Original Article

Functioning of Arogyakiranam programme in Kerala: A qualitative study

Manju Madhavan[1], Rekha M. Ravindran[2], K.S. Shinu[3]

[1]Research Officer, [2]Senior Research Officer, [3]Executive Director, Department of Health and Family Welfare, State Health Systems Resource Centre- Kerala (SHSRC-K), Kerala, India

Abstract

Context: Arogyakiranam program, a state-run health entitlement scheme, caters to health care needs of 0 to 18-year-old children, in government hospitals of Kerala. Very few studies have been conducted in this regard. **Aim:** An interim analysis of the functioning of this program through stakeholder perspective facilitates understanding the mode in which the program is currently progressing, thereby paving way for bettering it further. **Methods and Material:** A qualitative study in three purposively selected districts of Kerala consisting of in-depth interviews was conducted across different levels of stakeholders including officials from different health care levels and beneficiary caretakers who bring their wards to these centers. **Results:** The functioning of the scheme with regard to implementation, fund flow, monitoring, documenting, reporting etc., was found to be following a fine structure. The scheme provides financial risk protection to the beneficiaries' families. Perceived challenges were lesser public awareness of the scheme, the requirement of an updated guideline, funds, the need for the availability of specialists and other amenities. Complete electronic hospital proceedings, a separate account for the scheme, staff reorientation/training, more reviews, and appraisals were emphasized. The overall functioning of the scheme is found to be streamlined and highly fruitful in terms of catering to the child population in the state. **Conclusion:** Arogyakiranam program has proven to be a boon to its beneficiaries with nil out-of-pocket expenditure, providing an array of health care amenities, ensuring equity thereby relentlessly working towards universal health coverage.

Keywords: Arogyakiranam program, free entitlement health scheme, health coverage for children, stakeholder perspective

Introduction

Morbidity and mortality from childhood illnesses have forever remained a major point of interest both globally and nationally.[1,2] As per the National Family Health Survey (NFHS-V), infant mortality rate and under-5 mortality are 4.4 and 5.2 per 1000 live births, respectively in Kerala.[3] Morbidity and mortality in children and adolescents can be prevented by exercising effective implementation of proven evidence-based/facility-based interventions with high coverage.[4] As there is an advance in the reduction of child mortality, there is a dire need to improve survival outcomes and quality of life of the beneficiaries without any out-of-pocket expenditure (OOP).[5] This would be achieved by early detection and management of conditions that were not addressed comprehensively in the past through interventions,[5] beginning from the primary health care level to higher levels.

Arogyakiranam (AK) program is a state-initiated entitlement scheme in Kerala for 0 to 18-year olds (excluding dependents of government servants and income taxpayers), which provides free investigation and treatment for health conditions other than the 30 conditions covered under Rashtriya Bal Swasthya Karyakram (RBSK).[6,7] This initiative is depictive of the State Government's commitment in moving towards Universal Health Coverage for achieving sustainable development goals with an emphasis on equity.

Address for correspondence: Dr. Manju Madhavan, Research Officer, State Health Systems Resource Centre-Kerala (SHSRC-K), Department of Health & Family Welfare, Trivandrum, Kerala, India.
E-mail: manjushsrc@gmail.com

Received: 27-03-2021 **Revised:** 06-07-2021
Accepted: 09-07-2021 **Published:** 29-11-2021

Access this article online

Quick Response Code:

Website: www.jfmpc.com

DOI: 10.4103/jfmpc.jfmpc_586_21

How to cite this article: Madhavan M, Ravindran RM, Shinu KS. Functioning of Arogyakiranam programme in Kerala: A qualitative study. J Family Med Prim Care 2021;10:4117-23.

There is paucity of literature on the intricacies of its functioning, and an interim exploration into the operational mechanism of the scheme would help assess and enable further augmentation of the program.

Subjects and Methods

This qualitative descriptive study was conducted among stakeholders in Kerala from March to August 2018. Ethical approval was acquired from the Institutional Ethics Committee of General Hospital, Trivandrum as per order: B2/9878/2011/GHT. Kasaragode, Idukki, and Alleppey districts were selected for the study (categorized as high, medium, and low based on the AK fund utilization cumulative percentage). Sites [Figure 1] and stakeholders classified into categories [Table 1] were chosen purposively.

Preset open-ended in-depth interview guides with probes were devised after extensive formative research for different categories of stakeholders. After obtaining written informed consent, in-depth interviews were conducted (recorded using digital voice recorders) in the local language Malayalam which were then transcribed verbatim and translated into English. Manual coding of the transcripts was carried out to discover emerging themes and sub-themes, which were further classified into different categories. In order to augment the validity of the findings, they were verified independently by another researcher. The incongruities developed in the process were resolved by discussion until consensus was reached between the researchers, and conclusions were drawn.

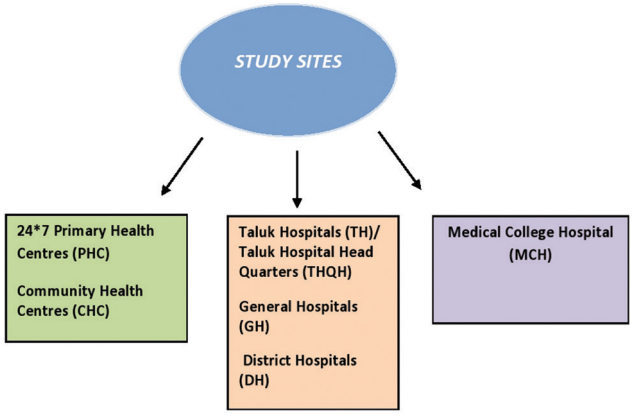

Figure 1: Study sites

Results

AK scheme which came into effect from 2nd October 2013 is the state's modified version of the central government scheme – RBSK for providing free health services from birth to 18 years of age regardless of the above poverty line (APL)/below poverty line (BPL) or gender categorizations. The scheme excludes dependents of government servants and income taxpayers. The funding is routed through the state program management and support units to district health and welfare societies, and the funds allotted under RBSK can be utilized for AK as well. A patient with no entitlement card, or with conditions not covered under/or above the financial limit of the Thalolam/Karunya Benevolent fund is eligible for AK aid.

Analysis of the in-depth interviews revealed the following key themes [conceptual framework-Figure 2]:

Implementation

Explaining the implementation of the scheme in their district, a DPM explained by highlighting the nil out-of-pocket expenditure feature of the program:

"All services are provided free of cost. Transportation and other expenses for shifting the patient to higher centers if necessary are also met through the scheme. Medicines not available in the center are also made available through- Karunya, Neethi, etc."

Enrolment of beneficiaries

Most of the beneficiaries get enrolled in the scheme when they directly approach the hospital seeking treatment. The staff at the registration counter identifies the beneficiaries and categorizes them with an AK seal on OP chits (most common method). In addition, beneficiaries are also identified and referred from the field to their respective centers by PROs and field workers. One M.O added:

"In our hospital, we have separate OP tickets for those under 18 years which are yellow in color."

Process

Consultant pediatrician in the institution is responsible for providing out patient/in-patient (OP/IP) services to the beneficiaries. If necessary, laboratory services, referral transport etc., are coordinated by the PROs and staff nurses. The clerk

Table 1: Category wise stakeholders interviewed

Table: Stakeholder Category

Categories	Participants	Site	No. of interviews
Providers	DPMs (District Program Managers)	Participants from all three districts	3
	DMOs (District Medical Officers)		3
	Superintendents (Medical Superintendents)/M.Os (Medical Officers)	Participants from all selected centers of the three districts	11
Facilitators/Implementers	PROs (Public Relations Officers)/clerks		11
Beneficiaries	Beneficiary-caretakers: (Randomly chosen for interviewing while they visited centers for medical consultation of their wards)		54

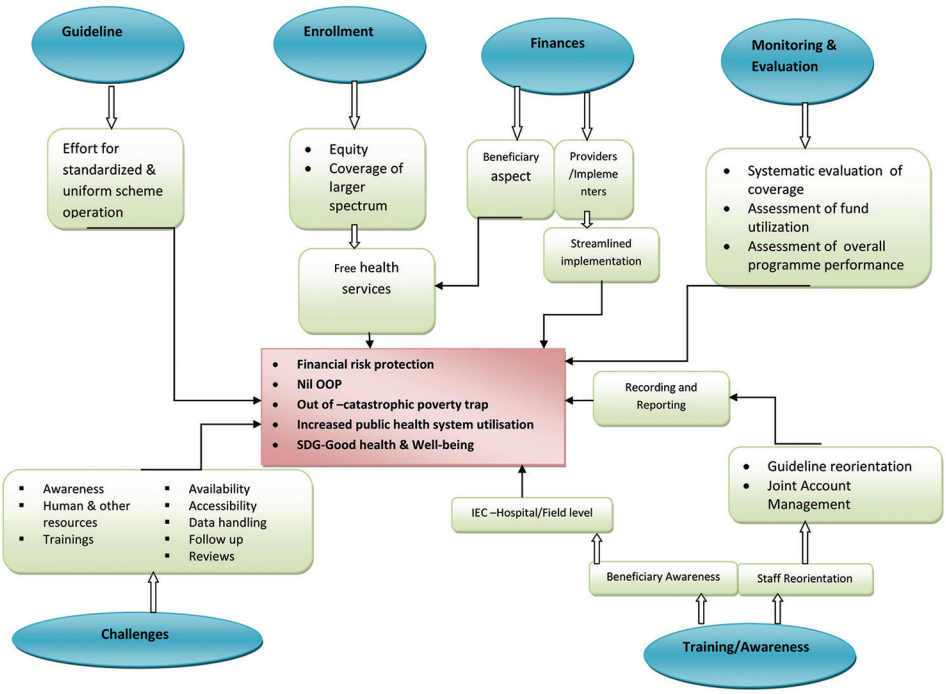

Figure 2: Conceptual Framework

processes the financial aspects. Documentation of details of laboratory investigations is maintained in a separate AK register. Most officials professed a need for an upgraded guideline with more content clarity and orientation among staff.

Common disease conditions

Fever was the most common condition that was reported. Respiratory infections, cough, urinary tract infections, anemia, and injuries were also common. Emergency cases, minor surgeries, cases requiring implants, cerebral palsy, adolescent and mental health problems were also reported. Certain region-specific health issues were also documented.

"Children from Endosulfan prone areas are treated here" as quoted by a PRO

Finances

National Health Mission (NHM) is the funding agency. Upon receiving requests, the funds are transferred to the DPM from where it is transferred to the superintendent of each institution. Most of the M.Os said statements of expenditure are produced periodically by the centers according to which funds are obtained from the NHM. Usually, financial expenses are met from the Hospital Management Committee (HMC) funds which are recouped upon receiving funds from NHM. Beneficiary caretakers stated they bore no expenses for availing services at the centers.

Record maintenance

At the centers, records were maintained at the medical records library/specific official sections and OP registration counters. The list of beneficiaries with details of the treatment availed was also maintained at the centers. These details were reviewed at varying intervals. However, maintaining OP records during rush hours was perceived as difficult. The PROs explained that separate registers were maintained for different services with patients' full details, which are monitored regularly every month by the superintendent/MO in charge.

According to a DPM:

"Verification of records by the DPM happens once a month at the time of meetings or during physical achievement monitoring"

Monitoring and auditing

For maintaining the fluidity and transparency of the program, monitoring is done every month/once in 2 months. The DMOs coordinated monitoring with the DPMs by conducting monthly meetings at the collectorate and audits/statutory audits in the Superintendent's office. Concurrent auditing is done through NHM and DHS audits; through committees with the MO as chairman. The findings of this audit are monitored by the DMO office. Expenditure monitoring and accountant general (AG) auditing are done yearly. Internal auditing is done yearly by the Hospital Development Committee headed by the Municipal Chairman. Most of the PROs and clerks said that the Superintendent/M.O does the monitoring process at their institution every month and mentioned periodic monitoring by the district and state. Monitoring by NHM occurs annually where the number of beneficiaries in this scheme and fund expenditures are analyzed. PROs also mentioned district-level audits, plan fund audit, audits from the panchayath, etc.

Even though an inbuilt monitoring structure was said to be followed by certain centers, it was not uniformly reported by all centers.

Reporting

The reporting process is handled by the PROs, and reports are sent to the NHM office forwarded by the M.O. Reporting is also done during conferences and Block Panchayath meetings. Most PROs stated that in the monthly reports, beneficiary numbers and expenditures are reported. From NHM, it is consolidated at the district level and sent to the State.

Awareness

Provider

Sessions were conducted during Staff and HMC meetings, block and DMO conferences, andAccredited Social Health Activist (ASHA) training to orient the staff regarding the program. Notices were issued at the state and district level to make the officials aware. Superintendents, doctors, postgraduate students, house surgeons, and nurses in medical colleges also played important roles in the provision of this scheme. However, most of the staff expressed a lack of awareness and clarity regarding the disease conditions to be enrolled under AK.

Beneficiary/caretaker

All visual, print, and digital media were used for generating public awareness regarding the program. Health facilities, school health programs, panchayath level meetings, local body interactions, and meals were utilized as venues for the same. Scheduled caste/scheduled tribe department, block extension officers, food safety officers, and Kudumbasree played an active role in imparting awareness. RBSK nurses, field workers, ASHA workers, and anganwadi teachers were trained to educate the public. However, public awareness was inadequate in spite of the efforts taken. An M.O added:

"All beneficiaries of this scheme receive free services, but they are unaware that the free services that they receive from the hospital come under AK scheme. And this is in spite of the IEC provided"

According to a beneficiary caretaker:

"*It is free for us because we belong to the Scheduled Caste"*

Challenges

a. Lack of awareness:

A major challenge reported by officials was the lack of public awareness of this scheme.

According to a DMO:

"*80% go to private clinics and these people miss out on the free services provided. The lack of awareness is high."*

b. Accounting

The joint account system of AK and RBSK was perceived as difficult to handle by most PROs. Fund crunches were mentioned, some of which were rectified almost quickly.

One DPM stated:

"Sometimes there is a tendency to keep no separate laboratory investigations' expenditure of AK which makes accounting difficult".

c. Need for advanced amenities:

Lack of facilities in public hospitals forces the beneficiaries to access private hospitals, thereby denying their opportunity to avail the free services of AK.

Another DMO from a high range area district added*:*

"Since this district does not have enough hospitals with facilities, the patients are forced to travel to other distant hospitals."

d. Lack of Specialty services

Lack of specialist services in remote areas was also a barrier preventing the beneficiaries from availing free services.

A DPM pointed out:

"There is lack of pediatricians in most centers. Staff shortage and low institutional facilities are other drawbacks."

e. Accessibility:

Accessibility is still an issue in hilly terrains and other remote areas. According to a DPM:

"We require a mobile unit for medical care and transportation due to the geographical barriers to reach the hospitals in the district"

f. Enrolment issues:

There were confusions regarding the conditions that came under RBSK and AK even after the initial rounds of sensitization and orientation.

g. Lost to follow up:

Lack of follow-up is the main problem after availing service. As quoted by an MO:

"Some of the beneficiaries do not come back for follow-up."

h. Issues of the marginalized:

Making the migrants understand details of the scheme is tough because of which referral is sometimes difficult. Less coverage of the scheme was perceived by some officials among the tribal population.

i. Other challenges:

The difficulty was expressed in the manual recording of large AK data. Lack of training for staff handling the scheme was perceived as a problem.

Discussion

Very few studies have been conducted in the past, to understand the functioning of the Arogyakiranam scheme keeping the

stakeholder's viewpoint/perspective in mind. This study was able to highlight how the scheme plays a role in benefiting the health of children and adolescents up to 18 years of age, ensuring complete financial risk protection.[8] It showcases the state's initiative to go beyond RBSK and address more disease conditions under its ambit. Prinja *et al.*[9] found that the presence of such schemes increased the utilization of hospital services by the public, and this increase in utilization is expected to sustain over time. Another study reported least OOP expenditure in state-run schemes which strengthens the findings of our study.[10] Universal Health Coverage as mentioned by the National Health Policy is one of the main features that is striven to be met through this program.[11]

It is an added advantage of the AK scheme, that services which would otherwise incur heavy costs are provided free to beneficiaries irrespective of APL/BPL categorizations unlike in RSBY which caters only to the BPL category[12] rendering commendable social protection. AK scheme singly covers health care needs of not only children but adolescents too, which covers the beneficiaries of the Rashtriya Kishor Swasthya Karyakram(RKSK) also. Sivagurunathan *et al.*[13] found that the implementation of RKSK was quite patchy, and there was no comprehensive program addressing all the needs of adolescents. Although RKSK focuses only on sexual/reproductive health, nutrition, injuries/violence, mental health, substance abuse, the AK scheme extends free services for a spectrum of other disease conditions thereby ensuring more comprehensive health care. It falls partly in line with the health amenities offered through Child Development Centre (CDC) in Kerala, which is a collaborative center for RBSK providing proactive and comprehensive child and adolescent services.[14]

It addresses health problems particularly with regard to certain state- and region-specific health issues of children, i.e., children dwelling in endosulfan affected areas in the state and health issues among tribal populations. Though there are health campaigns like "Care for Everyone" focusing on endosulfan victims (and other issues),[15] care to these beneficiaries through a cashless government health scheme like the AK scheme is of added help and is of profound value. Inclusiveness of a wider gamut of disease conditions attests the important functioning of this scheme in the state.

In the current study, fever was the most common condition for which children were brought to health facilities, similar to NFHS-IV and V reports where 90% and 86% of children, respectively under age 5 with fever were taken to a health facility/provider for treatment.[3]

The present study observed that efforts are taken within the health system to adhere to all elements expounded in the available guideline on Arogyakiranam.[6] However, an upgraded version of the guideline is anticipated by the officials, which would annihilate the doubts and uncertainties with respect to patient categorization, disease conditions' demarcation/inclusion-exclusion criteria, monitoring, evaluation, etc. Studies identify the absence of streamlined and clear-cut guidelines as a reason for weakness in a program implementation.[10] In this study, content clarity issues and beneficiary overlap issues between AK and RBSK were vocalized by the officials.

Though the current study shows a system of monitoring and evaluation in place, ensuring that a standardized and uniform mechanism of the same is being practiced across all centers would be desirable.[16] Relevant indicators reflecting the objectives of the project can help rectify even minor issues in health programs and ensuring execution of frequent internal and external evaluation would prove beneficial.[17]

Short-term fund flow delays were observed in this study which if more cared for could help avoid delay in process of implementation. The streamlined flow of funds could make the implementation process more seamless, as Kerala is known for its investment in public health as cited by Lakshminarayanan S *et al.*[18] Analogous to this study, more training for officials,[19,20] review meetings with robust reporting, and feedback mechanisms for staff involved in implementation would yield/promote even better service delivery.[21] Appraisals in the form of recognition/awards for best centers implementing AK program at district/state levels would be motivational. Upscaling centers with specialists and other service necessities (laboratory services, medicines, surgical instruments, e-Health facilities etc.) wherever necessary[22] would prove more effective.

The study observed the scope for improved public awareness generation on the program. Enhanced intersectoral coordination and sensitization of field workers could help in improving this. Similar to Moosan *et al.*'s[23] observation of lesser health service utilization among tribal mothers, this study observed a lack of contentment among some officials regarding complete coverage of tribal population under this scheme. As the program envisages equitable services, complete coverage of tribal beneficiaries in the AK scheme and their awareness of it is pivotal.[24,25]

The AK scheme is bundled with provision for equitable, quality health care services that are easily available and accessible to children up to 18 years, through the government health facilities with nil out-of-pocket expenditure to the beneficiaries' families. The facets of social security and financial stability that this program strives to provide to its beneficiaries within the state, starting from the primary health care level itself is laudable. The role of the primary care physician – both as a clinician and administrator in caring for the beneficiary, commencing from the first point of contact to providing a comprehensive continuum of care through this program is pivotal.

Strengths of this study include 100 percent acceptance and response rates because of the full-fledged cooperation of the officials across each level and also from the side of beneficiary caretakers. The introduction of costing exercises and defining packages would help in fleshing out this scheme into a more

robust program. Solutions for rectifying even the minute lacunae experienced at ground level will prove efficacious. Overall, the program has proven to be highly beneficial in tackling the health care needs of the younger population in the state, by offering comprehensive services at no catastrophic expenditure. This program, therefore, demonstrates the potential to accelerate the state's progression towards the attainment of sustainable development goals.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Acknowledgments

The authors are grateful to the National Health Mission and the Department of Health and Family Welfare, Kerala, for their wholehearted support in this study.

Key Messages

AK is bundled with the provision of equitable health care services for 0–18 years' children with nil OOP. It plays a strong role in preventing child morbidity and mortality across the state and has a structure flexible enough to make constructive changes and improvements for ameliorating further the health of children.

Financial support and sponsorship

This study has been funded by the National Health Mission.

Conflicts of interest

There are no conflicts of interest.

References

1. World Health Organization. Children: Improving survival and well-being. [Last accessed on 2021 Mar 24]. Available from: https://www.who.int/news-room/fact-sheets/detail/children-reducing-mortality.
2. National Family Health Survey-4_India.pdf. [Last accessed on 2020 Mar 27]. Available from: http://rchiips.org/NFHS/pdf/NFHS4/India.pdf.
3. National Family Health Survey-5_State FactSheet_Kerala.pdf. [Last accessed on 2021 Mar 24]. Available from: http://rchiips.org/nfhs/NFHS-5_FCTS/FactSheet_KL.pdf.
4. A Strategic Approach to Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A) in India.pdf. [Last accessed on 2021 Mar 24]. Available from: https://nhm.gov.in/images/pdf/RMNCH+A/RMNCH+A_Strategy.pdf.
5. Rashtriya Bal Swasthya Karyakram SH-RBSK-Chief Medical Officer Haridwar. 2020. [Last accessed on 2021 Jul 5]. Available from: http://web.archive.org/web/20200630142059/http://cmoharidwar.org: 80/programe-rashtriya-bal-swasthiya-karyakram.aspx.
6. Guidelines for implementation of Arogyakiranam Programme. Order No. NRHM/72/ARSH/2014/SPMSU Dated 03/01/2014.pdf.
7. Samanvay- A compilation of Central sector, Centrally sponsored and State schemes for convergence under Saansad Adarsh Grama Yojana -Kerala.pdf. [Last accessed on 2021 Mar 26]. Available from: http://nirdpr.org.in/nird_docs/sagy/Kerala.pdf.
8. Health Campaigns- Official Web portal. Government of Kerala, India. [Last accessed on 2020 Nov 28]. Available from: https://kerala.gov.in/health-campaigns.
9. Prinja S, Chauhan AS, Karan A, Kaur G, Kumar R. Impact of publicly financed health insurance schemes on healthcare utilization and financial risk protection in India: A systematic review. PloS One 2017;12:e0170996.
10. Prinja S, Bahuguna P, Gupta I, Chowdhury S, Trivedi M. Role of insurance in determining utilization of healthcare and financial risk protection in India. PLoS One 2019;14:e0211793.
11. National Health Policy 2017.pdf. [Last accessed on 2020 Nov 28]. Available from: https://www.nhp.gov.in/nhpfiles/national_health_policy_2017.pdf.
12. Rashtriya Swasthya Bima Yojna. [Last accessed on 2020 Nov 28]. Available from: http://www.rsby.gov.in/how_works.html.
13. Sivagurunathan C, Umadevi R, Rama R, Gopalakrishnan S. Adolescent health: Present status and its related programmes in India. Are we in the right direction? J Clin Diagn Res 2015;9:LE01-6.
14. Nair MKC, George B, Nair GH, Bhaskaran D, Leena ML, Russell PSS, *et al.* CDC Kerala 1: Organization of clinical child development services (1987–2013). Indian J Pediatr 2014;81:66-72.
15. Health Campaigns - Official Web portal. Government of Kerala, India. [Last accessed on 2020 Nov 27]. Available from: https://kerala.gov.in/health-campaigns.
16. Monitoring and Evaluation Quick Reference- Extracts from the Programme Policy and Procedure Manual Revised May 2005.pdf. [Last accessed on 2020 Nov 28]. Available from: https://www.unicef.org/evaluation/files/ME_PPP_Manual_2005_013006.pdf.
17. Derflerová Brázdová Z. Monitoring a evaluace program\uu podpory zdraví. Hygiena 2014;59:47-9.
18. Lakshminarayanan S. Role of government in public health: Current scenario in India and future scope. J Fam Community Med 2011;18:26-30.
19. Ganesh M, Indradevi R. Importance and effectiveness of training and development. Mediterr J Soc Sci 2015;6:334-34.
20. Truitt DL. The effect of training and development on employee attitude as it relates to training and work proficiency. Sage Open 2011;1:2158244011433338.
21. Purohit B, Martineau T. Is the annual confidential report system effective? A study of the government appraisal system in Gujarat, India. Hum Resour Health 2016;14:33.
22. Panigrahy BK, Swain A. A cross-sectional study to evaluate the functioning and infrastructure of mobile health teams and DEIC (District early intervention centre) at Koraput district of Odisha under Rastriya Bal Swasthya Karyakram (RBSK). World J Pharm Med Res 2019;5:165-72.
23. Moosan H, Stanley A, Prabhakaran AO, Vijayakumar K, Jayasree AK, Gopakumar S, *et al.* Comparison of health-care utilization pattern and its correlates among the tribal and

nontribal population of Kerala. Indian J Community Med 2019;44(Suppl 1):S57-61.

24. Report of the Expert Committee on Tribal Health-Tribal Health in India, Bridging the Gap and a Roadmap for the Future. Executive_Summary and Recommendations. pdf. [Last accessed on 2021 Mar 4]. Available from: http://nhm.gov.in/nhm_components/tribal_report/Executive_Summary.pdf.
25. Improving Health Services for Tribal Populations. World Bank. [Last accessed on 2021 Mar 4]. Available from: https://www.worldbank.org/en/news/feature/2012/02/28/improving-health-services-for-tribal-populations.