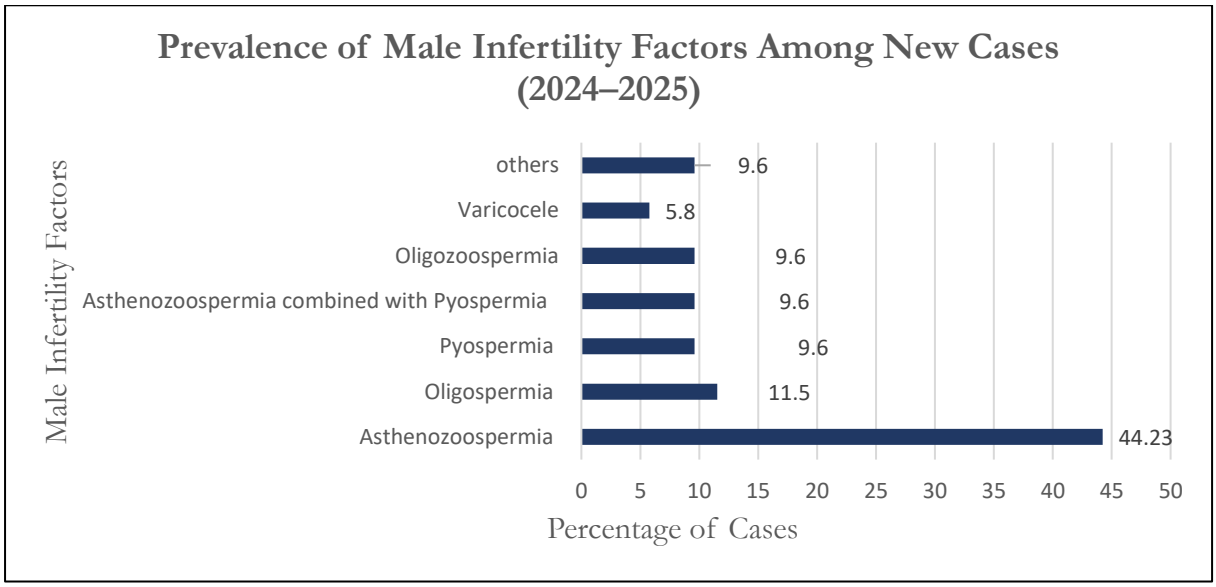

Fig 4: Prevalence of Male Infertility Factors Among New Cases (2024–2025)

Assessment of Beneficiary Profile in a Cross-Sectional Study on Infertility Management and Quality of Life

The present cross-sectional study was undertaken to assess the effectiveness and outcomes of the infertility management program among its beneficiaries, as well as to evaluate their quality of life, with a focus on gaining a holistic understanding of overall health, well-being, and patient satisfaction

Age Distribution of Selected Beneficiaries

Participants were categorized into five distinct age groups: 18–25, 25–30, 30–35, 35–40, and over 40. The findings indicate that the highest proportion of cases fall within the 25–30 and 30–35 age ranges, suggesting a greater demand for infertility services in these demographics. In comparison, the 18–25 and 35–40 age groups accounted for a smaller share of participants, reflecting lower levels of engagement or need. Interestingly, the over 40 categories, while not predominant, displayed slightly higher representation than some younger cohorts, highlighting ongoing treatment needs across a broader age spectrum (Fig 5).

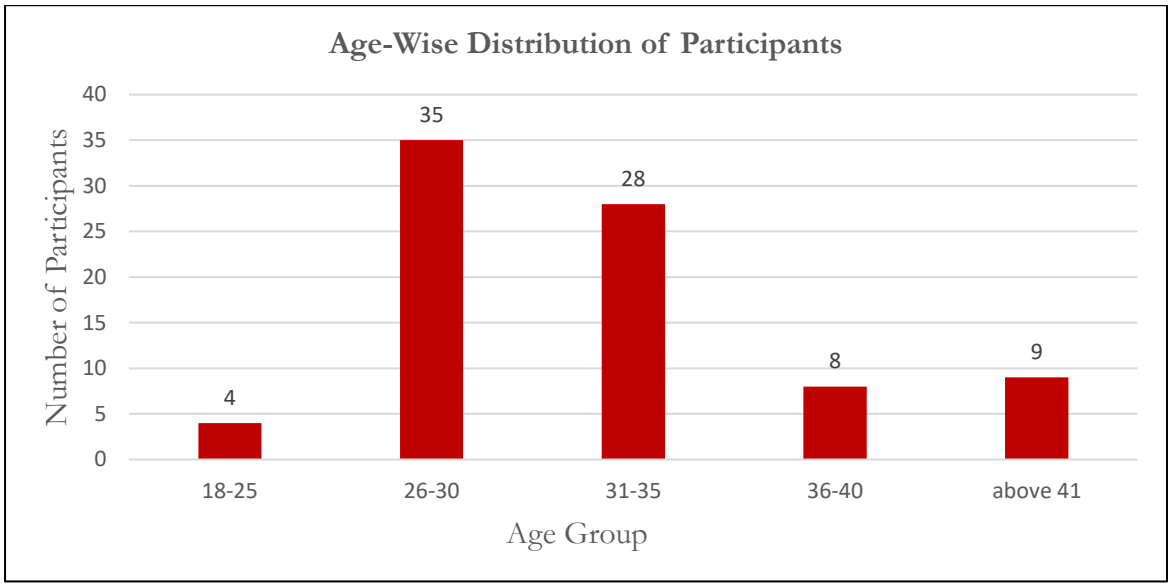

Fig5: Age-Wise Distribution of Participants

Service Delivery at the Infertility Clinic

The evaluation of service delivery at the infertility clinic reflects a largely positive patient experience across key areas of care. A notable 82.5% of respondents expressed high satisfaction with the clarity of their treatment plan, while an equal percentage felt they were treated with respect and dignity by the medical staff—highlighting the clinic's commitment to patient-centered care.

In terms of professional competence, 71% of patients acknowledged the expertise of healthcare providers, and the same percentage found the pre-treatment information to be clear and informative. These results indicate effective communication and skilled service delivery during the treatment process.

However, satisfaction was somewhat lower (69%) regarding the availability of basic treatment facilities, suggesting room for improvement in the clinic's infrastructure and resource accessibility. Overall, the findings demonstrate strong service delivery performance, with opportunities to further enhance patient experience through improved facility support and more comprehensive pre-treatment communication.

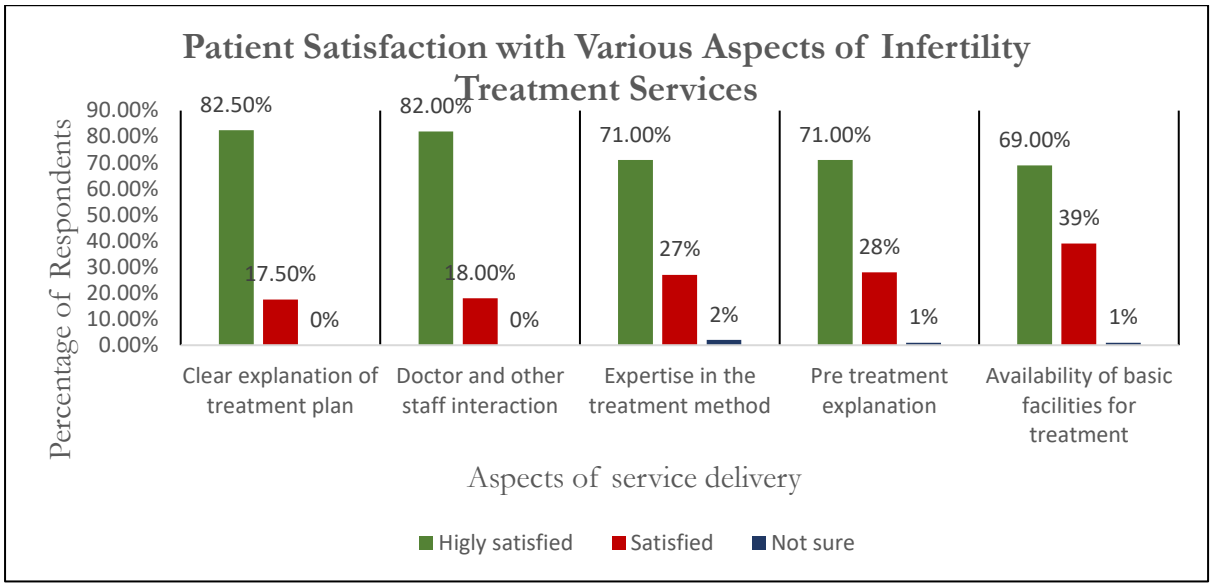

Fig 6: Patient Satisfaction with Various Aspects of Infertility Treatment Services

Perceived Effectiveness of Infertility Treatment Among Respondents

The Fig 7 reflects respondents' perceptions of the effectiveness of the treatment they received**. A significant majority (93%) rated the treatment as "Highly effective,"** indicating strong positive outcomes and a high level of satisfaction. Only a small portion of respondents rated the treatment as "Moderately effective" (3%), "Less effective" (3%), or "Not effective" (1%), suggesting that only a minority experienced suboptimal results. Overall, the findings highlight the success of the treatment approach, with minimal levels of dissatisfaction among beneficiaries.

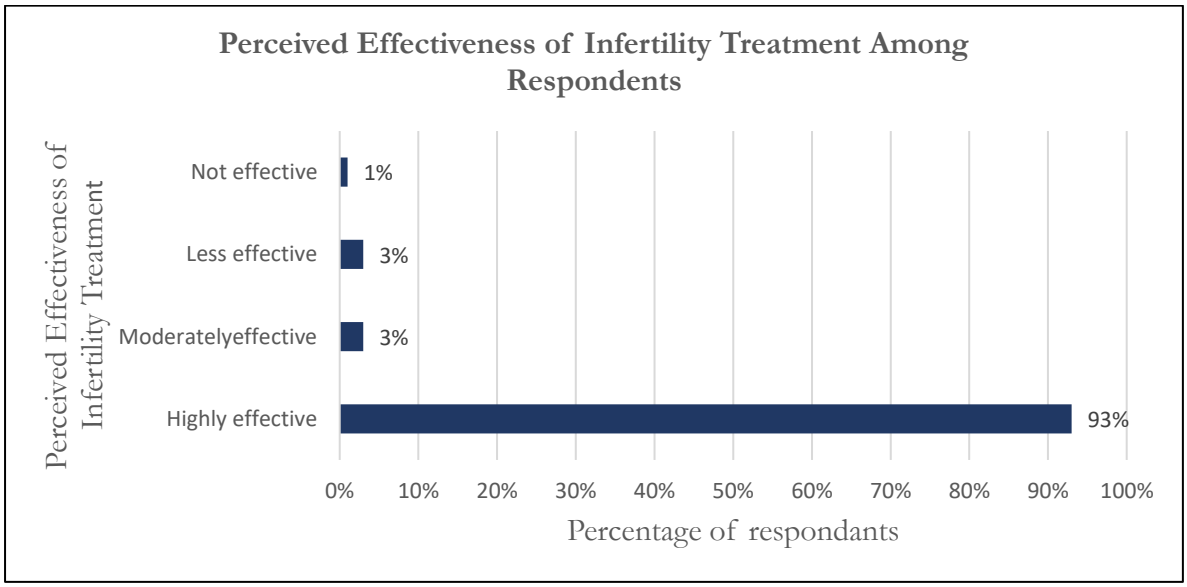

Fig 7: Perceived Effectiveness of Infertility Treatment Among Respondents

Patients' Experiences with the Timeframe of Noticing Improvement After Treatment

A significant portion of patients (39%) reported noticing improvements within the first three months of starting treatment, indicating a relatively swift response for many. An additional 34% experienced positive changes between three to six months, highlighting the treatment's continued effectiveness over a moderate period. Smaller groups observed improvement within six to nine months (11%) or after nine months (6%). Meanwhile, 10% of respondents reported no noticeable change in their condition. These findings suggest that the majority of patients begin to see positive results within the first six months of treatment.

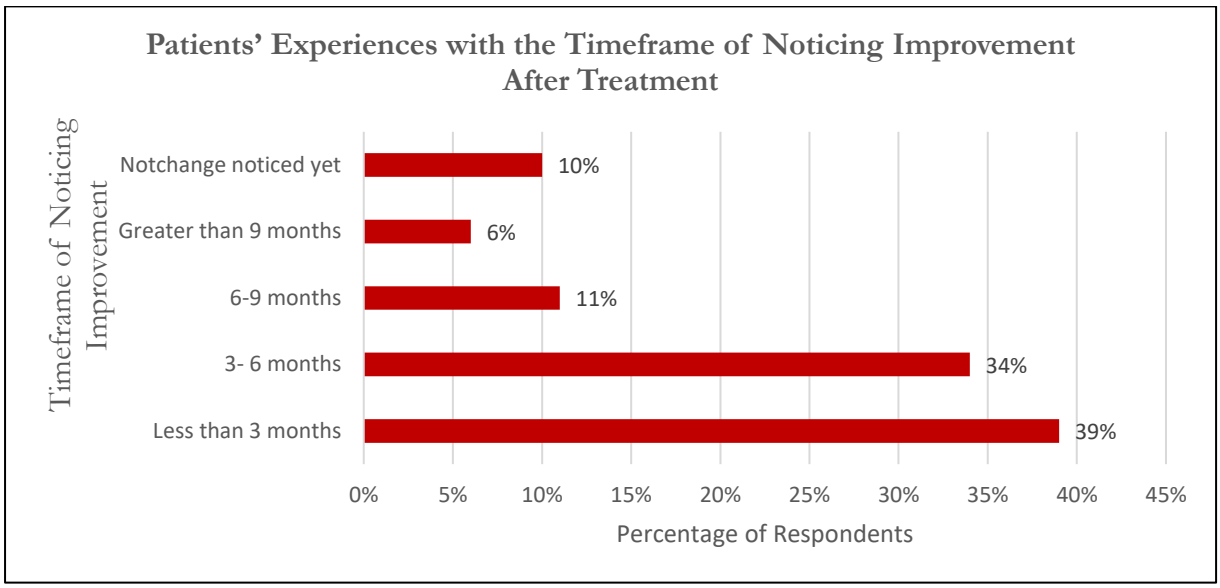

Fig 8: Patients' Experiences with the Timeframe of Noticing Improvement After Treatment

Patients' Responses on Daily Cost of Treatment

The distribution of responses regarding the daily cost of treatment shows that the majority of patients incur relatively low expenses. Most respondents reported costs below Rs.100, making it the most common category. This is followed by the "Below Rs.500" category, which also received a significant number of responses.

Moderate responses were observed in the "Below Rs.1000" and "Below Rs.2000" ranges, while the "Above Rs.2000" category had the fewest responses, suggesting that only a small proportion of patients face higher treatment costs.

Overall, the trend indicates that as the cost category increases, the number of respondents decreases. This suggests that most patients are accessing affordable treatment options, potentially reflecting the institution's commitment to providing cost-effective healthcare services.

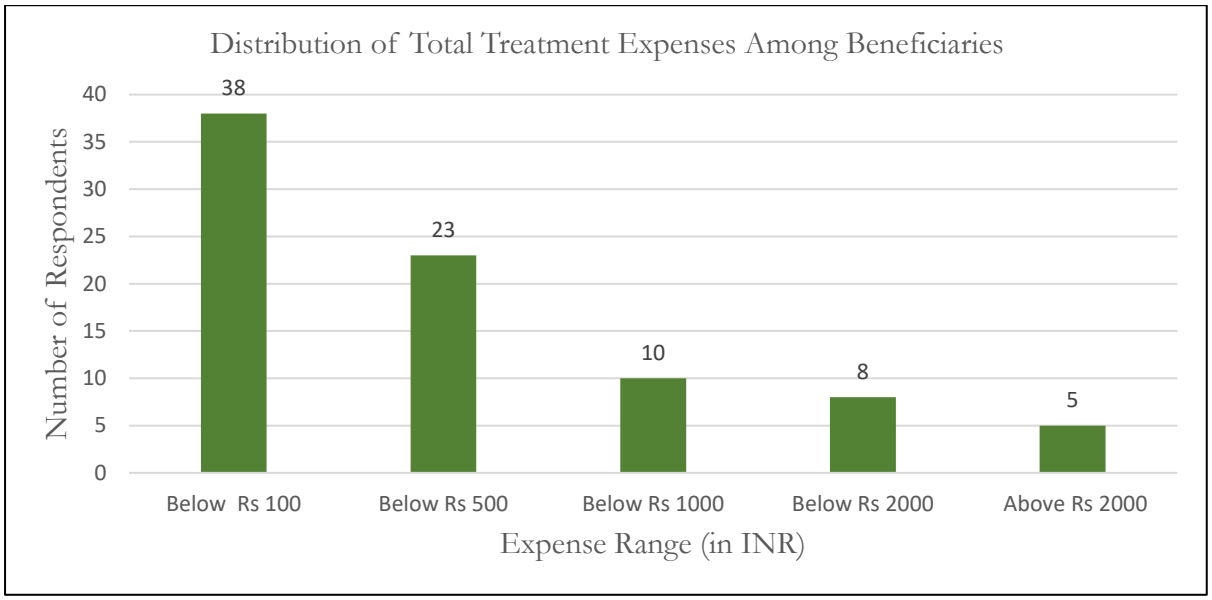

Fig 9: Distribution of Total Treatment Expenses Among Beneficiaries

Breakdown of Major Medical Expenses Highlights Key Cost Drivers

The cost analysis of major medical expenses reveals that the largest share of expenditure is attributed to medicines used during treatment. This underscores the significant role pharmaceutical costs play in overall healthcare spending.

Transportation and diagnostic test recommendations also emerge as notable financial burdens, emphasizing the impact of travel and necessary diagnostic procedures on patients' total medical expenses.

Furthermore, additional costs related to specialized medicines and special care contribute to the overall financial load, particularly for patients requiring intensive or long-term treatment. These findings highlight the multifaceted nature of medical costs and the need for strategic cost management in healthcare.

Key Drivers of Patient Satisfaction in Infertility Treatment

Patient satisfaction with infertility treatment is influenced by a range of factors, with treatment effectiveness emerging as the most significant. A majority of individuals reported that their satisfaction stemmed from the belief that the treatment led to successful outcomes, highlighting efficacy as the primary driver of positive experiences.

Affordability also plays a meaningful role, as many patients value access to cost-effective treatment options that reduce the financial burden of care. In addition, the availability of outpatient services and the convenience of nearby treatment facilities contribute to overall satisfaction by making care more accessible and manageable.

While multiple elements shape patient perceptions, it is clear that the success of the treatment itself carries the greatest weight. These insights underscore the importance of maintaining high standards of clinical effectiveness while continuing to improve affordability and accessibility.

While multiple factors contribute to patient satisfaction, the strong emphasis on treatment success suggests that patients prioritize effective outcomes above all. These findings can inform strategies to enhance patient experience by balancing clinical effectiveness with affordability and ease of access.

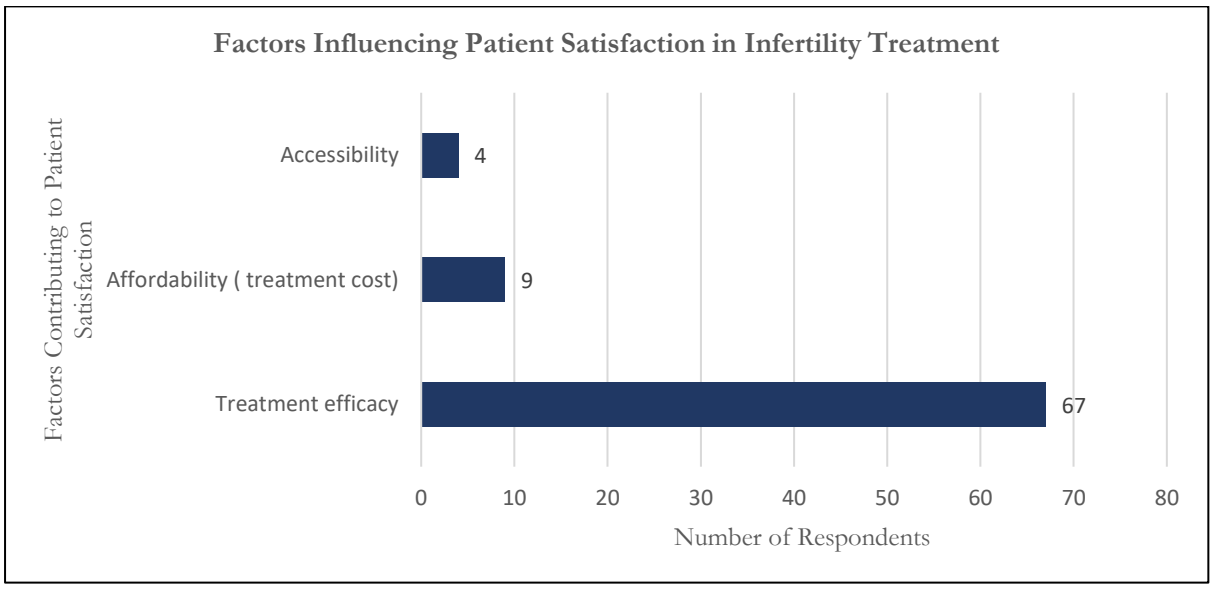

Fig 10: Factors Influencing Patient Satisfaction in Infertility Treatment

Conclusion

The impact assessment of the infertility project demonstrates its substantial contribution to enhancing reproductive healthcare, particularly in terms of accessibility, affordability, and treatment outcomes. By effectively integrating medical interventions, counselling services, and community outreach, the project has established a structured and supportive framework for individuals and couples navigating infertility.

The findings underscore that while affordability and the availability of outpatient (OP) services play vital roles in patient satisfaction, the most influential factor remains the perceived success of treatment outcomes. One of the project's most commendable achievements is its role in reducing the stigma associated with infertility. Through targeted awareness campaigns and educational initiatives, it has fostered a more open, supportive environment that encourages timely medical intervention. Efforts to deliver cost-effective treatment options have also improved patient adherence and engagement, ultimately broadening access to care.

Looking ahead, sustaining and expanding the project will require a comprehensive approach that integrates medical innovation, patient education, and psychological support. Strengthening collaborations with government bodies, NGOs, and private healthcare providers will be key to ensuring long-term sustainability and continuous improvement. In addition, incorporating regular impact evaluations and patient feedback mechanisms will help refine strategies and ensure responsiveness to evolving healthcare needs.

Overall, the infertility project stands as a vital initiative in reproductive health offering hope, breaking stigma, and delivering tangible solutions. With a continued commitment to a patient-centered, evidence-based approach and a willingness to innovate, the project holds strong potential to shape the future of infertility treatment and reproductive wellness.

MEDHA

Medha

Medha-A comprehensive multi-dimensional approach to the management of specially identified scholastic backwardness in children.

Specific Learning Disorders

Specific learning disorders (SLD) comprise varied conditions with ongoing problems in one of the three areas of educational skills–reading, writing, and arithmetic–which are essential for the learning process. The neuro-developmental disabilities in children with poor scholastic performance especially in this competitive era will leads to poor quality of life, due to which child suffers with immense social, emotional and economic consequences. Risk factors include a family history of learning disorders, poverty, premature delivery, prenatal alcohol exposure, Traumatic brain injury, and in the setting of other neurodevelopmental disorders. Types of learning disabilities, namely dyslexia, dysgraphia, dyscalculia, etc can occur alone or in different combinations ranging from mild to severe difficulties. The most common learning disorder is dyslexia, which accounts for at least 80% of learning disorders. Learning disorders often exist comorbidly with other disorders such as oppositional defiant disorder, attention deficit hyperactivity disorder, anxiety, and obsessive-compulsive disorder. Lifestyle modifications, corrections in food habits etc alone has proven to establish lot of changes in the mental health of such children. Through the holistic approach of Ayurveda, different cognitive impairments can be successfully managed. There are many classical Ayurveda formulations Background which promotes intellectual ability and memory power in children. Considering this facts GARIM is being conducting the project Medha in different schools in Malappuram district.

Introduction with rationale

Specific learning disorders (SLD), often referred to as learning disability, is a neurodevelopmental disorder (NDD) and refers to ongoing problems in one of the three basic skills–reading, writing, and arithmetic–which are the essential requisites for the learning process. Under achievers in examinations account for at least a quarter of the strength of any school. Learning disability affects the coordination and function of the brain to receive and process information. Learning disabilities

do not just fade away but rather, they may grow more problematic if nothing is done to handle the problem in time. When time is allowed to pass, a child with learning disabilities may become more frustrated because they lack confidence in everything, they do no matter how hard they try. A child with SLD undergoes much torture and mental harassment, sometimes leading to depression and behavioural issue.

Diagnostic and Statistical Manual of Mental Disorders (DSM-5) estimates the prevalence of all learning disorders (including impairment in writing, reading, and mathematics) to be about 5% to 15% worldwide. In India, the prevalence of SLD is reported to vary from 3% to 10%[1]. These observations how the severity of this distressing situation. Research shows that if detected early, one can take the necessary steps needed to provide the child with life skills needed for a successful life, which helps improve outcomes in the affected children as their minds continue to adapt to the new skills acquired. So early intervention is mandatory.

Ayurvedic management can be important for learning disabilities because Ayurveda offers a holistic, preventive, and therapeutic approach that enhances students' overall well-being. The project Medha was started with goal to create awareness about scholastic backwardness and efficacy of Ayurveda treatment in its management among the parents and teachers, and to provide effective Ayurveda treatment to the scholastically backward children of the selected schools. The nootropic drugs improve learning, memory, and cognitive functions. Similarly, yoga therapy improves the attention and concentration span of the child, thus enabling them to perform better. Combination of drug therapy and yoga therapy along with counselling for parents has been shown to enhance the outcome. This observation is adapted and structured as Medha project.

Imapact Assessment Report 2024-2025

This report evaluates the effectiveness of the Medha project interventions for children with learning disabilities during the year 2024-2025. The assessment is based on retrospective analysis of Cognitive Processing Inventory (CPI) scores recorded before and after the intervention, examining the impact of Ayurvedic therapies and multidisciplinary supportive care.

Objectives

To assess the impact of the Medha project interventions by analysing pre- and post-treatment CPI scores in children enrolled with learning disabilities.

Methodology

The project adopted a multi-stage approach to address scholastic backwardness among students

in selected schools in Malappuram district. Initially, awareness sessions were conducted by the project medical officer for parents and teachers to highlight issues related to poor academic performance. In the next stage, teachers identified underperforming students, and screening was carried out with support from postgraduate scholars of Ay-psychiatry from VPSV Ayurveda College, Kottakkal. Special instructions and parental guidance were provided through camps and WhatsApp groups.

The intervention phase included medical treatment, counselling, and yoga training. Medical interventions were aimed at improving overall health and cognitive functioning, with adjustments made for better compliance. Yoga sessions, conducted weekly by a trained instructor, included breathing exercises, asanas, and pranayama to enhance attention and concentration. Students were encouraged to practice yoga daily at home with parental support, aided by videos and instructions shared online.

Counselling was offered to students, parents, and families at GARIM, Kottakkal, with telephonic support for those unable to attend in person. Parental counselling emphasized remedial teaching, better learning methods, resolving family issues, managing phone addiction, and promoting character development. Individual support was provided to boost self-esteem and channel hyperactivity into productive activities. A reward–punishment system was also recommended to help build healthy routines in children.

For this particular study, a retrospective analysis was conducted on learning disability cases from the Medha Project. The Cognitive Processing Inventory (CPI) tool was used to assess the cognitive functioning of students. CPI scores were recorded during the initial visit and reassessed after the intervention to evaluate post-treatment improvements.

Result

Age-wise Distribution of Enrolled Children in the Medha Project

The children enrolled in the Medha project were categorized into four age groups ranging from 9 to 12 years. The distribution reveals a progressive increase in the number of participants with advancing age. At 9 years, 28 children (18.42%) were enrolled, representing the youngest group and indicating the importance of early identification and intervention. The 10-year age group included 38 students (25%), showing a modest increase, likely due to heightened school-age referrals. A total of 42 children (27.63%) were in the 11-year age bracket, a stage when learning

difficulties often become more evident as academic demands grow. The highest representation was seen in the 12-year group, with 44 students (28.95%), suggesting that older children, either identified later or experiencing ongoing academic challenges, were actively brought into the intervention framework.

This distribution pattern may reflect delayed identification of learning or behavioural issues, increased academic pressure in higher grades, and a gradual rise in referrals through awareness and school-based screenings. The trend highlights the importance of early screening and timely interventions ideally around the ages of 9 to 10 to mitigate the progression of learning difficulties and improve educational outcomes.

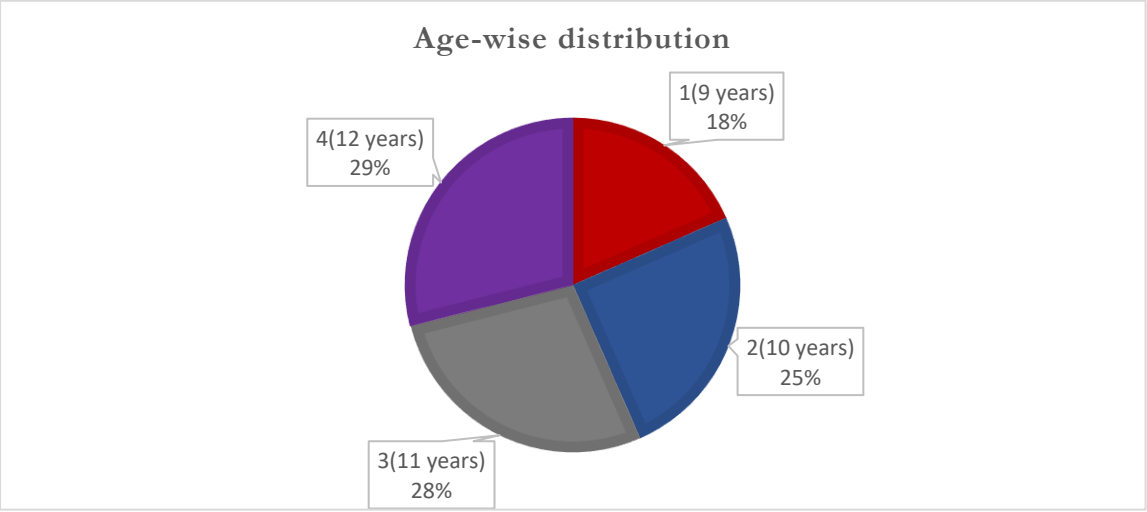

Fig 1: Age-wise Distribution of Enrolled Children in the Medha Project

Gender-wise Distribution of Students in the Medha Project

The gender distribution of students enrolled in the Medha Project reveals a notable predominance of male participants. Out of the total sample, 105 students (69.08%) were male, while 47 students (30.92%) were female. This significant skew toward males aligns with existing research in the field of developmental and learning disorders, which consistently reports a higher prevalence of conditions such as learning disabilities, ADHD, and behavioural challenges among boys.

Several factors may contribute to this male predominance. Neurodevelopmental vulnerabilities make boys more susceptible to conditions like Specific Learning Disabilities (SLD), ADHD, and autism spectrum disorders. Additionally, boys are more likely to exhibit externalizing behaviours such as hyperactivity and conduct issues that prompt earlier identification and referrals. On the other hand, girls often present with internalizing symptoms such as anxiety or social withdrawal, which are less likely to trigger concern or professional evaluation. Sociocultural factors may also

play a role, with educators and parents more inclined to seek help for boys showing disruptive or noticeable academic difficulties.

This trend underscores the potential gender bias in the identification and referral process for learning and behavioural issues. It highlights the need for gender-sensitive screening approaches, training for educators to recognize less overt symptoms often seen in girls, and ensuring that interventions are equitably accessible to all children, regardless of gender.

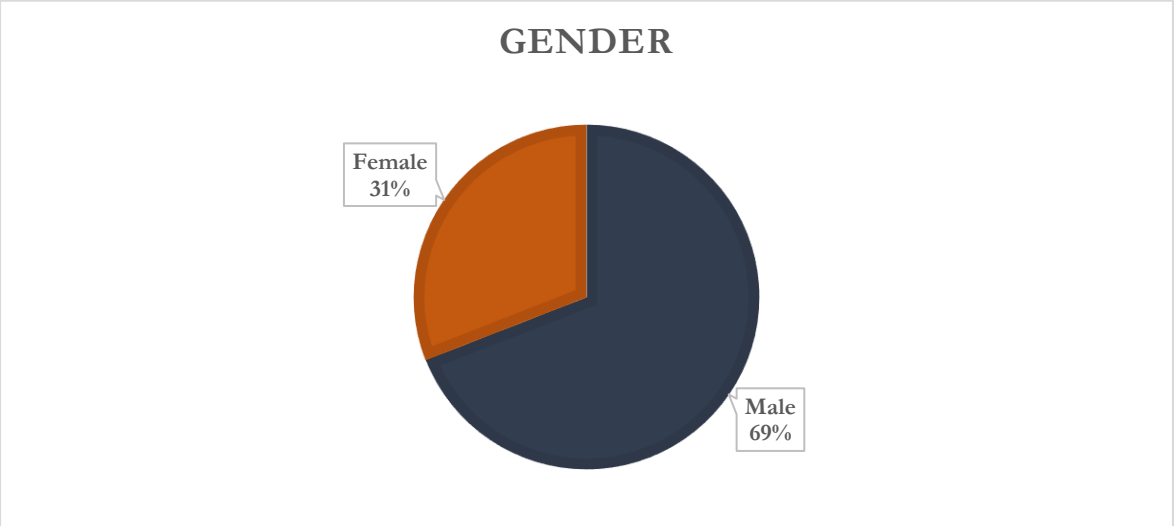

Fig 2: **Gender-wise Distribution of Students in the MEDHA Project**

Antenatal and Prenatal History Distribution among Students in the MedhaProject

The analysis of antenatal and prenatal histories among students enrolled in the Medha Project reveals notable insights into early risk factors associated with learning and developmental challenges. Antenatal complications were reported in 28.95% of the children, while 71.05% had no such issues. Common antenatal risk factors include maternal infections, hypertension, anaemia, medication exposure, and inadequate nutrition—all of which can adversely affect fetal brain development and are linked to cognitive delays, attention and behavioural issues, learning disabilities, and reduced academic resilience. These findings are consistent with global research, which suggests that early biological vulnerabilities can interact with environmental factors to contribute to conditions like scholastic backwardness, ADHD, and language processing difficulties.

Similarly, 13.16% of students had a history of prenatal complications, indicating exposure to potential risks during gestation such as teratogens (e.g., alcohol, tobacco), maternal illnesses, environmental stress, or malnutrition. While the percentage is lower than that of antenatal complications, prenatal risk factors are significantly associated with disrupted neural development, heightened risk for attention and learning problems, and difficulties in emotional regulation and executive functioning. Subtle prenatal stressors are known to impact critical brain regions such as the hippocampus and prefrontal cortex, which are essential for learning and memory.

These findings underscore the importance of incorporating detailed antenatal and prenatal history-taking into early developmental assessments. The Medha Project highlights the need for interdisciplinary collaboration among gynaecologists, paediatricians, mental health professionals, and educators to address early risk factors. Additionally, the data supports the inclusion of maternal health history in school-based mental health evaluations and emphasizes the role of prenatal counselling and early screening in promoting better academic and behavioural outcomes.

Developmental History of Enrolled Students

Among the students enrolled in the Medha Project, only 5.26% (8 children) had a reported history of developmental delays, while the vast majority of 94.74% (144 children) had no such history. This indicates that most children did not exhibit significant developmental concerns during early childhood, suggesting that learning difficulties in these cases may have emerged later or gone unnoticed in the early years.

Past Medical and Family History of Enrolled Students

In the Medha Project, 65.13% of the students (99 children) had a positive past medical history, indicating prior health issues that may be relevant to their current learning or behavioural challenges. In contrast, 34.87% had no significant medical background. Regarding family history, 28.95% of the children (44 students) had a positive family history of similar issues, while 71.05% reported no such background. These findings highlight the potential influence of both individual and familial health factors in the manifestation of learning difficulties.

Observation and Analysis of Diagnosed Cases

The Medha Project recorded a range of diagnoses among the enrolled students, with 69 children diagnosed solely with Learning Disability (LD), and 17 presenting with both LD and ADHD. Additional combinations included LD with hyperactivity (7 cases) and various forms of scholastic backwardness paired with other behavioural or neurological concerns. Specifically, 34 students exhibited scholastic backwardness with anger outbursts, 13 had developmental issues, 6 were associated with conduct disorder, 4 had epilepsy, while individual cases included Disruptive Mood

Dysregulation Disorder (DMDD) and Oppositional Defiant Disorder (ODD). These findings highlight the complex and overlapping nature of learning and behavioural challenges in the studied population.

Diagnosis	**Count**
LD	69
LD+ADHD	17
LD+Hyperactivity	7
Scholastic backwardness + Anger outburst	34
Scholastic backwardness Developmental Issues	13
Scholastic backwardness Epilepsy	4
Scholastic backwardness Conduct Disorder	6
Scholastic backwardness+DMDD	1
Scholastic backwardness ODD	1

Table 1: **Observation of Diagnosed Cases**

Statistical analysis

Visual Processing

The analysis showed a significant improvement in visual processing scores following treatment, with the mean score increasing from 11.05 to 12.55. The extremely small p-value (well below 0.05) indicates that this difference is highly statistically significant and unlikely to have occurred by chance. Additionally, the t-statistic of 16.07 greatly exceeds the critical t-value of 1.976, further confirming the reliability of the result. These findings provide strong evidence that the intervention led to a meaningful and statistically significant improvement in visual processing, as measured by the Cognitive Processing Inventory (CPI).

Auditory processing

The auditory processing scores showed a significant improvement, with the mean increasing by 1.47 points, from 10.80 to 12.27. The extremely small p-value ($p < 0.00000000000000000000000000000734$) confirms that the result is highly statistically significant. Additionally, the t-statistic of 14.30 far exceeds the critical value of 1.976, further supporting the finding. These results strongly indicate that the treatment led to a meaningful and statistically significant improvement in auditory processing, reflecting a positive impact on patients' auditory cognitive function.

Sequential processing

The mean score for sequential processing showed a significant increase, rising from 8.74 to 10.72. The p-value is effectively zero, confirming that the difference is highly statistically significant. Additionally, the absolute t-value of 24.75 is well above the critical value of 1.976, clearly indicating a true difference between pre- and post-treatment scores. These findings provide strong evidence that the intervention led to a substantial and statistically significant improvement in sequential processing, supporting its effectiveness in enhancing cognitive sequencing ability.

Conceptual Processing

The mean score for conceptual processing increased by approximately 1.64 points following treatment. The extremely low p-value indicates a highly statistically significant improvement. Furthermore, the absolute t-statistic of 17.77, which is much greater than the critical value, confirms the reliability of the result. These findings suggest that conceptual processing improved significantly post-treatment, demonstrating that the intervention had a meaningful impact on patients' ability to understand and organize complex information.

Processing speed

Participants' processing speed showed significant improvement after treatment, with a mean increase of approximately 1.71 points. The extremely small p-value confirms that this improvement is not due to chance. Additionally, the large absolute t-statistic of 16.82 further supports the strong reliability of the result. These findings indicate that the intervention effectively enhanced participants' cognitive speed and efficiency, leading to a meaningful improvement in processing speed.

Executive functioning

There was a very strong and significant improvement in performance after treatment, with a mean gain of 2.28 points, which is both clinically and statistically meaningful. The extremely low p-value confirms that this improvement is not due to chance. Additionally, the t-statistic of -28.35 is highly robust, further reinforcing the strength of the result. These findings suggest that the cognitive domain, likely related to Working Memory, showed the most significant improvement, indicating that the treatment was highly effective in enhancing core memory and attention functions.

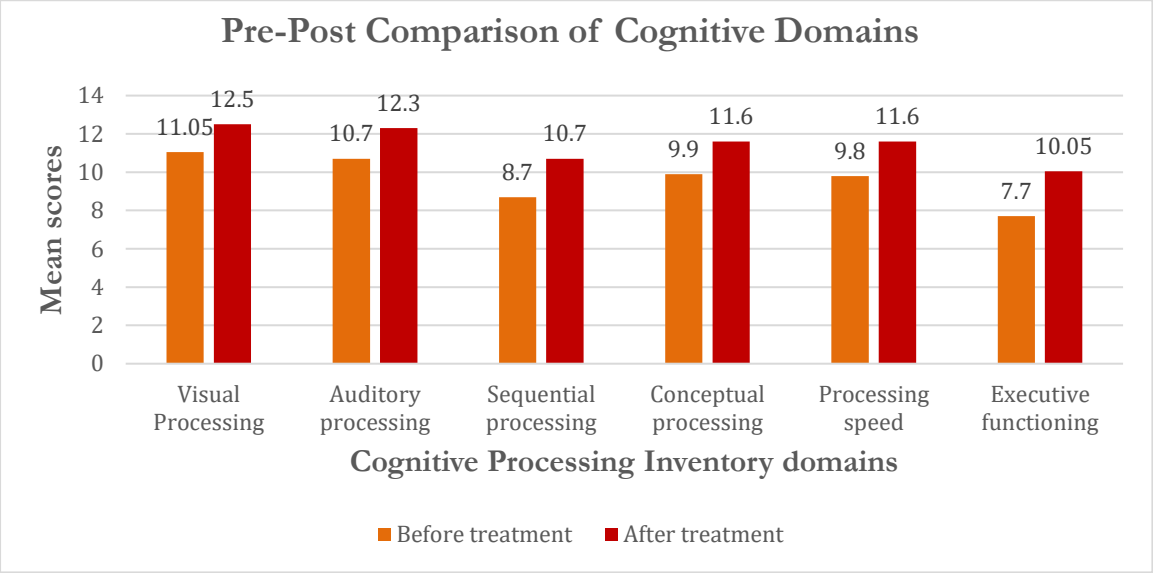

Fig3: Pre and Post Comparison of Cognitive domains

Overall Cognitive Performances

The total cognitive score showed a significant increase of approximately 10.63 points after treatment. The extremely small p-value indicates that this change is highly statistically significant. Additionally, the very high Pearson correlation (r = 0.898) suggests strong consistency in pre- and post-treatment scores across individuals. The t-statistic of -31.19 is exceptionally large, reflecting a very strong treatment effect. Overall, the analysis clearly demonstrates that the intervention had a profound and statistically significant positive impact on cognitive functioning across all measured domains. This confirms the treatment's effectiveness in enhancing various areas of cognitive processing, including visual, auditory, sequential, conceptual, processing speed, and working memory.

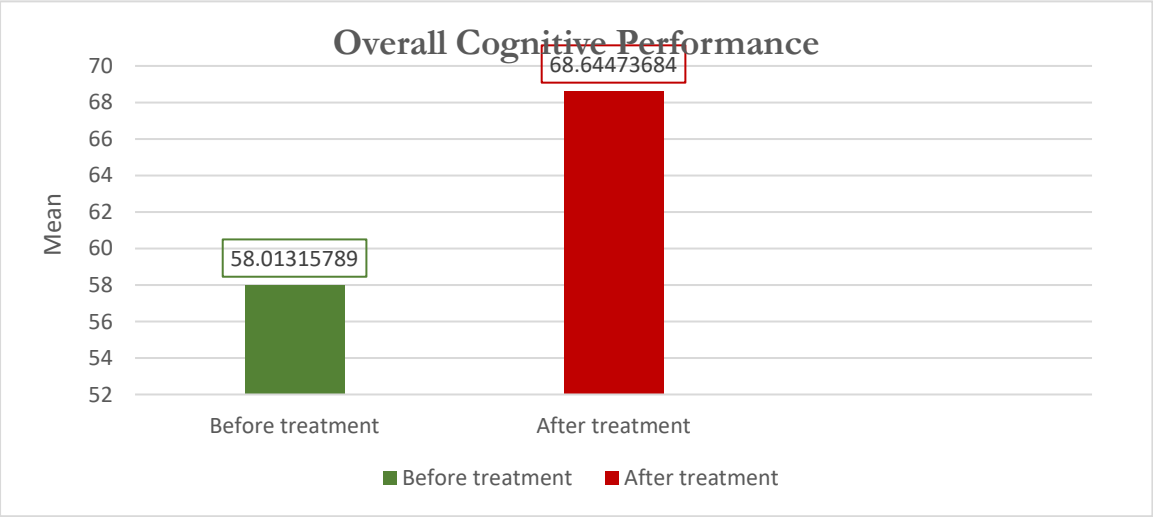

Fig 4: Overall Cognitive Performance

Feedback Summary and Functional Improvements Following Medha Project Interventions

The intervention program resulted in significant improvements across various domains of functioning in students diagnosed with diverse learning and behavioral challenges under the Medha project. Out of 152 students, diagnoses ranged from Specific Learning Disorders (SLD) to Scholastic Backwardness (SB) with co-occurring behavioral or neurological conditions. **Approximately 85% of students with SLD demonstrated increased interest in academics, better learning pace, and improved study duration**. **Among those with SLD co-occurring with ADHD or Hyperactivity, nearly 80% showed enhanced attention and classroom behavior. In cases of SB with anger outbursts or conduct disorders, over 70% exhibited reduced aggression, improved emotional regulation, and better peer interaction. Students with developmental issues, epilepsy, and other neurobehavioral conditions also reported better daily functioning, increased energy, and improved social participation. Overall, more than 75% of the total sample experienced general symptomatic improvements, including better appetite, enhanced physical health, and reduced screen time.** These findings underscore the effectiveness of integrated, multidisciplinary interventions in improving academic, behavioral, and emotional outcomes and highlight the need for continued support tailored to individual diagnoses.

Outreach Activities of the Medha Project

The Medha Project extended its impact through a series of outreach activities targeting students, parents, and educators. A total of 203 beneficiaries were covered through school-based screening camps. Counselling services reached 549 individuals, including both students and parents, while 254 received tele-counselling support. Awareness classes were attended by 185 participants, helping spread knowledge on learning and behavioural issues. Additionally, 165 students benefited from structured yoga training sessions aimed at improving focus and emotional regulation.

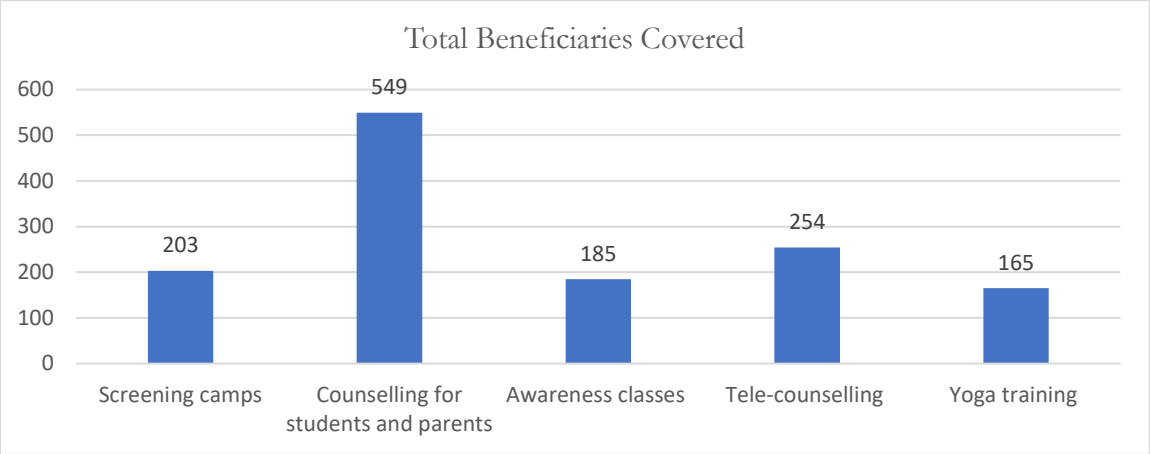

Fig 5: **Outreach Activities of the MedhaProject**

Success and Challenges of the Medha Project

The Medha Project demonstrated significant success in addressing diverse learning and behavioural challenges among schoolchildren through individualized support and structured interventions. With a focus on early identification and holistic strategies, the project reached 152 students across government schools, offering targeted therapeutic approaches including Ayurvedic medicine, yoga training, counselling, and diet modifications. The results revealed that a large majority of students showed marked improvements in core areas such as attention, emotional regulation, study habits, and general well-being. Over 75% of children with conditions such as Specific Learning Disorders (SLD), ADHD, and scholastic backwardness showed functional betterment, supported by consistent feedback from both parents and teachers.

However, the implementation of the project also revealed a set of challenges that need to be addressed in future phases. A significant barrier was the **lack of awareness among parents**, many of whom misinterpreted their children's struggles as laziness or defiance rather than neurodevelopmental issues. This often led to delayed diagnosis and inconsistent participation in interventions. **Social stigma** related to conditions like ADHD or learning disabilities further hindered acceptance and created emotional setbacks for affected students. **Insufficient teacher training** in identifying and managing behavioural and developmental issues also limited the effectiveness of classroom interventions. Furthermore, **limited time and resources** restricted the ability of facilitators to offer in-depth, individualized care to every student. **Inconsistent parental involvement** due to personal or work-related constraints further affected continuity in care and the reinforcement of strategies at home.

To overcome these obstacles, the project recommends the integration of regular awareness campaigns, teacher training modules, the establishment of school-based support units, structured parental guidance, individualized follow-up systems, and multi-disciplinary collaborations with healthcare providers. These steps can ensure broader reach, deeper impact, and long-term sustainability of interventions.

Conclusion

The Medha Project stands as a pioneering and impactful school-based initiative aimed at the identification and rehabilitation of children with learning and behavioural difficulties. By embedding support services directly within educational institutions, the project ensured accessibility and continuity of care for children often overlooked in mainstream systems. Clinical assessments and data analysis confirmed that the majority of students particularly those with SLD, ADHD, and co-occurring developmental concerns benefited significantly from the interventions. Improvements were seen across multiple domains, including attention span, classroom behaviour, learning pace, emotional control, and physical well-being.

Despite facing challenges such as limited parental awareness, stigma, and resource constraints, the project succeeded due to the dedication of its multidisciplinary team and the support of school authorities and proactive parents. It highlights the importance of inclusive education practices and the necessity of inter-sectoral collaboration among educators, mental health professionals, and families. Moving forward, insights from the Medha Project can inform policy-level changes and inspire replication in other regions. The project provides a clear roadmap for integrating mental health and learning support into school systems, ensuring that every child regardless of their challenges has the opportunity to learn, grow, and thrive.

Attention Deficit hyperactivity disorders

Ayurvedic Child and Adolescent Care Centre, Purakkattiri

Introduction

A C Shanmughadas Memorial Ayurvedic Child and Adolescent Care Centre (ACSMACACC), located in Thalakkulathur Grama Panchayat of Kozhikode district, is Kerala's first dedicated facility under the Indian Systems of Medicine for the specialized care of children and adolescents up to 20 years of age. Established with the objective of addressing both physical and mental health challenges in young individuals, the institution is operated by the Indian System of Medicine under the Kozhikode Zilla Panchayat, with support from the National Ayush Mission.

The hospital initially began as a paediatric outpatient (OP) unit in 2010 at the District Ayurveda Hospital. In 2013, the District Panchayat took over its operations and launched the 'Spandanam' project, which focuses on learning and behavioral issues in children in addition to general illnesses. By 2015, the facility was expanded into a full-fledged hospital in Purakkattiri, offering a 30-bed inpatient unit. The center provides treatment for a wide range of conditions, including autism, attention deficit hyperactivity disorder (ADHD), Down syndrome, cerebral palsy, intellectual disabilities, cognitive impairments, delayed developmental milestones, learning disabilities, and behavioral disorders.

In addition to Ayurvedic medication and Panchakarma therapy, the centre offers a range of supportive therapies, including psychological counselling, learning assessment and remedial training, physiotherapy, speech and language therapy, and clinical yoga. Beyond individualized treatments, the institution also conducts group therapy sessions, parental education programs, school-based remedial programs, and awareness classes to provide holistic care and support.

Further extending its reach, the centre operates nine sub-centres across the district under the "Spandanam" project, with the Spandanam team providing services at these locations once a week. The institution is dedicated to the early identification of physical, mental, behavioral, and social challenges in children, ensuring timely intervention and awareness. Its mission is to integrate children into society by equipping them with the necessary support while fostering effective communication with parents. By encouraging parents to recognize and address their children's challenges, the centre helps them actively participate in finding solutions. Over the years, the

institution has received numerous accolades for its impactful contributions to child and adolescent healthcare.

Attention Deficit Hyperactive disorder

Attention-deficit hyperactivity disorder (ADHD) is the most prevalent neurobehavioral disorder in childhood with a worldwide pooled prevalence of over 5 %(1). In India the prevalence of ADHD has been reported to be 1.6-17.9 % with a pooled prevalence of 7.1%(2). ADHD is responsible for 0.06% of total years lost to disability(YLDs) and 0.02% of total disability adjusted life years(DALYs)(3). The major components of this disorder are developmentally inappropriate levels of inattention and hyperactivity/impulsivity, which result in functional impairment in one or more areas of academic, social, and emotional function. Three major clinical subtypes of ADHD include Predominantly inattentive, predominantly hyperactive or a combination of these two subtypes. Children with ADHD also have a higher frequency of co-occurring learning, cognitive, language, motor, and mental health disorders. Similarly, children with developmental disorders have a higher risk of co-occurring ADHD(3).

Impact Assessment Report 2024-2025

This report evaluates the effectiveness of interventions for children with ADHD at ACSMACACC during the year 2024-2025. The assessment is based on changes in ADHD symptom rating scores before and after treatment, analysing the impact of Ayurvedic therapies and multidisciplinary supportive care.

Objectives

To assess the impact of the interventions for ADHD at ACSMACACC by analysing ADHD symptom rating scores calculated before and after intervention.

Methods

Case records of children diagnosed with ADHD based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) criteria who underwent inpatient treatment at ACSMACACC were analysed. Children received a combination of Ayurvedic treatments, including internal medications and external Panchakarma therapies, along with regular sessions with psychologists, occupational therapists, physiotherapists, and clinical yoga practitioners. Sessions of speech therapy and special education were recommended based on associated morbidities.

External Ayurvedic treatments included Abhyangam, Pratisaranam, Siro Pichu, Mathra Vasthi, Siro Lepam, and Nasyam, each prescribed based on the individual needs of the child.

Data Collection Tools

The study analysed eighteen case records of children diagnosed with ADHD based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) criteria who underwent inpatient treatment at the hospital between 2017 and 2019. The primary data source was clinical assessments, particularly the ADHD Symptom Rating Scale (SRS), measured before and after treatment to evaluate its impact.

The ADHD SRS includes individual scores for hyperactivity, impulsivity, and a total composite score. Each score corresponds to a percentile, classifying children into three risk categories: normal risk, at risk, and high risk. In addition to the SRS, clinical outcomes documented by attending clinicians were reviewed to further assess treatment effectiveness.

Results

Patient Demographics and Admission Details

The average age of children in the study was 8.5 years. Among them, 83% were male, and 17% were female (Fig 1). The average duration of inpatient treatment at the hospital was 42 days.

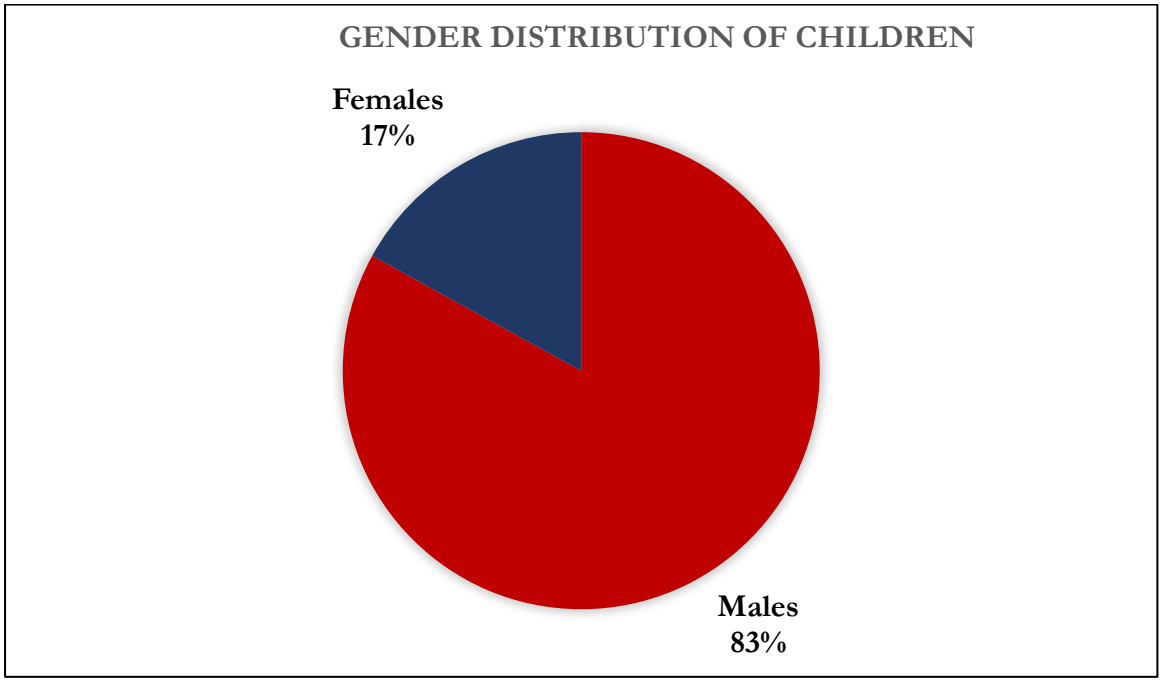

Fig 1: Gender distribution

Primary Symptoms and Associated Complaints

Restlessness and hyperactivity were the predominant symptoms observed in all children. Additionally, 94% of children experienced poor school performance as an associated complaint. Unclear speech was another common issue, present in 66% of the cases.

Impact of Treatment on ADHD Symptoms

The study found that 78% of children showed a reduction in hyperactivity and impulsivity scores by the end of the treatment period, whereas 22% experienced an increase in these scores. On average, the hyperactivity scores decreased by 9%, while impulsivity scores showed a 4% reduction (Fig 2& Fig 3). Furthermore, 77% of children demonstrated an overall improvement, as reflected in a decrease in their total ADHD symptom rating score, with an average reduction of 18% (Fig 4).

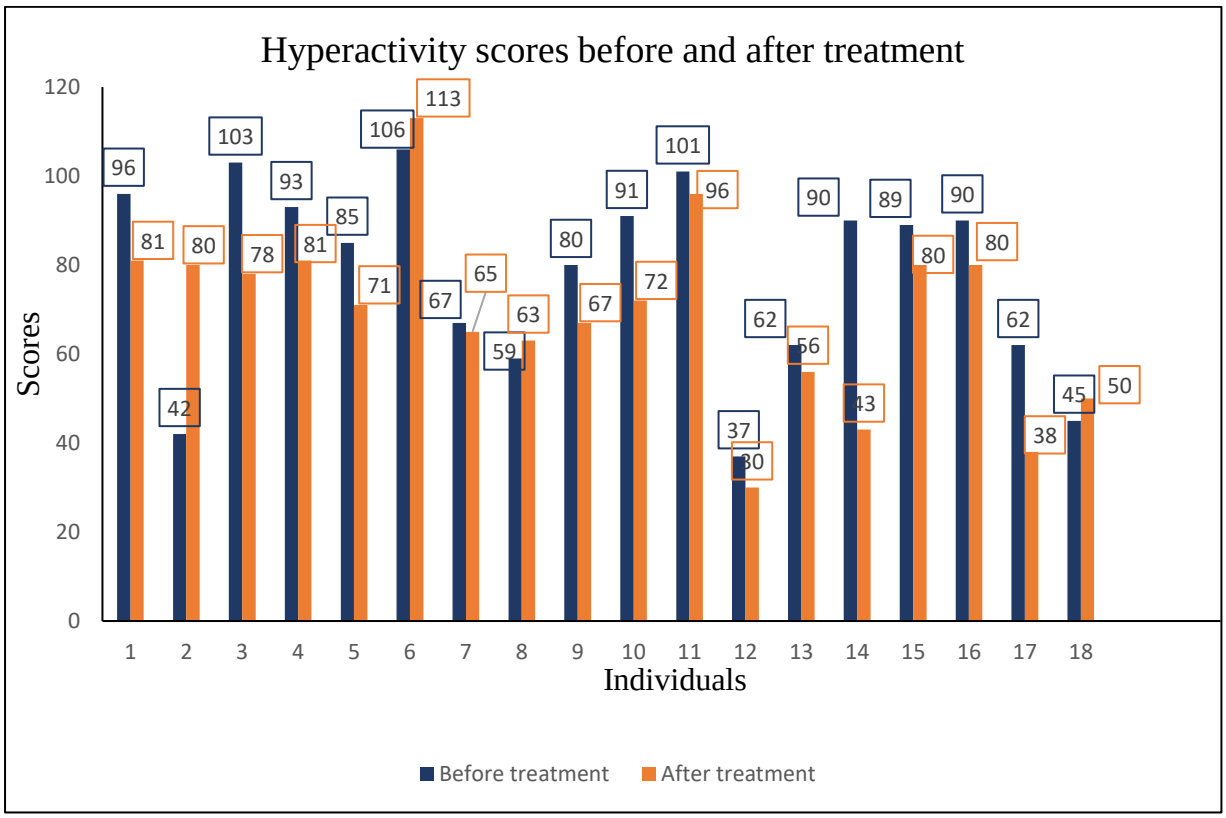

Fig 2: Hyperactivity scores before and after treatment

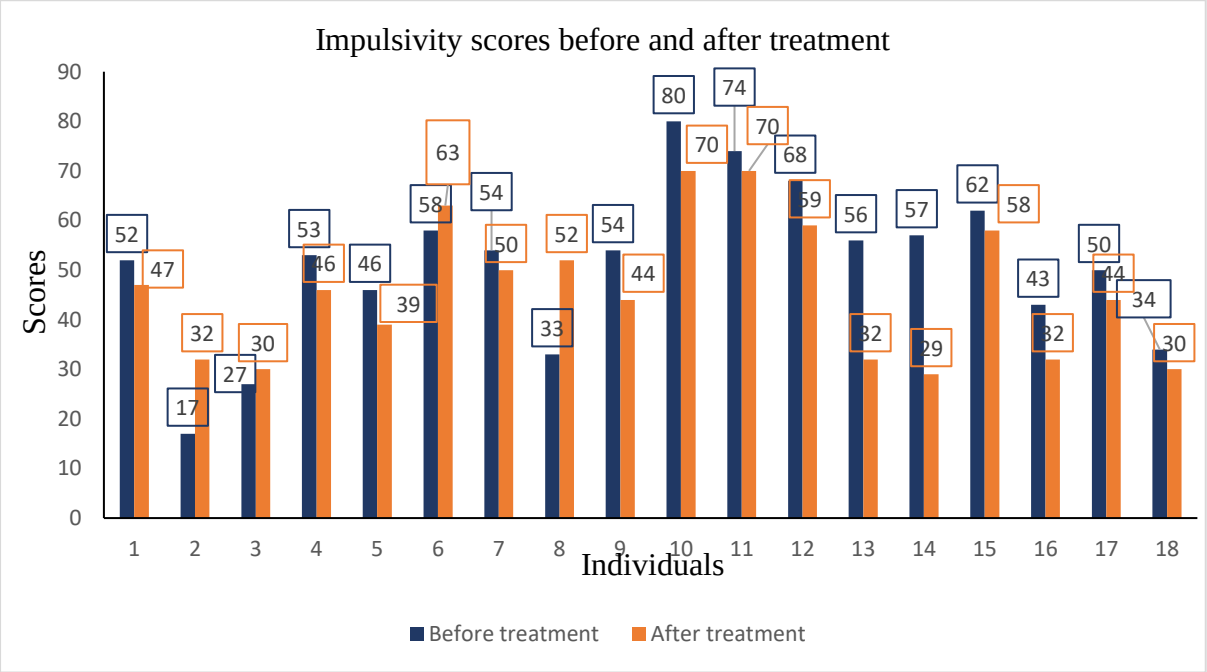

Fig 3: Impulsivity scores before and after treatment

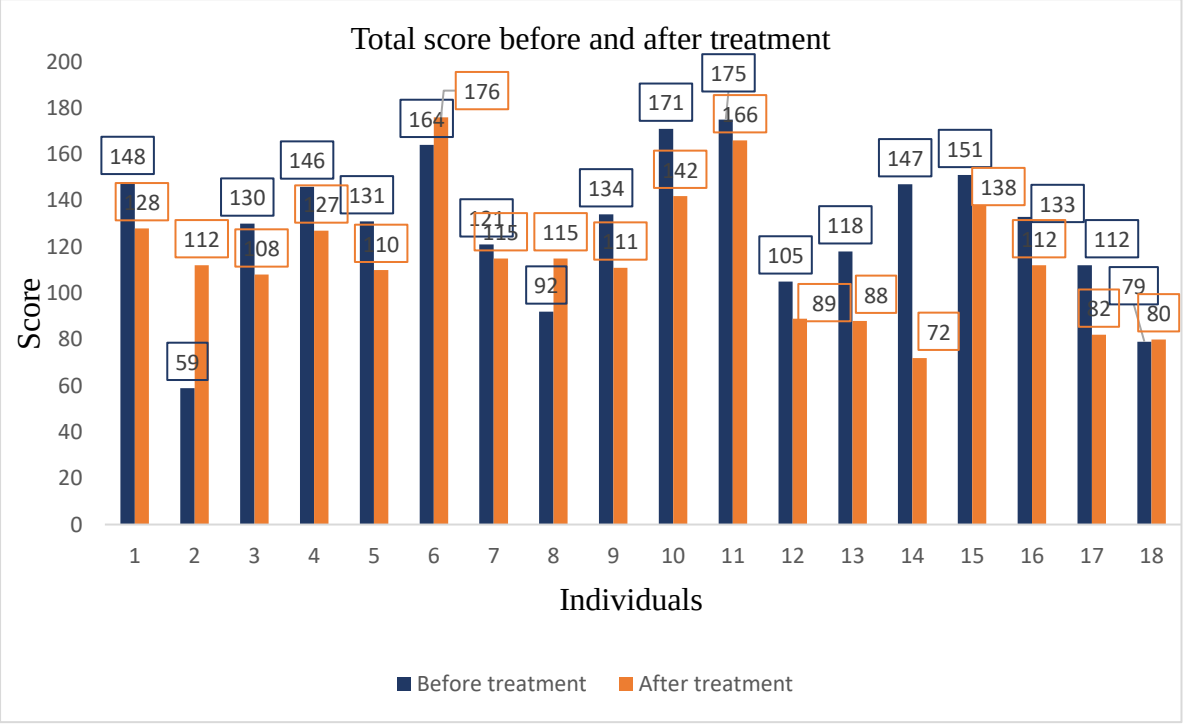

Fig 4: Total score before and after treatment

Improvements in Functional Abilities

Significant improvements were noted in various functional aspects of the children following treatment. About 75% of the children exhibited enhanced focus and better impulse control. Among those with unclear speech as an associated symptom, 90% showed improved speech clarity by the end of the treatment period. Additionally, a majority of children who initially struggled with poor sitting tolerance demonstrated a notable increase in their ability to remain seated for longer durations, indicating improved behavioral regulation and concentration.

Discussion

The findings of this study offer valuable insights into the effectiveness of hospital-based treatment for children with ADHD. Restlessness and hyperactivity were the primary symptoms observed in all children, aligning with the core diagnostic criteria for ADHD. Additionally, a significant proportion of children exhibited associated challenges such as poor school performance and unclear speech, indicating that ADHD often extends beyond hyperactivity and inattention to impact cognitive, academic, and communication skills.

Encouragingly, **78% of children experienced a reduction in their hyperactivity and impulsivity scores by the end of treatment, suggesting that the interventions were effective in managing these key symptoms. Although 22% of children showed an increase in their scores, the overall trend was positive, with an average reduction of 9% in hyperactivity and 4% in impulsivity.** While these reductions may appear modest, they represent meaningful progress in symptom management and behavioral regulation.

Furthermore, **77% of children demonstrated an overall reduction in their total ADHD scores, with an average decrease of 18%, indicating a broad-based improvement in symptom severity.** This positive trend was further reinforced by improvements in focus and impulse control, observed in 75% of the children. Enhanced self-regulation in these areas is particularly significant, as it contributes to better academic performance, social interactions, and overall daily functioning.

A particularly noteworthy outcome was the improvement in speech clarity among children with initially unclear speech. **By the end of treatment, 90% of these children exhibited better articulation and communication skills, highlighting the effectiveness of comprehensive ADHD management strategies that address coexisting speech difficulties**. Similarly, children with poor sitting tolerance showed significant improvement, reflecting better attentional control and self-regulation post-treatment.

Overall, these findings underscore the effectiveness of the transdisciplinary approach implemented at ACSMACACC, which integrates Ayurvedic treatment with psychological support, speech therapy, physiotherapy, clinical yoga, and special education. This holistic model has demonstrated substantial improvements not only in core ADHD symptoms but also in related cognitive, behavioral, and communicative challenges. The results emphasize the importance of early, structured, and intensive therapeutic interventions in enhancing the overall well-being and developmental outcomes of children with ADHD.

Recommendations

Implementing individualized treatment plans tailored to each child's specific comorbidities will enhance the effectiveness of ADHD management. Conducting regular parental training sessions will empower caregivers with the knowledge and strategies needed to provide continued support at home, thereby reinforcing and prolonging the benefits of the treatment. Additionally, ensuring consistent and long-term follow-up will be crucial in maintaining progress and achieving sustained improvements in symptom management and overall development.

Conclusion

The ADHD intervention model adopted at ACSMACACC has yielded positive outcomes for the majority of children, demonstrating significant reductions in core symptoms such as hyperactivity and impulsivity. Furthermore, notable improvements have been observed in associated challenges, including poor school performance and unclear speech. The holistic, multidisciplinary approach implemented at the hospital, integrating Ayurvedic treatment with supportive therapies, has shown considerable promise in managing neurobehavioral conditions. This comprehensive treatment framework not only addresses immediate concerns but also contributes to the long-term developmental well-being of children with ADHD.

AYURKARMA

Introduction

Ayurveda is not merely a system of medicine; it is a holistic way of life deeply embedded in the daily traditions and customs of people, particularly in rural areas. Unlike conventional medicine, Ayurveda emphasizes a comprehensive approach to well-being, integrating physical, mental, and spiritual health to achieve overall balance and vitality.

One of the most profound therapeutic practices in Ayurveda is Panchakarma, a specialized detoxification and rejuvenation therapy designed to restore equilibrium in the body. This treatment comprises five primary procedures: Vamana (emesis therapy), Virechana (purgation therapy), Nasyam (nasal therapy), Vasthi (medicated enema), and Rakthamoksham (bloodletting therapy). When performed after preparatory procedures known as Poorvakarma, these treatments play a crucial role in eliminating toxins, strengthening the immune system, and managing chronic ailments. Panchakarma is particularly beneficial for middle-aged and elderly individuals, helping them combat lifestyle disorders while enhancing their overall well-being.

Project Ayurkarma is a structured initiative designed to integrate Panchakarma treatments into Government Ayurveda Dispensaries across rural Kerala. By doing so, the project aims to bridge gaps in Ayurvedic healthcare and ensure that high-quality, holistic treatments are accessible to underserved populations.

The implementation of Project Ayurkarma follows a systematic approach, starting with targeted patient assessments to identify those who would benefit most from Panchakarma therapies. Once identified, specialized Panchakarma units are established within government dispensaries, equipped with modern infrastructure, trained professionals, and essential resources to deliver effective treatments.

To maintain high standards of care, the project emphasizes capacity building by conducting training programs for Ayurvedic practitioners and healthcare providers. Additionally, community outreach initiatives play a key role in educating the public about Panchakarma's benefits and encouraging wider participation. To ensure continuous improvement, rigorous monitoring and evaluation mechanisms are in place to assess the effectiveness of treatments and optimize service delivery.

Aim of Project Ayurkarma

The core objective of Project Ayurkarma is to integrate Panchakarma therapies into Government Ayurveda Dispensaries in rural Kerala, ensuring that underprivileged communities have access to comprehensive Ayurvedic treatments. The project is committed to addressing healthcare disparities within the Ayurvedic public healthcare system, making holistic wellness more inclusive and accessible.

Objectives

- To bridge the gap in Ayurvedic healthcare services in rural areas by offering Panchakarma treatments, including the essential kriya kramas, at Government Ayurveda Dispensaries.
- To improve the quality of life and overall well-being of patients, particularly the economically disadvantaged, by providing holistic healthcare through Panchakarma therapies.
- To enhance the social relevance of Ayurveda institutions by expanding their range of services.

Operational Status and Patient Trends

All 26 Ayurkarma units are currently fully operational, with monthly patient data systematically collected and analyzed based on diagnosis, gender, and age. This data offers valuable insights into patient demographics and treatment trends, helping to assess the initiative's reach and effectiveness.

Recent reports indicate a steady increase in the number of beneficiaries accessing Ayurkarma services. Month after month, patient participation has shown a significant rise, reflecting growing community awareness and trust in the efficacy of outpatient-based Panchakarma treatments. This upward trend highlights the project's success in making holistic Ayurvedic therapies more accessible to the public.

Project Ayurkarma primarily caters to individuals suffering from chronic and lifestyle-related conditions. The most commonly treated ailments include arthritis and joint pain, neurological disorders such as paraplegia and hemiplegia resulting from cerebrovascular diseases (CVDs), digestive issues, respiratory ailments, and stress- and anxiety-related disorders. The increasing

demand for these treatments underscores the initiative's relevance in addressing prevalent health concerns through Ayurveda, reinforcing its role as a transformative force in public healthcare.

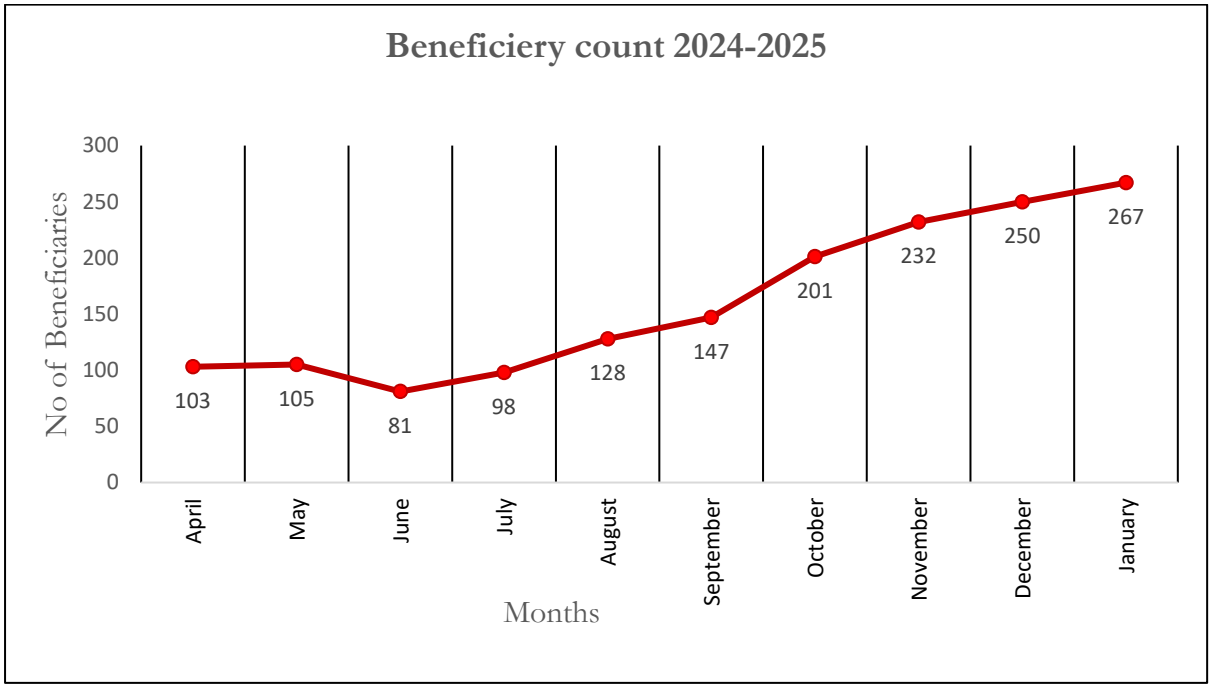

Fig 1: Ayurkarma beneficiary data over months

Evaluating the Impact of Project Ayurkarma

Assessment of Effectiveness and Accessibility

The evaluation of Project Ayurkarma aims to analyze its strengths, measure its overall effectiveness, and identify areas for improvement. By expanding the scope of Government Ayurveda Dispensaries, the project enhances the social relevance of Ayurveda while ensuring that high-quality Panchakarma therapies are accessible to rural communities. Through continuous refinement and development, Project Ayurkarma is set to become a model for integrated Ayurvedic healthcare in Kerala. By improving service accessibility, treatment effectiveness, and overall patient experience, the initiative plays a significant role in enhancing public healthcare and reinforcing Ayurveda as a key component of holistic well-being. This report presents a comprehensive evaluation of Project Ayurkarma for the financial year 2024-2025. The assessment was conducted using structured patient feedback forms designed to gather valuable insights into treatment effectiveness, patient satisfaction, service quality, interactions with healthcare staff, and hygiene standards.

Methodology

A structured assessment was conducted across 26 operational Ayurkarma units in different districts of Kerala, where Outpatient (OP)-based Panchakarma treatments are provided. Patient feedback forms were distributed to 84 beneficiaries receiving treatments at these dispensaries, offering a detailed perspective on the quality, accessibility, and effectiveness of the project. The assessment focused on various key parameters, including patient demographics, overall satisfaction levels, effectiveness of treatments, affordability and cost considerations, as well as the willingness of patients to recommend and return for further treatment. The collected data was systematically analysed using both quantitative and qualitative insights, providing a clear understanding of Project Ayurkarma's impact. These findings serve as a foundation for future improvements and expansion, ensuring that Panchakarma therapies remain a vital and accessible part of Kerala's public healthcare system.

Demographic Overview

The demographic details of patients, including gender distribution, age groups, and educational background, were gathered as part of the survey to assess the reach and inclusivity of Project Ayurkarma. The analysis revealed that 68% of the total respondents were female, while 32% were male (Fig 1). This indicates a higher participation of female patients in the program, suggesting that women are significantly benefiting from the initiative.

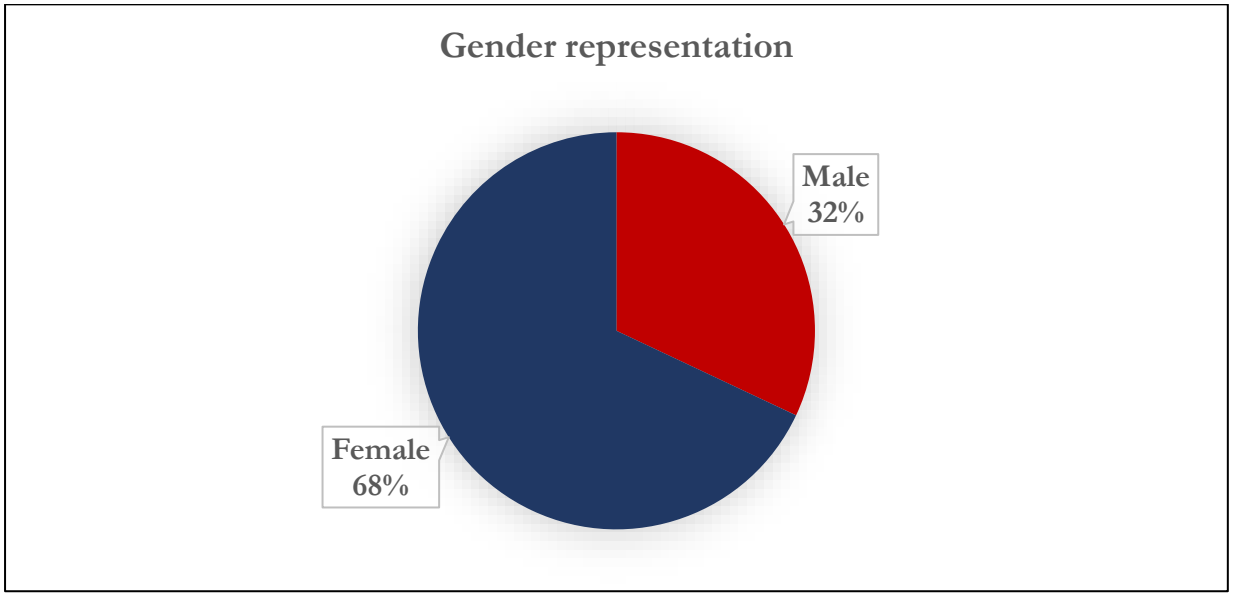

Fig 2: Gender representation of Ayurkarma beneficiaries

Educational Background of Beneficiaries

The survey results highlight that while a significant portion of beneficiaries have only a primary education level, individuals across all educational backgrounds are availing themselves of the benefits of the Ayurkarma project (Fig 2). This widespread acceptance underscores the initiative's ability to reach a diverse population, ensuring that Ayurvedic treatments remain accessible regardless of educational status.

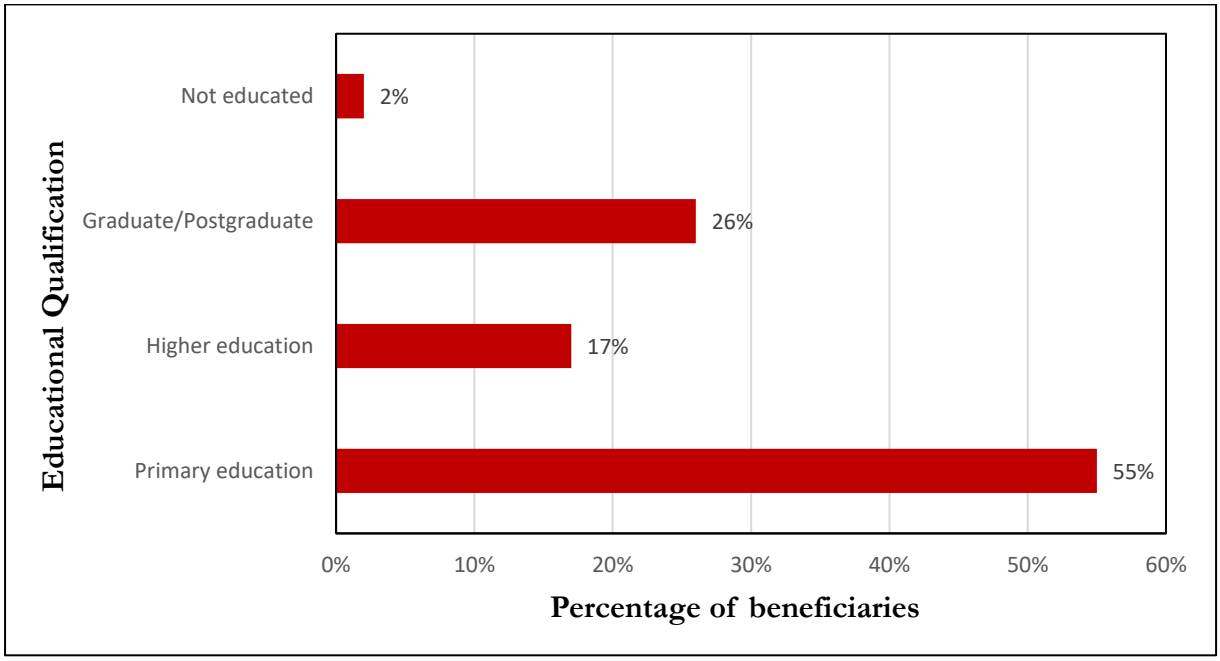

Fig 3: Educational status of beneficiaries of Ayurkarma project

Age-Wise Distribution of Patients

An analysis of the age distribution of beneficiaries shows that the majority belong to the 17-60 age group, demonstrating the project's popularity among the working-age population. Additionally, a considerable number of elderly patients (above 60 years) are utilizing Panchakarma treatments, reinforcing the initiative's significance for senior citizens. However, participation from younger patients (below 17 years) remains notably low, with only one recorded beneficiary (Fig 3).

This demographic distribution suggests that Project Ayurkarma is widely accepted across different age groups, particularly among adults and the elderly. The findings highlight the project's effectiveness in providing holistic healthcare solutions, especially for individuals in their prime working years and senior citizens seeking rejuvenation and relief from chronic ailments.

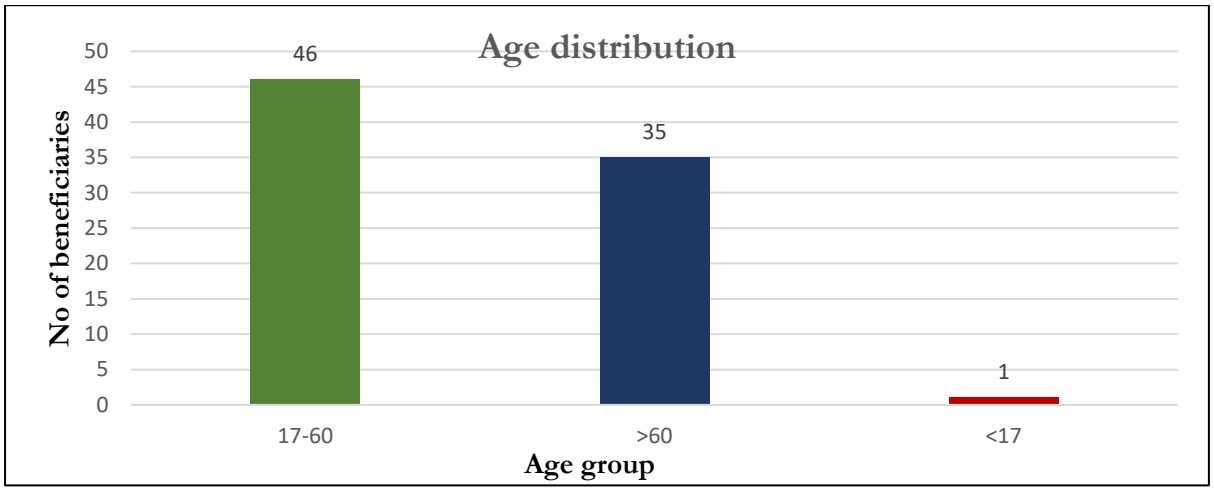

Fig 4: Age distribution of patients benefitting from *Ayurkarma* Project

Patient Experience and Satisfaction

Patient satisfaction is a crucial measure of the success of the Ayurkarma project, and feedback from beneficiaries highlights a highly positive response. One key aspect assessed was the clarity of treatment explanations provided by medical staff. The majority of respondents found the explanations to be highly satisfactory, reflecting the project's strong emphasis on effective communication and transparency in treatment procedures. This clear and informative approach helps patients feel well-informed about their therapies, enhancing their confidence and trust in the Ayurkarma initiative.

Another significant factor contributing to overall satisfaction is the behavior of doctors and medical staff. The majority of respondents reported respectful and professional interactions, reinforcing the positive reputation of the Ayurkarma healthcare team. The compassionate, patient-centric approach of the staff has played a pivotal role in ensuring a supportive healing environment.

Additionally, hygiene and cleanliness standards were highly rated by patients, with treatment rooms and facilities receiving positive feedback. Proper sanitation and well-maintained infrastructure contribute to patient comfort and safety, reflecting the project's strong commitment to maintaining a high-quality healthcare experience.

Overall, the survey revealed that 69% of patients were "Very Satisfied," 29% were "Satisfied," and only 2% expressed dissatisfaction. These findings affirm that Ayurkarma is not only effective in delivering quality Ayurvedic treatment but also excels in providing a hygienic, patient-friendly, and professionally managed healthcare environment.

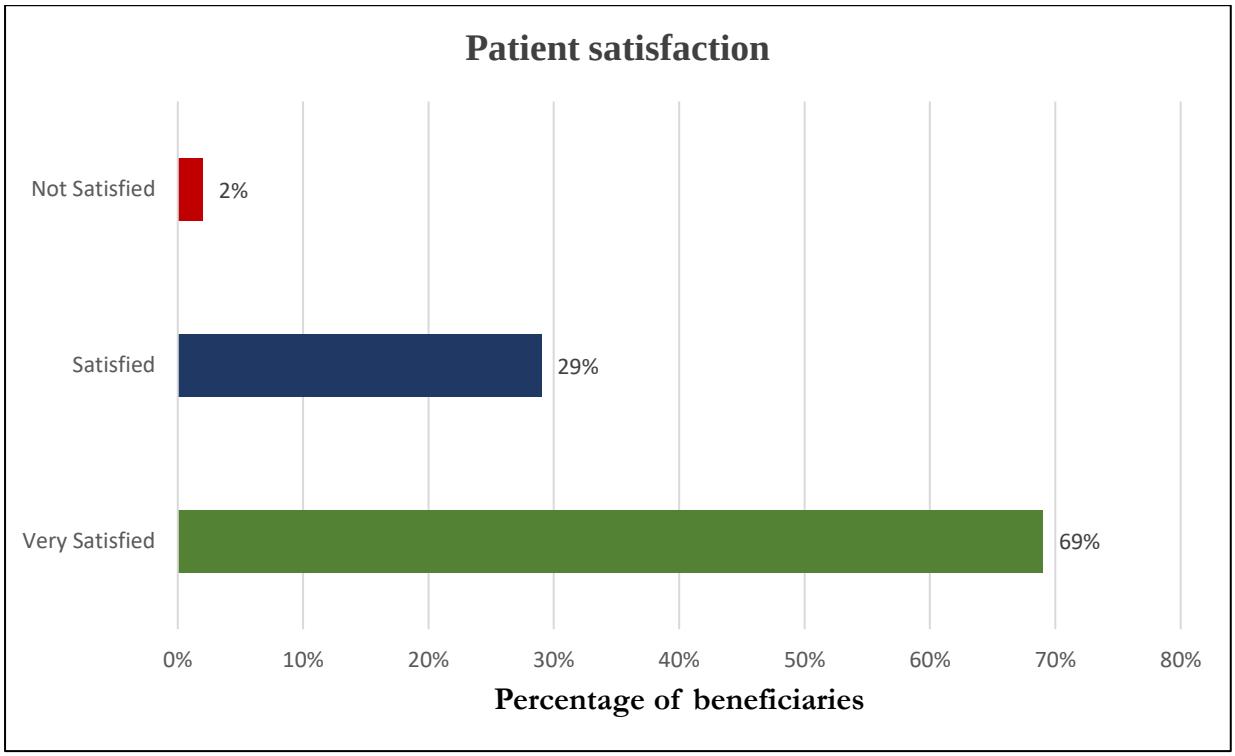

Fig 5: Patient Satisfaction

Patient Perception of Treatment Effectiveness with Ayurkarma

The effectiveness of Ayurkarma's treatments is evident in the high levels of patient satisfaction reported in the survey. A majority of patients expressed being highly satisfied with their treatment experience, while a smaller percentage reported moderate satisfaction, and only a minimal number were dissatisfied.

A key indicator of trust in the treatment process is patients' willingness to return for further care. Notably, all respondents who addressed this question expressed their intention to continue seeking treatment under the Ayurkarma project, demonstrating strong confidence in the facility. Similarly, every respondent stated they would recommend Ayurkarma's treatment services to family and friends, further reinforcing the program's positive impact and the high quality of care provided.

The survey also provided insights into treatment duration. More than half of the patients required treatment for one to two weeks, while a significant portion completed their treatment within a week. Only a small percentage needed extended treatment beyond two weeks, primarily due to the severity of their condition. These findings highlight Ayurkarma's commitment to personalized, patient-centric care, ensuring that treatment plans are tailored to individual health needs for optimal effectiveness.

Affordability and Financial Considerations of Ayurkarma Treatments

The cost of treatment was a key factor assessed in the patient survey, with results indicating that expenses varied based on the type and duration of care received. However, the majority of respondents found the costs to be reasonable in relation to the quality of services provided, underscoring Ayurkarma's success in offering high-quality treatment while maintaining affordability.

The survey further revealed that daily medication expenses were the primary cost concern for most patients, followed by transportation costs. Additionally, a significant portion of patients reported that their per-day treatment expenses remained below 300 rupees, while a smaller percentage spent above this amount. These findings highlight the financial considerations associated with treatment and reinforce the need for cost-effective healthcare solutions to ensure continued accessibility for all patients.

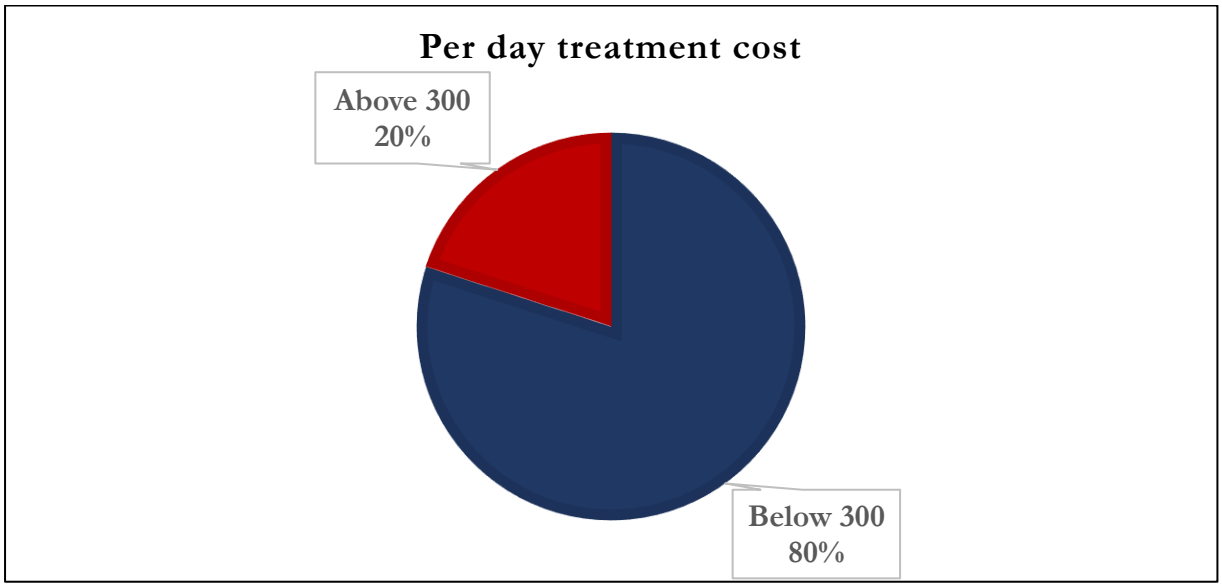

Fig 6: Per day treatment cost for patients of Ayurkarma project

Evaluation and Recommendations

The assessment of the Ayurkarma project for the financial year 2024-2025 reaffirms its effectiveness in delivering high-quality Ayurvedic treatments, ensuring patient satisfaction, and maintaining affordability. The project's key strengths include transparent communication, compassionate and professional healthcare staff, well-maintained facilities, and a strong sense of trust among patients.

To further enhance its impact, several improvements are recommended. Strengthening patient education and communication will help beneficiaries better understand their treatment plans,

leading to improved adherence and health outcomes. Additionally, maintaining high standards of hygiene and continuously upgrading infrastructure will ensure sustained patient satisfaction. Regular follow-ups and proactive feedback collection will also be crucial in identifying evolving healthcare needs and enhancing patient engagement. By implementing these measures, Ayurkarma can continue to expand its reach and effectiveness, further establishing itself as a cornerstone of accessible and holistic Ayurvedic healthcare.

AROGYANOUKA Floating dispensary

Introduction

Arogyanouka is an innovative healthcare initiative launched under the National AYUSH Mission specifically designed to provide accessible and affordable Ayurveda-based healthcare to communities residing in the water-locked regions of Alappuzha district. The initiative is a floating dispensary that caters to patients in remote villages where transportation constraints and geographical isolation make it difficult for residents to access conventional healthcare facilities.

The Alappuzha district is characterized by a unique topography consisting of a sandy strip of land interspersed with numerous canals, rivers, and lagoons. The region includes areas like Karthikapally, Ambalapuzha, Kuttanad, and Cherthala, where over 80% of the landmass falls within the coastal belt, while the rest consists of midland regions. A substantial portion of the population inhabits the Kuttanad region, which lies below sea level and is heavily reliant on backwaters and paddy fields for livelihood. This region is prone to frequent flooding, making it susceptible to both communicable and non-communicable diseases due to stagnant water, poor sanitation, and limited medical facilities.

Recognizing these challenges, the Health Service Department and Homeopathy Department initially introduced a floating dispensary project to address the growing healthcare needs of the population. However, due to overwhelming public demand, the National AYUSH Mission incorporated Arogyanouka into the State Annual Action Plan (SAAP) 2017-2018, giving rise to the current floating dispensary service.

Scope and Service Delivery

The Arogyanouka initiative is designed to provide regular and uninterrupted healthcare services to the rural communities residing in the four grama panchayats of Kainakari, Nedumudi, Champakkulam, and Pulinkunnu, as well as the municipality of Alappuzha. Given the region's challenging geography, where transportation to mainland healthcare centers is limited, the initiative employs a motorized floating dispensary as a mobile medical unit. This dispensary travels across designated locations on a bi-weekly basis, ensuring that essential medical care, disease management, and follow-up treatments are consistently delivered to the local population.

The floating dispensary primarily focuses on providing primary healthcare services, including screening and management of infectious and lifestyle diseases. Special emphasis is placed on geriatric care, addressing the needs of elderly patients who suffer from chronic ailments. Additionally, the initiative extends palliative care services to bedridden and terminally ill patients,

ensuring that they receive continuous medical support within their communities. Recognizing the occupational health risks associated with agriculture and fishing—the predominant livelihoods in the region—Arogyanouka also provides treatment for work-related ailments and injuries.

The dispensary follows a structured schedule, visiting each consultation point twice a month. Operating from Monday to Saturday between 9 a.m. and 2 p.m., the mobile unit ensures that healthcare remains accessible and systematic. The medical team consists of a qualified Ayurveda medical officer and a multipurpose healthcare worker, who work together to conduct consultations and distribute prescribed medications. Through this well-coordinated service delivery model, Arogyanouka continues to bridge the healthcare gap for the water-locked communities of Alappuzha, offering a sustainable and effective solution to their medical needs.

Patient Statistics and Utilization Trends

Arogyanouka has experienced a steady increase in patient footfall over the years, underscoring its growing acceptance and effectiveness among the local communities. The patient statistics for three consecutive years reveal a significant rise in healthcare utilization. In the year 2022-2023, a total of 11,300 patients were treated, with an average of 1,027 patients per month. This number saw a sharp increase in 2023-2024, where the total patient count rose to 14,152, reflecting a monthly average of 1,286 patients. The ongoing year 2024-2025 continues this upward trend, with the total patient count surpassing 15,223 so far, maintaining an average of over 1,268 patients per month. This steady increase indicates the growing reliance on Arogyanouka's services and the trust placed in Ayurveda-based healthcare by the community.

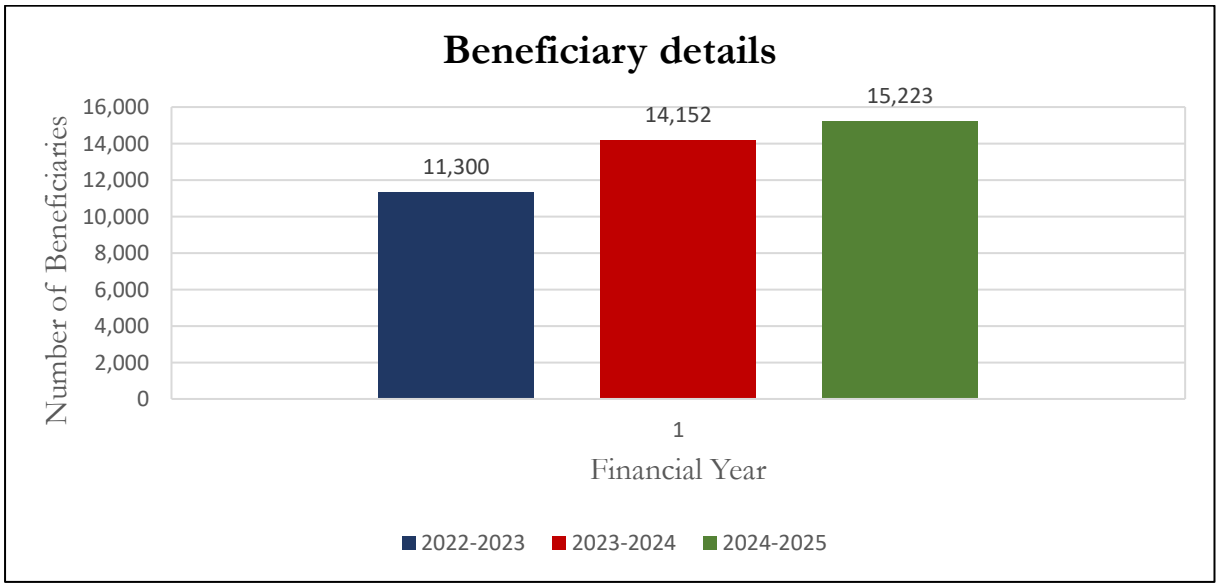

Fig 1: Beneficiary Data of Arogyanouka Over the last Three Years

Gender and Age-Wise Utilization Trends

An analysis of patient demographics reveals that approximately 60% of the beneficiaries are female, suggesting that women in the region actively seek Ayurveda-based healthcare solutions. The largest proportion of patients falls within the 16-60 years and above-60 years age groups, reflecting a high demand for chronic disease management and elderly care services. Additionally, there has been a noticeable increase in pediatric cases, particularly among children under 16 years of age. These cases often involve parasitic infections, malnutrition, and seasonal diseases, highlighting the need for targeted interventions to address child health concerns. The rising trend in healthcare utilization across all age groups reaffirms the importance of Arogyanouka in delivering essential medical services to the underserved populations of Alappuzha.

Aim of the Study

The primary objective of this to evaluate the impact of the Arogyanouka initiative on the healthcare accessibility and well-being of the water-locked communities in Alappuzha. By assessing the availability, utilization, and effectiveness of Ayurveda-based healthcare services, the study aims to understand how the program has contributed to disease management, preventive care, and overall community health.

Additionally, the study seeks to identify the strengths and challenges of the initiative by analyzing patient demographics, healthcare trends, and service delivery efficiency. Through qualitative and quantitative assessments, it aims to provide insights into the program's sustainability and areas that require further enhancement.

Methodology

Both quantitative and qualitative data were gathered to comprehensively assess the availability, accessibility, and utilization of the Arogyanouka healthcare initiative. The study covered all thirty service delivery points of Arogyanouka to ensure a thorough representation of the program's reach and impact. The selected study area included four grama panchayat -Kainakari, Nedumudi, Champakkulam, and Pulinkunnu as well as the municipality of Alappuzha in Alappuzha district.

Sampling and Data Collection

To ensure a representative sample, ten beneficiaries were randomly selected from each of the thirty service delivery points, resulting in a total sample size of 300 beneficiaries. A structured questionnaire was used to collect relevant information from the selected individuals. Additionally,

in-depth interviews were conducted with the beneficiaries to gain insights into the program's functioning and areas for improvement.

Selection Criteria of Beneficiaries

The survey included beneficiaries who were 18 years of age and above and had completed a minimum of three visits to Arogyanouka. This approach ensured that the responses were gathered from individuals with substantial experience with the program, allowing for more accurate and meaningful insights into its effectiveness. By selecting participants who had engaged with the healthcare services multiple times, the study was able to assess the impact of the initiative more comprehensively, capturing the beneficiaries' experiences, satisfaction levels, and perceived improvements in their health conditions.

Sociodemographic Characteristics of Respondents

The survey revealed that the majority of the beneficiaries were female, comprising **83%** of the total respondents, while males accounted for **17%**. In terms of educational qualifications, **36.67%** of respondents had completed primary education and an equal percentage had pursued secondary education. A smaller proportion, **15.33%**, had completed higher secondary education, whereas **4.67%** of the beneficiaries had no formal education.

Regarding religious demographics, **67%** of the respondents identified as Hindu, while **19%** were Christian, and **14%** were Muslim. The occupational distribution showed that **30.33%** of the beneficiaries are skilled workers in agriculture and fisheries, reflecting the primary economic activities of the region. Elementary occupations accounted for **30%**, while **9%** of respondents were involved in craft and related trade work. **26.67%** of the beneficiaries were unemployed, and a minimal proportion only **4%** include government employees and other office workers.

These sociodemographic insights provide a deeper understanding of the population served by Arogyanouka, highlighting the importance of accessible healthcare services for communities with limited formal education and employment opportunities. The detailed demographic characteristics of participants are summarized in **Table 1**:

Variables	Total	Percentage
Sex		
Male	51	17
Female	249	83
Educational qualifications		

Illiterate	14	4.67
Primary	110	36.67
Secondary	110	36.67
Higher secondary	46	15.33
Higher education	20	6.67
Religion		
Hindu	201	67
Christain	57	19
Muslim	42	14
Occupation		
Unemployed	80	26.67
Elementary occupation	90	30
Craft and related trade workers	27	9
Skilled workers in Agriculture and Fisheries	91	30.33
Others (Government and other office workers)	12	4

Table 1: Demographic Characteristics of Respondents.

Patient Satisfaction at Arogyanauka Floating Dispensary

A recent survey among beneficiaries of the Arogyanauka floating dispensary revealed an outstanding **99.67% patient satisfaction rate**, highlighting the effectiveness of its healthcare services. Patients expressed high levels of appreciation for the dispensary's commitment to accessible, compassionate, and quality medical care.

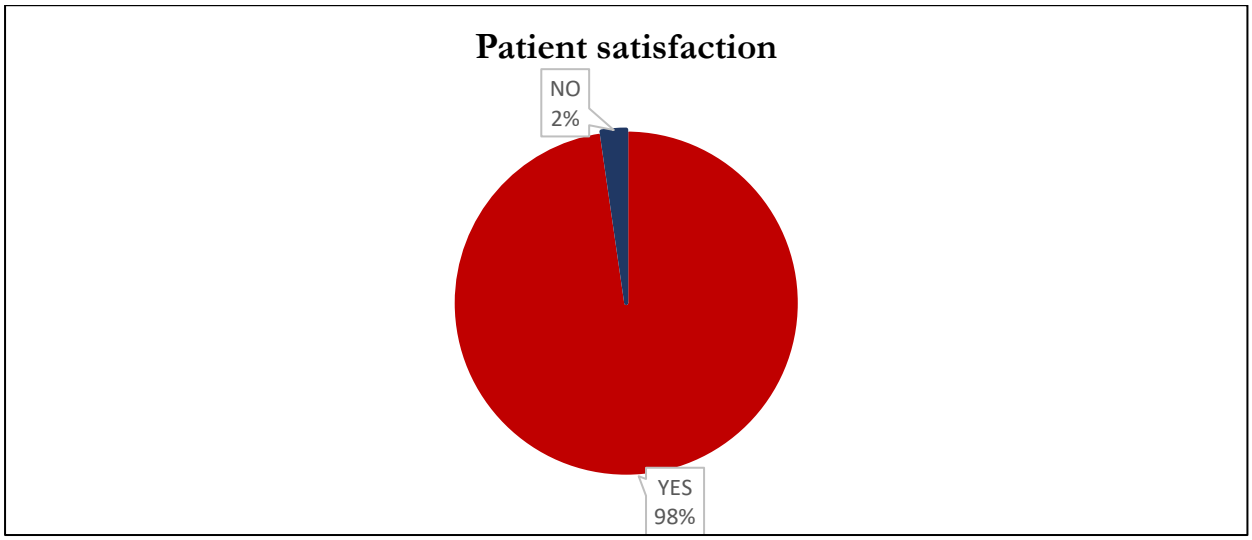

Fig 2: Patient Satisfaction of Arogyanouka Floating Dispensary

Empathetic and Patient-Centered Interaction

The interaction between the medical staff and patients was a key factor in patient satisfaction**. 85% of respondents stated that the staff spent sufficient time with them, allowing for detailed discussions about their health concerns**. Additionally, **60% of patients** shared that they felt comfortable discussing personal issues with the medical officers, leading to sessions that often extended into counseling, offering emotional support alongside medical treatment.

Clear Communication and Health Education

Effective communication by the healthcare team has played a crucial role in ensuring patient well-being. **90% of beneficiaries** appreciated the clear explanations provided on medication usage, dietary habits, and hygiene practices. Furthermore, **78% of patients** noted that the staff exhibited a high level of empathy, making them feel comfortable and cared for.

Preventive Healthcare Awareness

Beyond treatment, *Arogyanauka* actively promotes preventive healthcare. **71% of patients** confirmed that they received awareness sessions on the prevention of communicable and non-communicable diseases. These educational efforts empower patients with knowledge, improving overall community health.

The overwhelmingly positive feedback underscores Arogyanauka's vital role in delivering not just medical care but also emotional support, health education, and preventive healthcare, ensuring the well-being of the communities it serves.

Advance Notification and Timely Service of 'Arogyanauka'

A survey among beneficiaries revealed that 92.8% of respondents receive advance notifications about Arogyanouka's visit to their location. Additionally, an impressive **98%** confirmed that the floating dispensary consistently arrives on all pre-scheduled days at the designated time and location without any delays. During interviews, **80%** of beneficiaries stated that they receive notifications in advance from their Local Self-Government (LSG) members, while **3%** reported that they personally contact Arogyanouka staff to confirm the date and time of the visit. Meanwhile, **23%** of the beneficiaries mentioned that they do not require notifications since the schedule remains fixed. Furthermore, **100%** of respondents affirmed that Arogyanouka consistently maintains the same time and spot for every visit, ensuring reliability and accessibility for all beneficiaries.

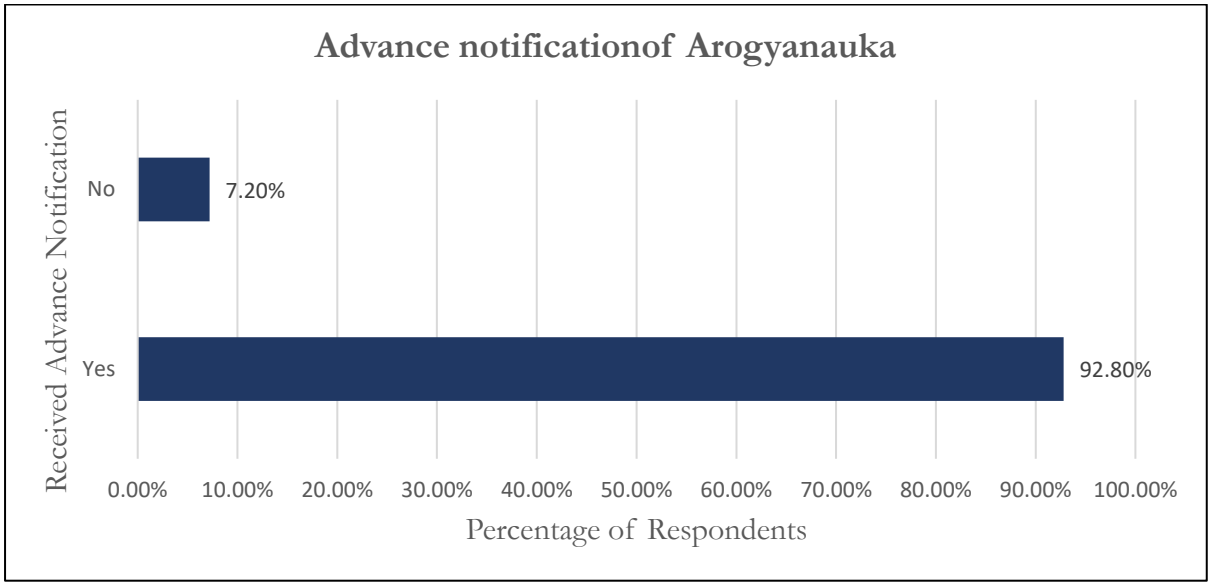

Fig 3: Advance Notification of Arogyanauka

Need for Extension of Consultation Hours

A survey revealed that 84.67% of beneficiaries believe that the consultation hours of Arogyanouka should be extended to accommodate more patients. During interviews, **19%** of respondents expressed that the time allocated for each consultation is insufficient, as they require more interaction with the medical officer. A significant portion of beneficiaries, primarily those engaged in agriculture, daily wage labour, and fisheries, reported that Arogyanouka visiting hours coincide with their working hours, often forcing them to miss work in order to seek medical

consultation. This highlights the need for flexible scheduling or extended service hours to ensure better accessibility for all beneficiaries

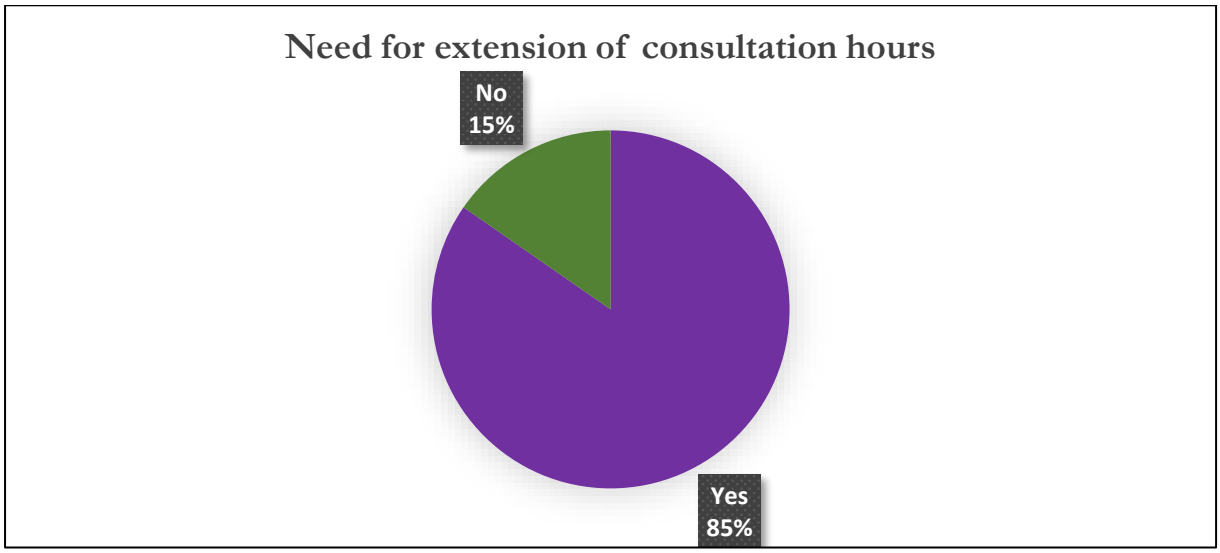

Fig 4: Patient need for extension of consultation hours

Impact of Arogyanouka on Healthcare Accessibility

A survey revealed that 93% of beneficiaries experienced an improvement in their health-seeking behavior with the arrival of Arogyanouka. Additionally, **98%** reported never facing a shortage of medicines. Before its introduction, **79%** of patients sought medical attention only in emergencies and primarily relied on home remedies. The service has also provided significant relief, with **75%** of beneficiaries experiencing improvement in ailments related to their occupations, particularly skin diseases and musculoskeletal disorders. Furthermore, **85%** of respondents found the provided medicines, including medicated oils, highly effective in managing age-related health issues.

Need for Infrastructure Upgradation

Beneficiaries have expressed the need to upgrade Arogyanouka with modern equipment to enhance the quality of healthcare services. A major concern raised is the absence of basic laboratory facilities, particularly for blood investigations, which are crucial for monitoring and managing non-communicable diseases. Introducing these essential diagnostic services would greatly improve accessibility to timely and comprehensive healthcare, ensuring better health outcomes for the community.

Conclusion

The Arogyanouka initiative has significantly improved healthcare accessibility for the water-locked communities of Alappuzha, addressing critical barriers posed by geographical isolation. The floating dispensary has not only provided consistent medical services but also fostered a shift in health-seeking behavior, with beneficiaries reporting increased engagement in preventive care. Patient satisfaction remains exceptionally high, attributed to the compassionate approach of healthcare providers, effective communication, and reliable service delivery.

Despite its success, there is a growing need to extend consultation hours to accommodate working populations and to upgrade infrastructure by incorporating basic diagnostic facilities. Addressing these concerns will further enhance the program's efficiency and impact. The continuous evolution of Arogyanouka, with necessary improvements, will ensure its sustainability and effectiveness in delivering quality healthcare to underserved communities.

Saanthwanam (Ayurveda Mobile Medical Unit for Endosulfan Affected Victims)

Introduction

The Kasaragod district has witnessed the devastating consequences of endosulfan, a pesticide that was extensively used in local cashew plantations until its ban in 2011. This toxic chemical has left a lasting impact on 11 Grama Panchayats, with nearly 6,000 individuals suffering from severe health complications due to prolonged exposure. The affected population includes individuals battling neurological disorders, physical disabilities, mental health conditions, and chronic ailments, many of whom require specialized care but face significant challenges in accessing conventional healthcare services.

In response to this pressing crisis, the Saanthwanam Project was launched—an Ayurveda mobile medical unit dedicated to improving the quality of life of endosulfan victims. Designed to bridge the healthcare accessibility gap, the initiative provides doorstep Ayurvedic treatment, ensuring that bedridden and differently-abled individuals receive consistent, holistic care without the burden of travel. Through this compassionate approach, the project brings comfort, healing, and renewed hope to affected families.

The Saanthwanam Project has been widely embraced by the community, establishing itself as a crucial lifeline for those in need. Operating across 11 Grama Panchayats, the initiative continues to make a profound difference, extending unwavering support and fostering a healthier, more resilient community. In addition to providing comprehensive Ayurvedic treatment through home visits, the project also focuses on empowering parents and caregivers with knowledge on healthy lifestyle practices, enabling them to better support affected individuals. By enhancing the physical, cognitive, and emotional well-being of endosulfan victims, the initiative paves the way for sustainable recovery and an improved quality of life.

Project Overview

Beneficiary Details

Among the 155 beneficiaries, there are 70 male patients, 61 female patients, and 24 children, reflecting a diverse group requiring specialized care and attention.

The following table presents the distribution of patients who received Ayurvedic treatment across different Panchayats:

Details of patients in each Panchayath who were given Ayurvedic treatment through home visit.

Panchayath	Male		Female		Child		Total
	16-60	>60	16-60	>60	M	F	
Badiadka	4	0	4	1	2	1	12
Kumbadaje	3	0	6	0	1	1	11
Pullur Periya	7	1	5	1	1	1	16
Ajanur	7	0	7	0	1	1	16
Panathady	3	1	3	2	2	1	12
Kallar	7	0	5	2	3	0	17
Muliyar	5	1	5	1	0	0	12
Kardaka	5	1	6	1	0	1	14
Kayyur Cheemeni	12	0	5	2	4	1	24
Enmakaje	7	1	1	0	1	1	11
Bellur	5	0	3	1	1	0	10
Total	65	5	50	11	16	8	155

Table 1: Beneficiary Details of Saanthwanam project

This impact assessment evaluates the effectiveness of the Saanthwanam Project based on its objectives. To evaluate the impact and effectiveness of the initiative, insights were gathered from 100 caregivers among the 155 registered beneficiaries, offering a comprehensive understanding of the project's reach and outcomes.

Duration of Support Received

The Saanthwanam Project has built a deep and lasting relationship with its beneficiaries, as evidenced by a survey conducted among 100 caregivers. An overwhelming 91% of respondents reported that their loved ones have been receiving Ayurvedic homecare services for over five years. This sustained engagement highlights the project's reliability and dedication to providing continuous support. The long-term assistance offered by Saanthwanam has not only improved the

well-being of endosulfan victims but also fostered a strong sense of trust and dependability within the community.

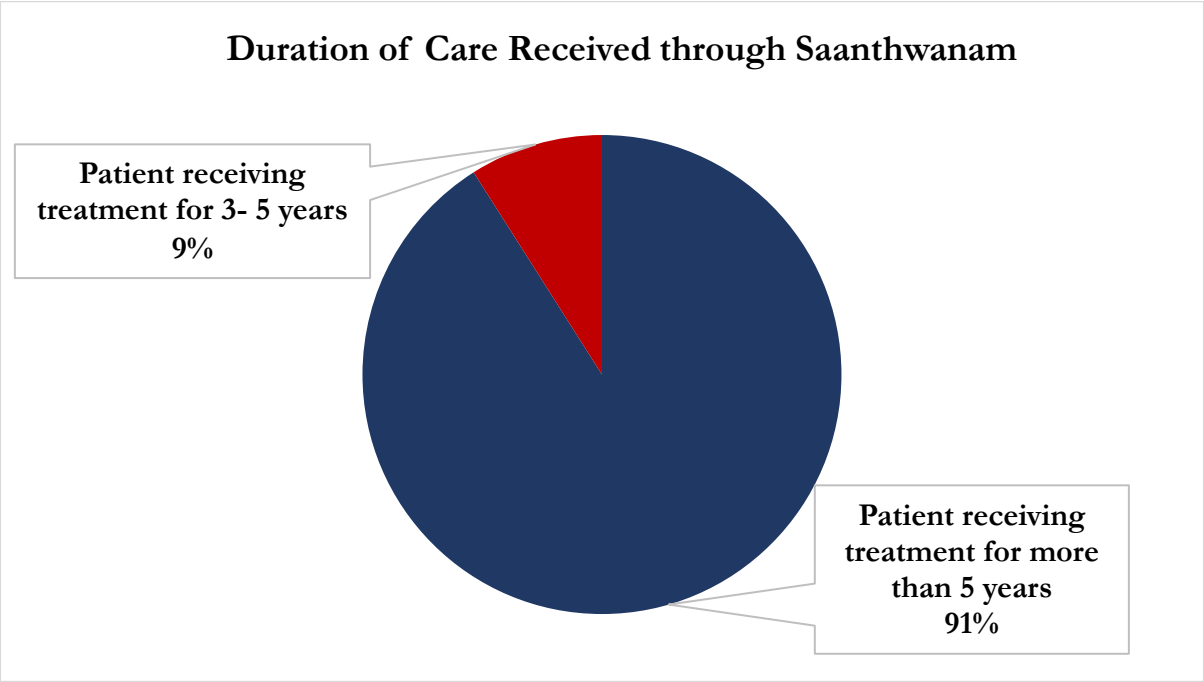

Fig1: Duration of care received through Saanthwanam

Improvement in Health Conditions

In a survey of 100 respondents**, 76.8% reported noticing some improvement in the health of individuals receiving Ayurvedic treatment through Saanthwanam.** This suggests that a significant majority observed at least partial relief or progress in their condition, ranging from mild symptom alleviation to noticeable recovery. Additionally, 23.2% of respondents reported experiencing significant improvements, indicating a more substantial reduction in symptoms or marked recovery. These findings highlight the positive impact of Ayurvedic treatment, with many caregivers witnessing tangible health benefits in those they care for.

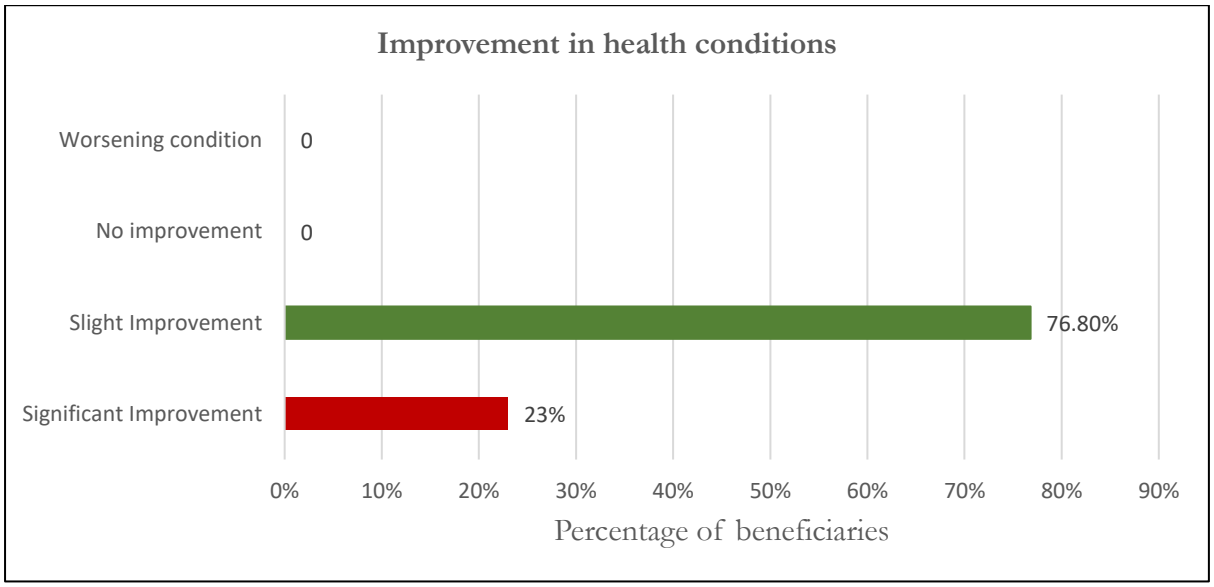

Fig2: Improvement in Health Conditions

Effectiveness of Ayurvedic Treatment

The initiative to provide Ayurvedic treatment to Endosulfan victims has yielded positive results, as reflected in the satisfaction of caregivers. Patients have reported noticeable improvements in physical symptoms, particularly fatigue, joint pain, and body aches. Additionally, skin conditions such as rashes and irritation have shown significant relief with Ayurvedic medicine, further highlighting its effectiveness.

A particularly notable area of improvement has been in neurological symptoms, including anxiety, depression, self-harm tendencies, and anger. Caregivers have also observed enhancements in cognitive functions, such as memory and concentration, suggesting a positive impact of Ayurvedic treatment on brain health.

Moreover, Ayurvedic interventions have contributed to regulating menstrual irregularities and alleviating conditions like urinary tract infections (UTIs) and digestive issues. These improvements indicate that Ayurvedic treatment not only addresses specific symptoms but also supports the body's detoxification processes, strengthens the immune system, and enhances overall digestive health.

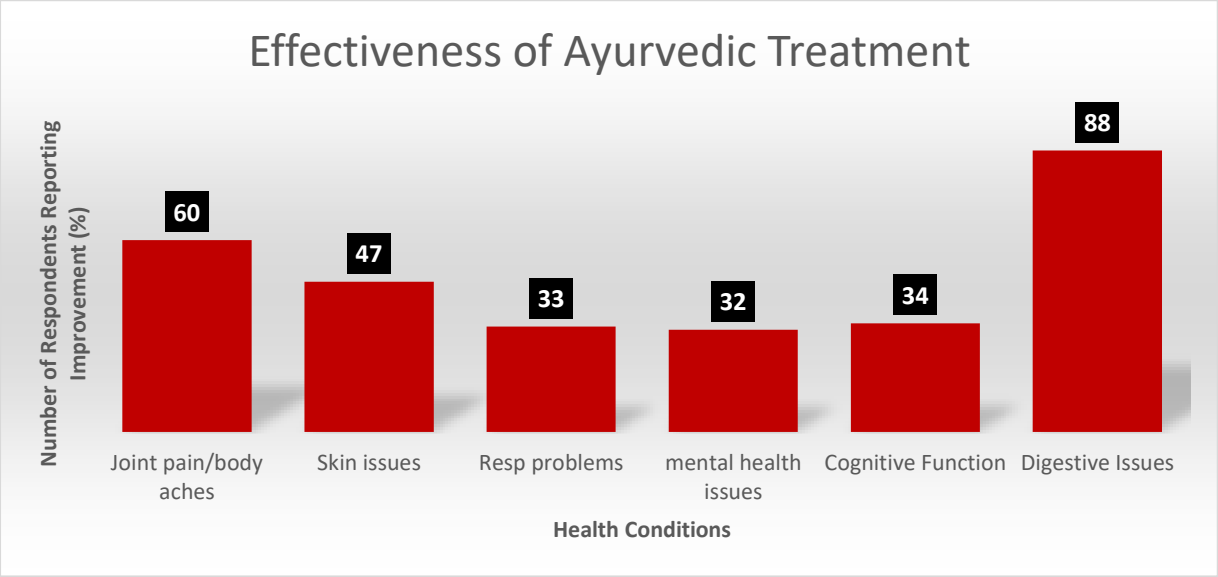

Fig3: Effectiveness of Ayurvedic Treatment

Services Provided

All 100 respondents confirmed that they received medicines as part of the homecare services offered by the project. This reflects the project's success in ensuring consistent access to essential medications for those under care. Additionally, 82% of respondents reported receiving educational resources on the harmful effects of Endosulfan, helping to raise awareness and promote informed caregiving.

Emotional support was another crucial component, with 84% of caregivers acknowledging its impact. This highlights the project's role in easing the psychological and emotional burden associated with caregiving, ultimately improving the well-being of both caregivers and patients.

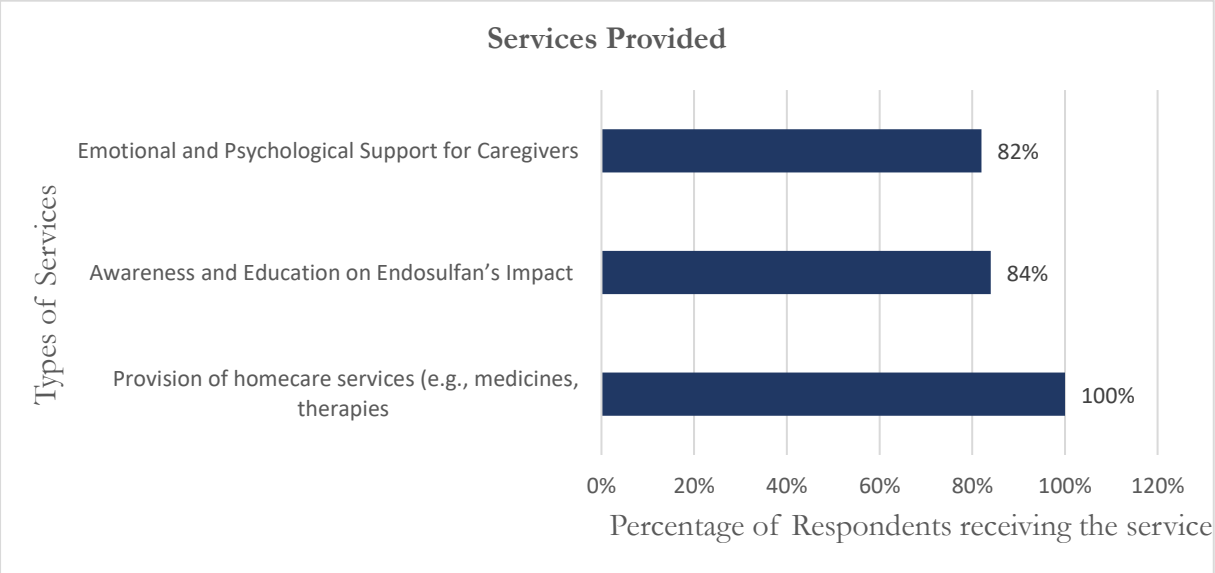

Fig 4: Services Provided

Caregiver Satisfaction

The results of a comprehensive survey among caregivers reveal a remarkable level of satisfaction with the services provided by the project. **An impressive 88% of respondents expressed satisfaction**, while 12% reported being very satisfied, highlighting the project's success in not only meeting but exceeding caregiver expectations. Such overwhelming approval underscores the initiative's effectiveness in addressing caregivers' needs, offering essential support that is both valuable and deeply appreciated.

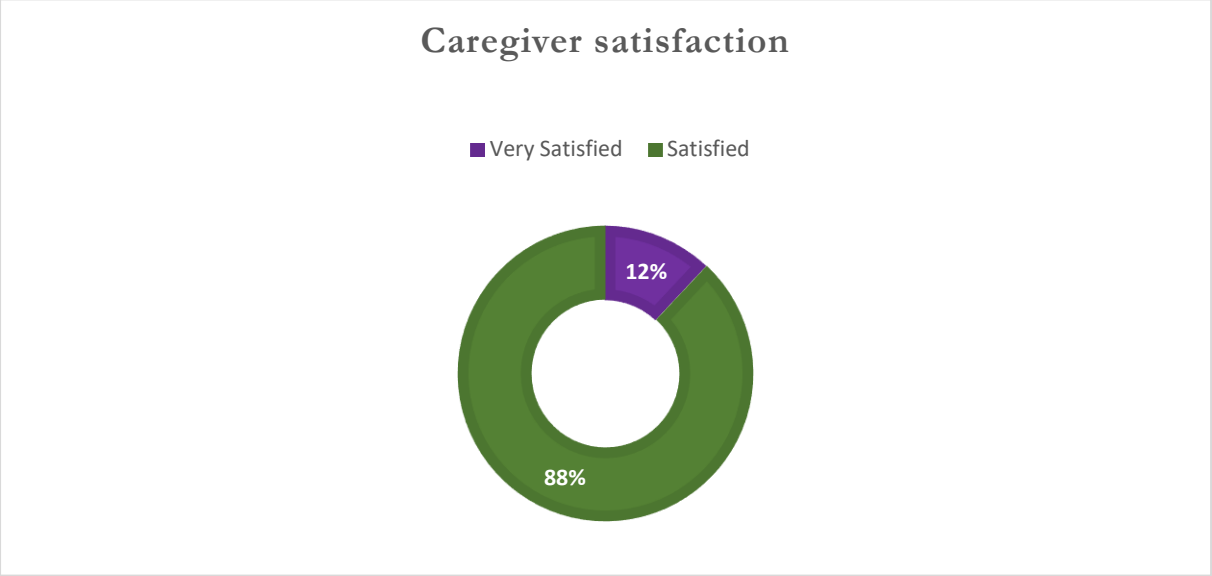

Fig 5: Caregiver Satisfaction

A key insight from the survey is that over 90% of caregivers are women, emphasizing the need to recognize and support the unique challenges they face. Many of these women juggle multiple responsibilities, including household duties, employment, and caregiving, making access to convenient healthcare solutions essential. One of the most well-received aspects of the project is its home-based treatment model, which eliminates the need for caregivers to travel to healthcare facilities. This is particularly beneficial for women with limited time or resources, as it ensures continuous care for patients while easing the stress and logistical challenges caregivers often encounter.

Beyond convenience, caregivers reported high satisfaction with the quality of care and holistic support provided. The Saanthwanam program has played a crucial role in enhancing caregivers' overall experience by offering not only practical assistance but also emotional reassurance. Many caregivers expressed that the compassionate care delivered during home visits significantly alleviated their emotional burden, making them feel more understood and less isolated. Caring for a loved one with chronic health issues can be mentally and emotionally exhausting, often leading

to stress, anxiety, and a sense of overwhelming responsibility. However, the presence of care providers during home visits has helped mitigate these challenges, fostering a greater sense of well-being. By offering a listening ear, guidance, and emotional comfort, the initiative has empowered caregivers to manage their loved ones' conditions more effectively while also prioritizing their own mental health.

Additionally, caregivers were provided with training to equip them with essential knowledge on managing the health of endosulfan victims. Doctors conducted informative sessions outlining crucial dos and don'ts, ensuring that caregivers were well-prepared to implement necessary precautions, treatment routines, and lifestyle adjustments to enhance both the physical and mental well-being of the affected individuals.

Overall, the project has successfully achieved its primary objectives of supporting endosulfan victims in Kasaragod through Ayurvedic treatment, personalized home-based care, and caregiver education. These efforts have significantly contributed to improving the quality of life for affected individuals in the selected Grama Panchayats, fostering a community-centered approach to healing. The overwhelmingly positive feedback from caregivers reaffirms the project's role as a crucial pillar of support, strengthening the well-being of both caregivers and their loved ones.

AYUSHGRAM

Introduction

In today's era of abundance and rapid technological advancements, many individuals have neglected essential aspects of a healthy lifestyle, such as regular physical activity, a balanced diet, and consistent sleep patterns. This has led to an increase in lifestyle-related diseases. Ayurveda, with its holistic approach to health, emphasizes the significance of a well-balanced lifestyle in preventing such conditions.

The Ayushgram initiative is designed to integrate Ayurveda and Yoga principles into village communities, promoting holistic well-being at the grassroots level. Under this concept, select villages are identified for the adoption of AYUSH-based lifestyles and healthcare interventions. The initiative focuses on behavioral change communication, training village health workers in identifying and utilizing local medicinal herbs, and delivering AYUSH health services. Additionally, it encourages the cultivation and conservation of endemic medicinal plants.

The project has been successfully implementing AYUSH-based healthcare services across designated block panchayats in various districts. It fosters public awareness through educational initiatives, yoga sessions, and activities such as the distribution and cultivation of medicinal plants, ensuring accessible and sustainable healthcare solutions for rural communities.

Background

The Ayushgram Project was launched under the National AYUSH Mission in 2016-17, following the approval of the State Annual Action Plan (SAAP) 2015-16. The initiative initially began with eight units across different districts, including Kannur, Thrissur (Chavakad), Idukki, Thiruvananthapuram, Kasargode, Kottayam, Ernakulam, and Kollam. In its first phase, the project focused on implementing AYUSH-based healthcare interventions in these selected regions. Over time, due to its success and growing recognition, the initiative was expanded to all districts of the state, with additional units established in Kannur and Thrissur to enhance coverage and impact.

Objectives

The Ayushgram Project aims to promote awareness within communities about the importance of dietary habits and lifestyle practices as outlined in AYUSH systems of medicine. By educating people about these principles, the initiative encourages the adoption of healthier lifestyles that help in preventing diseases and enhancing overall well-being.

Another key objective is to provide guidance on common ailments and their treatment using locally available medicinal herbs. Many traditional herbs have significant therapeutic properties, and empowering communities with this knowledge enables them to utilize natural remedies for minor health issues, reducing dependency on synthetic medications.

The project also focuses on raising awareness and organizing campaigns against communicable diseases such as Malaria, Tuberculosis, and Diarrhea. These efforts include educating people on effective preventive measures, early detection, and treatment options, thereby reducing the spread of infections and improving community health.

In addition to disease prevention, Ayushgram emphasizes the preservation and cultivation of medicinal plants. The initiative encourages communities to engage in sustainable practices that protect and expand the availability of endemic medicinal herbs, ensuring their continued use in traditional healing methods.

The project also addresses the increasing prevalence of lifestyle-related diseases such as diabetes, hypertension, and obesity. By integrating AYUSH principles into daily life, individuals can adopt preventive measures that promote long-term health and reduce the risk of these conditions.

Furthermore, the initiative actively supports the promotion of Yoga as an essential component of holistic well-being. Regular yoga practice is encouraged within communities to improve physical, mental, and emotional health, making it a powerful tool for both disease prevention and overall wellness.

By focusing on these objectives, the Ayushgram Project fosters a healthier society through traditional wisdom, community participation, and sustainable health practices.

Implementation

The Ayushgram Project was implemented in selected blocks across each district with the goal of promoting an AYUSH-based lifestyle among the general population. To ensure effective execution, the project involved a dedicated team comprising Nodal Officers, Medical Officers, Multi-Purpose Workers, and Yoga Instructors in each unit.

Medical Officers played a crucial role in conducting awareness sessions on lifestyle modification to encourage healthy living. These sessions were organized in selected blocks of each district, with prior notifications sent to Anganwadi teachers, ASHA workers, and other relevant officials to ensure maximum participation. A wide range of educational classes was delivered by the project Medical Officers on topics such as Dinacharya (daily routine), Ritucharya (seasonal regimen),

Aaharavidhi (dietary guidelines), and Sodhanakriyas (detoxification practices). These sessions highlighted the significance of traditional health practices in disease prevention and were supplemented with the distribution of informative pamphlets. Additionally, Medical Officers were actively involved in sensitizing village representatives in the selected villages, fostering a deeper understanding and integration of AYUSH principles at the community level.

Brief Review (2022-23 & 2023-24)

The Ayushgram Project has made remarkable progress in improving community health and promoting traditional wellness practices during the financial years 2022-23 and 2023-24.

In 2022-23, the initiative successfully reached a wide section of the population through its various programs. A total of 81,802 individuals attended awareness sessions, gaining valuable knowledge about disease prevention and healthier living. Additionally, 73,305 people participated in yoga sessions, which played a significant role in improving physical and mental well-being. The project also organized medical camps, ensuring that 11,697 individuals received essential healthcare services.

Continuing its impact in 2023-24, the initiative expanded its reach, benefitting 80,145 individuals through awareness programs that emphasized lifestyle improvements and preventive care. The number of participants in yoga sessions stood at 72,611, reflecting the growing acceptance of yoga as an essential practice for maintaining health. Furthermore, medical camps provided treatment and support to 12,870 individuals, ensuring better access to alternative healthcare solutions.

One of the significant highlights of 2023 and 2024 was the distribution of 5,338 medicinal plants, encouraging the use of traditional remedies in everyday life. This initiative not only helped in the preservation and sustainable use of medicinal plants but also educated communities about their benefits. By reintroducing the use of these plants in daily healthcare practices, the project aimed to reconnect people with valuable knowledge passed down through generations.

Through these continued efforts, the Ayushgram Project has strengthened healthcare accessibility at the grassroots level, promoting preventive care, traditional remedies, and a balanced way of living.

	BENEFICIARIES	

FINANCIAL YEAR	AWARENESS CLASSES	YOGA SESSIONS	MEDICAL CAMPS	**MEDICINAL PLANT DISTRIBUTED**
2022- 2023	81802	73305	11697	3689
2023 - 2024	80145	72611	12870	1649

Table 1: Beneficiaries details of the financial year: 2022 – 2023 and 2023 – 2024

Current Progress of the Ayushgram Project (2024-25)

In the financial year 2024-25, the Ayushgram Project has continued to expand its reach, operating across 14 districts with a total of 16 functional units. The initiative has benefited 51,220 individuals through awareness sessions, while 80,302 people have participated in yoga classes aimed at improving physical and mental well-being. Additionally, 11,987 individuals received medical support through health camps, and 8,948 beneficiaries accessed services at newly established NCD clinics. The project also distributed 951 medicinal plants, reinforcing its commitment to promoting the use of traditional medicinal resources.

A key milestone of 2024-25 has been the launch of the NCD (Non-Communicable Disease) Clinic Initiative to address the rising prevalence of lifestyle-related illnesses. Each Ayushgram unit now conducts weekly NCD clinics, providing regular medical support, consultations, and necessary medications to those affected. This intervention has been successfully implemented in almost all units, ensuring better healthcare accessibility for individuals at risk of conditions such as diabetes, hypertension, and other chronic diseases.

The project has made remarkable strides in strengthening healthcare services at the community level. Its widespread adoption across all districts has led to a significant increase in public participation, demonstrating growing awareness and interest in integrating traditional medicine and preventive healthcare into daily life. The rising enthusiasm for Ayurvedic practices and lifestyle modifications reflects a positive shift toward embracing time-tested healthcare solutions. By continuously engaging a broad audience and adapting to evolving health challenges, the Ayushgram Project remains a pioneering force in promoting sustainable and complementary healthcare solutions for communities across the state.

Year	April 2024 - Feb 2025
Districts	14

Units	16
Awareness class beneficiaries	51,220
Yoga class beneficiaries	80,302
Medical camp beneficiaries	11,987
NCD clinic beneficiaries	8,948
Medicinal plant distributed	951

Table 2: Project Beneficiary Statistics (April 2024 - February 2025)

Impact Assessment Report

To evaluate the impact of the Ayushgram Project on the community, a comprehensive survey was conducted. The survey was conducted using a semi- structured questionnaire comprising 29 carefully designed multiple-choice questions aimed at gathering detailed feedback and insights from participants. These questions focused on assessing community awareness, participation levels, and the perceived benefits of the project. Data collection was systematically carried out across all operational units of Ayushgram, ensuring a well-rounded understanding of its reach and influence.

Demographic and Socioeconomic Profile of Respondents

A total of 741 responses were gathered for the impact assessment, representing a diverse sample from all project units. The data collection process was facilitated by Ayushgram Medical Officers using the Google Form, ensuring accurate and efficient compilation of responses. Among the 741 respondents, a significant majority 85% were female (Fig 1), highlighting the strong participation of women in the initiative.

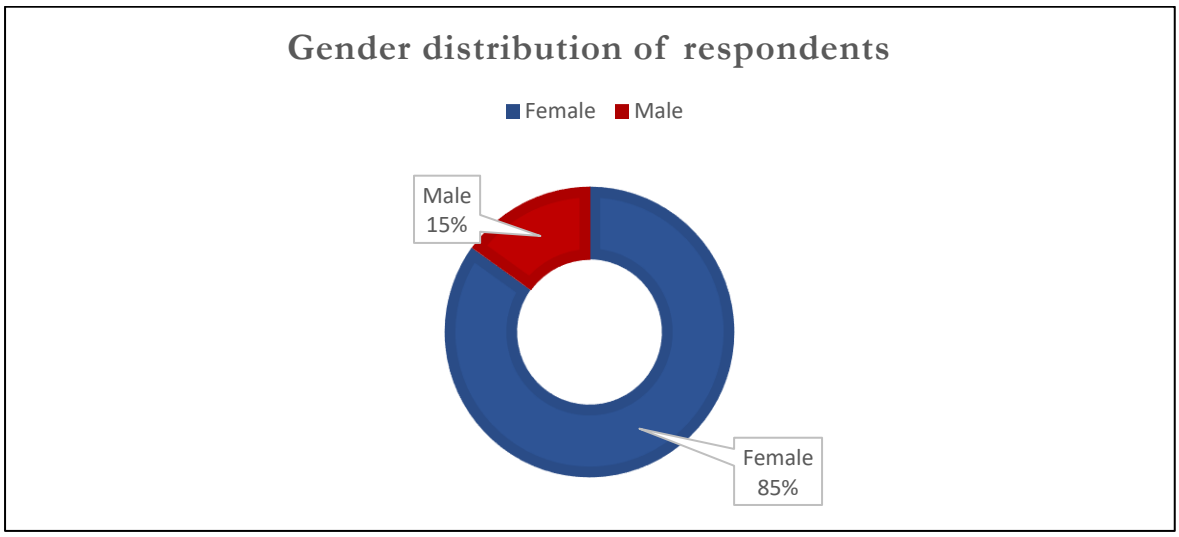

Fig 1: Gender Distribution of Respondents

The survey revealed that 55% of the participants belonged to the Above Poverty Line (APL) category, holding Blue and White cards. Meanwhile, 39.9% were classified as Below Poverty Line (BPL), possessing yellow and pink cards, which indicate economically weaker sections. Additionally, 4.4% of respondents were unaware of their financial classification.

Among the respondents, 60.7% had completed school-level education, while 27.8% were graduates. A smaller percentage (6.1%) held postgraduate or higher degrees, and 5.4% had no formal education.

The survey identified that 49.9% of respondents were housewives, followed by 24.6% who were employed. Additionally, 8.7% were daily wage earners, 6.3% were unemployed, 5.8% were students, and 4.8% were retired.

Duration of Participation in Ayushgram

Regarding their engagement in the Ayushgram Project, 38.3% had been involved for over six months, 37.6% for less than three months, and 24.1% for three to six months.

Awareness of Project Objectives

A significant 90.3% of respondents were aware of the primary objective of the Ayushgram Project. However, only 44.1% accurately identified all the project's objectives, while the remaining respondents were familiar with only two or three key goals.

Participation in Ayushgram Activities

The survey showed strong participation in various Ayushgram initiatives. 82.9% of respondents attended yoga sessions, 58.4% took part in awareness programs, and 38.3% participated in health camps. Additional community activities included Ayurveda Day competitions, cookery shows, and other outreach programs.

Community Perception and Accessibility

An overwhelming 99.7% of respondents expressed their willingness to recommend the project to others, while 99.2% confirmed that Ayushgram services are accessible to everyone in the community (Fig:2).

These findings highlight the growing acceptance and impact of the Ayushgram Project, demonstrating its effectiveness in promoting well-being and accessible healthcare solutions at the community level.

Impact of Ayushgram Participation on Daily Life

Participation in the Ayushgram project has brought noticeable improvements in daily life for many individuals. Participants reported incorporating Ayurvedic remedies for acute conditions, practicing yoga regularly, and adopting an Ayurvedic diet. Additionally, by sharing their knowledge with family members, they observed an increase in healthy habits and a greater understanding of AYUSH principles within their households.

Yoga Practice and Its Impact

Yoga has been one of the key elements of the Ayushgram initiative, with 80.5% of participants attending yoga sessions. Notably, 95.9% of them learned yoga for the first time through the project. Among the participants, 48.6% practice yoga daily, 31.2% practice three to four times a week, 10.5% engage once a week, and 9.7% practice occasionally. Additionally, 79.1% of participants practice yoga exclusively through Ayushgram sessions, while others practice at home, schools, or community centers.

Participants were driven by various factors to engage in yoga practice. Some were motivated by health benefits, while others sought mental relaxation, flexibility, or improved fitness.

Yoga has had a profound effect on the physical and mental health of participants. Many reported improvements in flexibility, reduced joint pain, and better overall mobility. Additionally, yoga practice helped in managing stress levels, enhancing mental clarity, and improving emotional well-being.

Yoga has proven to be an effective tool in managing various health conditions. Among the participants, 77% experienced significant relief, while 23.6% noticed moderate improvements in conditions such as low back pain, hypertension, dyslipidemia, shoulder pain, migraine, obesity, dysmenorrhea, asthma, and joint pain. Additionally, yoga helped participants experience higher energy levels and improved sleep quality.

Beyond physical health, 58.6% of participants improved their dietary choices, 60% experienced better sleep patterns, 48.5% increased mindfulness, and 40.3% reported improvements in all three areas.

Satisfaction with Yoga Sessions

The majority of participants were highly satisfied with the yoga sessions provided by Ayushgram. **A remarkable 72.9% of respondents reported being very satisfied, while 25.9% were satisfied. Only 1% expressed a neutral opinion about the program** (Fig2)

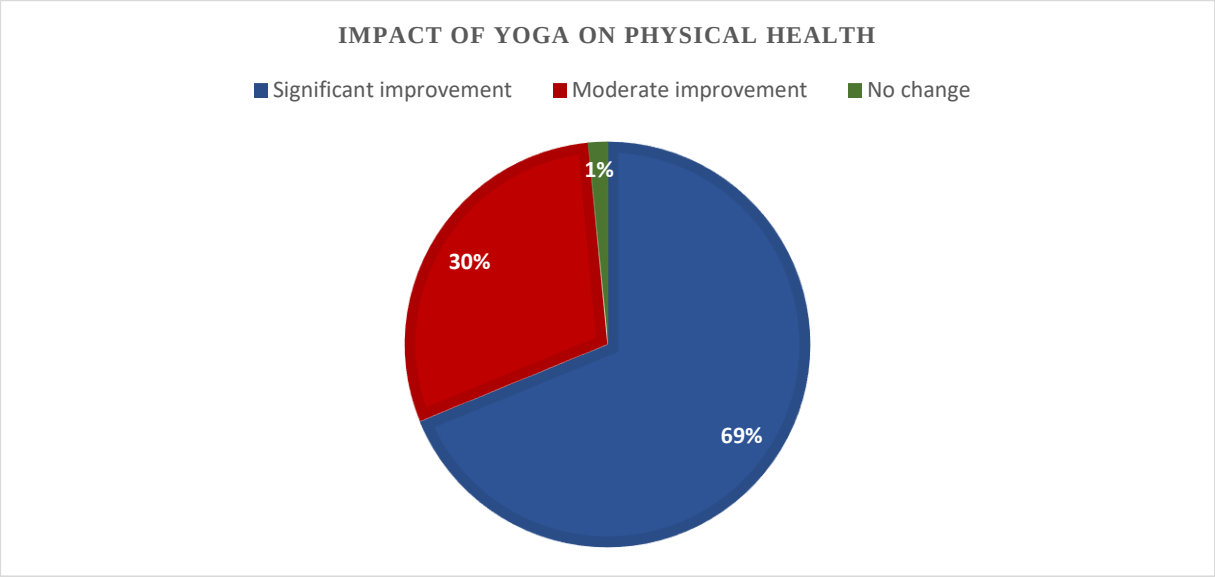

Fig 2: Impact of yoga on physical health

Accessibility and Convenience

Yoga sessions were widely regarded as convenient and accessible, with 98.1% of participants affirming their ease of participation. A small percentage cited challenges related to infrastructure and space, which they felt could be improved for a better experience.

Willingness to Recommend Yoga

An overwhelming **99.8% of participants expressed their willingness to recommend yoga to others in their community, emphasizing its benefits for both physical and mental well-being.**

Broader Impact of the Ayushgram Project

Impact of AYUSHGRAM Participation on Overall Health

Participation in the AYUSHGRAM initiative has led to significant health improvements among participants. According to the **assessment, 69% of respondents reported a significant improvement in their overall health**, while 29.7% experienced moderate improvement. Only a small fraction, 1.5%, noted no change in their health status. These findings highlight the effectiveness of AYUSHGRAM interventions in promoting well-being through holistic health practices, including yoga, Ayurveda, and lifestyle modifications.

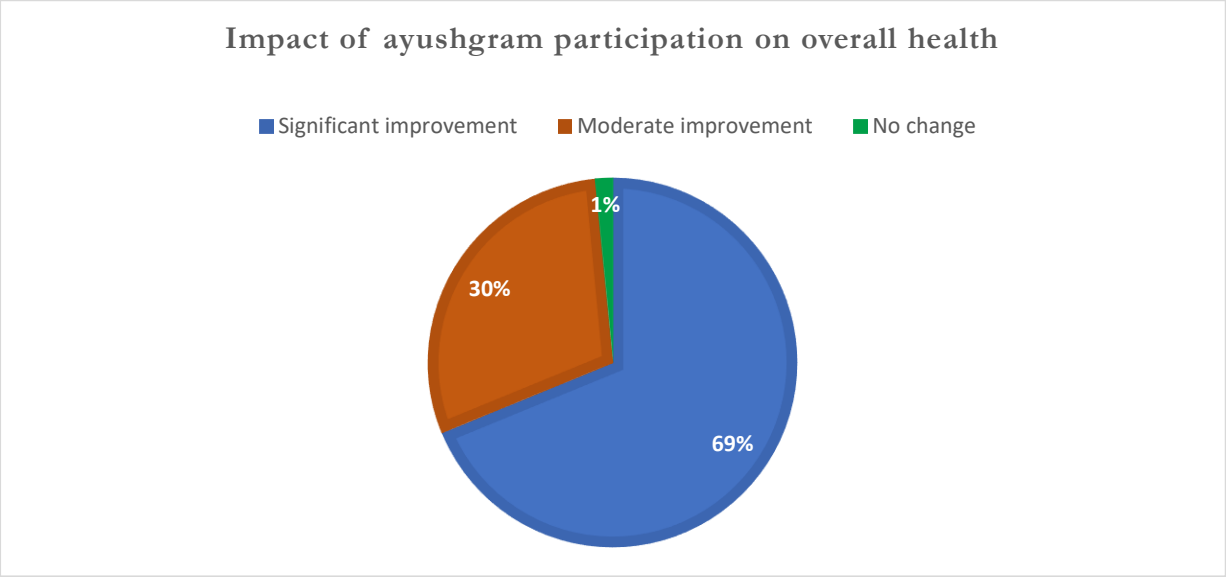

Fig 3: Impact of AYUSHGRAM Participation on Overall Health

Reduction in Dependency on Conventional Medicines Through Ayushgram Project

The Ayushgram project has contributed to a significant reduction in dependency on conventional medicines among participants. **According to the survey, 60.9% of respondents reported a significant reduction, while 34.2% experienced a moderate decrease in their reliance on conventional treatments.** However, 4.9% of participants did not notice any change in their medication dependency. These findings emphasize the effectiveness of AYUSH-based interventions in promoting natural and preventive healthcare alternatives.

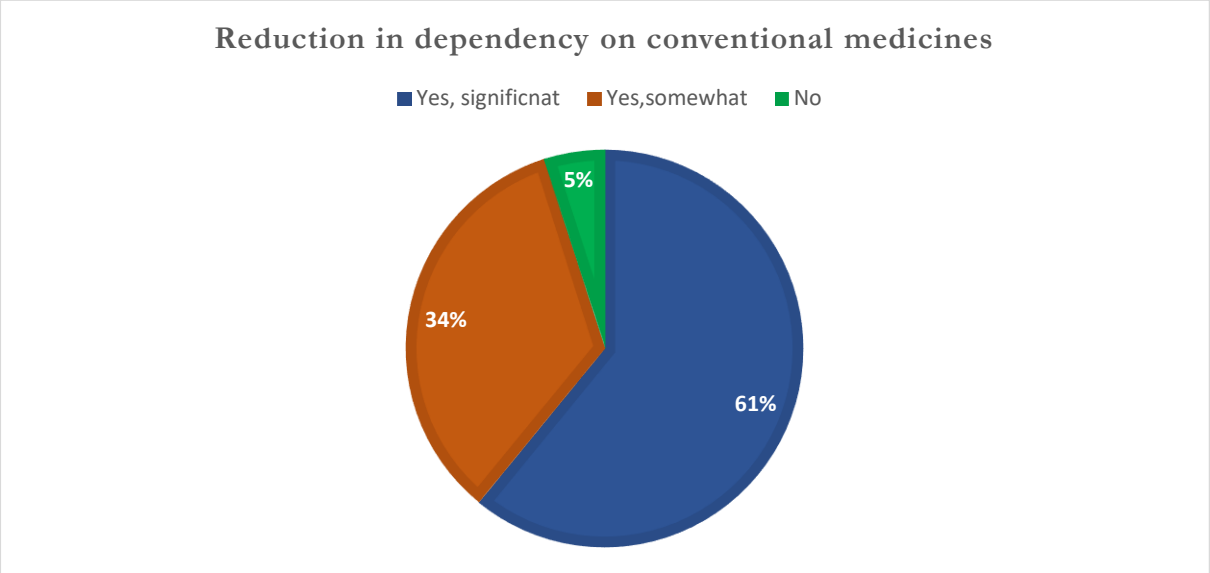

Fig 4: Reduction in Dependency on Conventional Medicines Through Ayushgram Project

Expansion and Infrastructure Enhancement

Participants expressed a strong desire to see the Ayushgram project expand to more villages, ensuring a larger population can benefit from its initiatives. They believe that expanding the program's reach would help address health and wellness needs in underserved communities by promoting yoga, Ayurvedic practices, and health awareness on a broader scale.

Additionally, many participants suggested increasing the space allocated for yoga practice, citing issues such as overcrowding and inadequate facilities. Expanding and improving the infrastructure would enhance the quality of yoga sessions and allow more individuals to participate comfortably.

Key Achievements of the Ayushgram Project

The Ayushgram Project has achieved significant milestones in promoting Ayurveda-based healthcare and holistic well-being. It has successfully expanded its reach to all districts, ensuring equitable access to Ayurvedic services. With a high beneficiary count, the project has positively impacted thousands of individuals, demonstrating its effectiveness in improving community health. Additionally, Ayushgram has raised substantial awareness about Ayurveda, encouraging people to explore traditional and preventive healthcare methods. A growing interest in Ayurvedic medicines and lifestyle practices reflects the project's success in fostering sustainable health habits. By integrating Ayurveda, yoga, and wellness activities, the initiative has promoted a comprehensive approach to health and preventive care. Furthermore, strong community engagement has been a key highlight, with active participation in awareness programs, yoga sessions, and health camps, empowering individuals to take control of their health.

Conclusion

The Ayushgram initiative has significantly contributed to community well-being by integrating Ayurveda, yoga, and health awareness into daily life. The program's impact assessment highlights notable improvements in health outcomes, increased awareness of traditional healing practices, and greater community participation in self-care and preventive healthcare.

Key findings underscore the effectiveness of AYUSH-based interventions in encouraging lifestyle modifications and reducing dependency on conventional medicine. The success of awareness

sessions and yoga classes reflects the potential of AYUSH methodologies in complementing modern healthcare systems.

To enhance the project's impact, expanding outreach, strengthening data collection, and integrating technology could further increase accessibility and effectiveness. With continued community engagement and infrastructural improvements, the Ayushgram project has the potential to transform preventive healthcare practices across wider populations, fostering a healthier and more self-reliant society.

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FLEXIPOOL PROJECTS

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