Chapter – VII

Conclusions

This chapter is an understanding of inclusive education with reference to special needs education and draws ample attention towards the complexities involved in the framework of policies; and implementation in relation to their multidimensionality factor. It chiefly focuses on the policy interventions initiated by the Government of India and their practice in the state of Andhra Pradesh. The role of state and society is critically viewed through policy dimension followed by few recommendations based on the empirical findings in order to strengthen the policies in existence with reference to special needs education.

Conceptual Understanding

The available literature clearly states that Inclusive Education can be understood as a philosophy, human right, shift in paradigm, accepting diversity, a responsibility, a motivation, building competencies, and a political strategy. To elaborate, Inclusive Education as a **Philosophy** understands the exclusive needs of children with disabilities such as educational, physical, psychological, social, technical and so on. The basic idea of Inclusive Education is to provide equal status to every child and their family, and to create opportunities and humanistic world around them. The expected results would not become true unless this philosophy is injected into the school system i.e., in both teachers and students.

Inclusive Education can be termed as a **Human Rights** issue because it promotes every child’s right to learn and live happily together in the society. It creates a positive social sense and rules out all the illegitimate reasons for separation. Research has shown that Children with Special Needs [CWSN] can do better in academics as well as in other settings of social integration in an inclusive set up. It considers the children with disabilities as ‘an inseparable part of general education system’ and gives equal rights and social dignity while coping up with the rest of the society.

Inclusive Education as a **Shift in Paradigm** triggers the progress in the social structure. As a result, the emphasis on persons with disabilities has shifted from
exclusion to inclusion; the social attitude towards children with disabilities is oscillated from ignorance to awareness; and parents’ perceptions shifted from feeling shame and burden to responsibility.

Inclusive Education orients **Accepting Diversity**. Earlier, the ‘difference’ in any person was not understood appropriately. The inappropriate understanding of the ‘difference’ in humans was labeled as disability. This notion on dis-ability made certain section of people to stay segregated from the society. Later, the disability movements and studies explored potential behind ‘disability’ and claimed it as ‘difference’ rather than inability. Hence, Inclusive Education is a process of educating and providing a space for ‘difference’ i.e., difference in understanding, teaching, learning, expression, execution etc. Thus, education needs to be provided in an appropriate environment, which includes principles of educational diversity, inclusive curriculum, strategies for managing a classroom, promoting positive social relationships, and support to the teachers to discuss the range of different needs and issues to encounter in an inclusive classroom.

Inclusive Education is a **Responsibility**. It draws the attention of each and everyone in the society. Every law or policy could be successful only when community gives its best support. Inclusive Education raises the level of community awareness to recognize and identify the capacities and potential of ever child around them. This process has shifted the whole responsibility from individual to environment. Invoking this responsibility by schools would realize the right to education and may begin to accommodate different socio-economic-cultural backgrounds of those children and their broader range of learning styles, behaviors, capabilities, and potentials in all sensory domains.

Inclusive Education promotes **Motivation**. The process—Inclusive Education—would be successful only when a teacher is highly skilled and motivated to the cause. There are sufficient research evidences to suggest that inclusion of even children with the most severe disabilities can work if schools have a culture of shared values and are
genuinely committed to improving their practice. Hence, education has to be provided in the best way possible.

Inclusive Education **Builds Competencies.** Inclusion embraces diversity, identifies the potentiality and enables the stakeholders in the process. It capacitates in building the competencies gradually in children with disabilities, teachers, administrators, etc. However, building competencies varies from person to person in general and in this case most probably within the school system. For instance, a school administrator may focus on the cost effectiveness of the proposed system while a teacher may focus on the ways and means of developing effective curriculum and instructional method; the peer group, on the other hand, will show an interest in accommodating the child with disabilities in the daily routine in school.

Inclusive Education is a **Political Strategy.** Inclusive education is sometimes seen as a tool of human rights and democratic principles that confront all forms of discrimination in the process of developing an inclusive society. It is to avoid negligence or ignorance in society. Inclusive Education will have a great significance because a child with disability is generally greeted with disappointment, frustration and anger in the society. The initial years of the children would have been spent either in medical shopping or neglected or in over protection. This extreme situation might have excluded the child from opportunity of love, nurture and simple childhood. It is important to ensure facilities to the children to lead comfortable life but that should not disable them to realise their potential. This social construction of exclusion which excludes these people from the mainstream opportunities that normal child, generally, would expect such as normal schooling, and other opportunities to grow. Hence, it is a move towards re-creating the cultural value system with dignity and self respect.

**Policy Understanding**

Inclusive Education is one of the important aspects of Indian educational policy. Including children with special needs are seen as crucial element from the beginning.
The essence spins around four indicators i.e., (1) Education in common schools (2) Equal Partnership in Learning (3) Special training to cope with mainstream learning and (4) Education in appropriate environment and learning. Indian Education Commission (64-66) states that the children with special needs are an inseparable part of general education system and needed to improve the adequate and necessary services. The scheme ‘Integrated Education for Disabled Children’ (1974) was intended to provide educational opportunities for children with disabilities in common schools. It was to facilitate integration and ultimate retention of children with disabilities in common school system. It means, schools should have educational aids and equipment, salaries for special teachers and facilities for children with disabilities.

‘National Policy on Education’ (1986-92) emphasized the need to provide education to children with motor handicaps and other mild disabilities in regular schools, whenever feasible. It extended by saying that children with special needs should be enrolled only in special schools. Children who are already in special schools could be permitted to join in regular schools as soon as they acquire reasonable levels of daily-living skills, communication and basic academic skills. It also emphasized the need to restructure primary teacher training programs to prepare teachers to deal with children with disabilities. It has made a clear distinction between inclusive education and special education regarding children with special needs. Similarly, ‘District Primary Education Program’ (1994) was aimed to reduce the overall dropout rate of all students enrolled in primary classes, to raise their achievements levels and to provide primary education for all children, including children with disabilities.

Persons With Disabilities Act, 1995 ensured that every child with a disability should have access to free education in an appropriate environment till he/ she attains the age of 18. It is to promote integration of students with disabilities in the normal schools, to promote and set up special schools in government and private sector so that children with disabilities will be a part of general schools, to endeavour to equip special schools with vocational training facilities. Sarva Shiksha Abhiyan (2002) ensured that every child with special needs, irrespective of the kind, category and degree of
disability, should be provided with meaningful and quality education. Finally, National Policy for Persons with Disabilities (2006) considered PWD as the valuable human resource for the country. It has focused on creating an environment to provide equal opportunities, protection of their rights and full participation in society for the PWDs.

**Empirical Understanding**

The basic objectives of the study are: to study the Special Needs Education programs in Andhra Pradesh, to understand and analyse Inclusive Education with reference to Children With Special Needs (CWSN), to find the complexities in implementing Special Needs Education, and a Critique on Special Needs Education in Andhra Pradesh.

(A) Methodology

The present study is conducted with the help of both primary and secondary sources to understand theoretical and empirical aspects of the study. The field study primarily depended on personal interviews with children with special needs, their parents, teachers and Inclusive Education Resource Teachers. The purpose of the interviews was to know socio-economic backgrounds of children with special needs and their families, society’s perception on disability and special needs, to find out accessible environments in schools, and to identify further requirements with reference to special needs education. The field study was conducted in 13 villages in four Mandals in East Godavari district of Andhra Pradesh. The selection of Mandals is made on the basis of their performance in implementing inclusive education programs with reference to children with special needs. The identification of the respondents is made through simple random sampling and snowball sampling. The total number of respondents considered for the study was 90 children with special needs, their parents, nine teachers, three Inclusive Education Resource Teachers and one Community Mobilisation officer.
(B) Methods suggested by SSA

Children with special needs are not a homogeneous group. Their needs differ from person to person based on type of disability. They are (a) Visually Impaired students, need magnifying glasses, books with big letters, optical device, non-optical device, and electronic device (in case of partial visual impairment), walking sticks, Braille scripts, audio sets, and computer with appropriate software. (b) Hearing Impaired children needs a Hearing Machine, Tape Recorder, Television, and other materials like real objects, charts, flash cards with colours, pictures, talking toys and different objects to make different subjects. (c) Learning disabled children need embossed charts and embossed textures, Optical Device, Tape Recorder, Braille slates, Abacus, Magnifying Glass, Large Print Books, real objects and concrete materials. (d) Mentally Retarded children needed Teddy Rings, Peg Boards, Flash Boards, Charts, Flash Cards, Puzzles, concrete materials. (e) Cerebral Palsy children needed Wheel Chairs, Ramps, Escort, and adoptive materials like Pencil with gripper and adoptive spoon. (f) Orthopedic Impaired children needs Wheel Chair, Ramp, Escorts and structurally accepted environment. Apart from the above said physical provisions, they also need specially trained teachers, special teaching methodology and understanding approach.

(C) Composition

The study has found four major categories of disabilities i.e., Visual Impairment, Hearing Impairment, Orthopedic Impairment, and Mentally Retarded. The mentally retarded further includes Cerebral Palsy (CP), Cerebral Palsy with Othopedic Impairment (CPOH), and Cerebral Palsy with Mental Retardedness (CPMR). The study identified that, half of the respondents belonged to the mentally retarded category. The age composition of children with special needs ranges from 5 to 20 years. The highest percentage of respondents is from 11-15 age groups which is 3/4th of the sample. Regarding caste composition of respondents, 40 percent of them are from Backward Categories, 18.9 percent are from Scheduled Caste and 3.3 percent are from Scheduled Tribe and 37.8 percent are from Other Categories.
(D) Findings

According to the study, the major problem in inclusive education is lack of parental awareness. Awareness plays an important role in executing any designed action. The present study reveals that the awareness on inclusive education with reference to special education is inadequate. Due to the substandard knowledge on disability issues and its consequences, the problems in inclusive education have increased. One of the primary aspects in special education is early identification and detention from school. This has not been properly done by parents, teachers and local level medical departments. Further, the facilities and awareness regarding physiotherapy and counseling was not propagandized in the society. Hence, the need of the hour is to build awareness on the above mentioned areas that would enhance the condition of children with special needs in the learning process at school level. As part of it, Information, Education, Communication (IEC) material such as documentary screening, audio-visual support, distributing booklets and pamphlets, etc need to handover to all the categories of people that belong to the sample of the study. The medical staff in the primary health center and Anganwadi teachers in the location would need take the responsibility during the natal and pre-natal phases. Support from the teachers and local administrative officials in creating awareness in the society would also ensure in bringing the change.

It is been widely observed that shortage of awareness and improper knowledge of available medical facilities is causing heavy loss to children and parents. Secondly, the ignorance and the dogmatic knowledge of parents and caretakers on local medical knowledge is causing loss of money, energy and hope concomitant to delay in cure. Many a times these delays affect the child permanently with disabilities. In some instances, strangers take the advantage of parental ignorance, and cheat them with fake promises of a speedy recovery of the child. It is the challenge to bring parents out of their innocence and sensitize them on scientific medicines. Meticulous contemplation of empirical reality and appropriate planning and implementation of plan of action would yield in effectively preventing the child to fall prey to disability as result of parental ignorance. The most important aspect of special needs education
is to create awareness on special needs. One should recognize that special need is part of human rights. It is a multi-level and inter-dependent task. Awareness on special needs remains incommensurate to the present society.

The major drawback is ignorance of the parents to identify children’s abilities and lack of knowledge regarding training centers. The study discovered that 43.3 percent children, have listening problem. It is observed that the treatment towards deaf and dumb is with sympathy. Some parents fail to recognize their child’s skills. Some children, though deaf, manage their daily activities with their visional abilities; but they cannot respond to happenings behind their back/rear. Parents are unaware of their children’s problems in listening. They think that the child can listen from the front and not from behind. In fact, it is not the listening ability from front side, but an alternative skill developed by the child. In this study, 63.3 percent children have a problem with speech. Parents are ignorant enough in recognizing disabilities in their children. They believe in superstitions and expect children to start speaking as they grow up. Another common belief is that age solves many problems. But, when the child does not speak after a certain age, the child is considered dumb. In most cases, parents do not know that early identification of such problems can be rectified through speech therapy and sign language. Similarly, the study found that 37.8 percent have problems with mobility. Parents are also unaware of the facilities provided by the government for the development of such children. Sometimes, parents can identify the mobility issues of the children, but, most of the times they fail in getting their treatment done. It may be due to financial constraints, lack of knowledge in and about training centers, long distance between their home and hospital and unaware of the facilities available to treat their children. From the study, it reveals that 73.3 percent children have a problem with writing, 42.2 percent have a problem with bathing, and 52.2 percent have a problem with clothing. These three mentioned categories are due to motor impairments, mental retardedness, and cerebral palsy. Parents of these children do not have any idea about the causes or the consequences of the problem that their children are facing. Hence, creating awareness among teachers and parents
on the benefits of special needs education expected to bring hope in the society that everyone can enjoy their rights.

Another important aspect by which parents deny medical treatment to children with disabilities is faith in God. They go on pilgrimage along with their sick children with a hope of healing. Hence, it is important to instill and internalize the scientific advancements in the field of medicine, so that children with special needs benefit at the maximum level.

Existing programs and its implementations proved that they have not reached the targeted sections as desired. The dearth awareness on special needs education, inclusive education, benefits of education, medical facilities, pre- and post-natal care availability of rehabilitation centers and rights of the special needs children are seemingly hindrance to the success of the programs. Due to the deficient multi-level unawareness campaigns, the purpose of education is downplayed and children with special needs are kept at bay from education. Social stigma and inter-group marriages are also playing important role.

The researcher of the study felt the need for a high-level convergence of different departments to transform the lives of children with special needs. As said earlier, Inclusive Education is a multi-dimensional process in understanding; it needs a collaborative support from departments of health, education, women and child, the local governments, and community mobilization in the villages in order to address the issues of special needs education.

Another important dimension in inclusive education process is safety and security. Parents are worried about their child’s safety in schools. The reasons for this apprehension according to parents are (1) child’s incapacity to handle the society, (2) society’s inferior notions on disability and (3) attainment of puberty in the case of the girl child. They prefer not to send children out of their home. This position of the parents’ alerts on the perception the society has about the weaker sections. It is
important to bring them out of this phobia; the state should create a safety environment for special needs children and their parents.

The practice of early marriage also creates hurdle in inclusive education. Parents feel that marriage is important than the child’s cure. To avoid exposing the disabilities of the child to the society, they deny medication for the child and refuse to be enrolled in any government records. It is important to break the notion of marriage and concentrate on curing the child.

The awareness programs should also address social stigma associated with disabilities. Parents do not take special needs children to social gatherings part of socialisation, and there are instance where some fathers do not care for the child. It leads to humiliation and isolation of the child. The study says that 43.3 percent of children are restricted from moving out of the home and 3.3 percent of parents are embarrassed to take them to social gatherings. The stigma also extends to schools and colleges, and teachers humiliate them. As a result, special needs children are forced out of the education process. The study says that 20 percent of the children are rejected by teachers in the school, 2.2 percent children revealed that they don't go to school and 1.1 percent of the children are recommended to go to special schools.

(E) IERT: Minimal impact

The study found that the Inclusive Education Resource Centre (IERT) is one of most important part of the inclusive education with reference to children with special needs. It is a home based education where teacher visits the children at their homes and teaches. The IERTs impact can be understood in three areas. They are (1) children’s learning process (2) parents awareness and (3) teachers concern. The children’s learning process is not successful as mentioned in the policy. Among the whole sample, only 34.4 percent of children have got an opportunity to avail Home Based Education and around 64.4 percent of the children neither have any idea about Home Based Education (HBE) nor about Inclusive Education Resource Teacher. Among the Home Based Educated children 23.3 percent are satisfied with HBE and 11.1 percent
are dissatisfied with the outcome of children's education. In each Mandal, only one IERT is appointed and he/she has to mainstream 15 children with special needs in a span of 10 months. The time they spend with the children is very less. Hence, there was not much difference in the children before and after the HBE. Secondly, the HBE is also aimed at providing counseling and awareness to parents of children with special needs, so that their care and concern would be enhanced scientifically. In fact, it could not impact any parent. Parents could not understand the thrust of education in general and HBE in particular. Hence, their support to IERT is also lower than the expected level. As a whole, only 8.9 percent parents have been counseled by IERTs, which would enhance their knowledge to care for their children’s special needs. Finally, the IERT is supposed to visit few schools on monthly intervals. This visit is intended to provide follow-up support to mainstreamed children form HBE and to support general teachers to make them understand the purpose of children with special needs. Neither the general teacher received suggestions for him nor IERT contacted them. And, the study shows that the IERTs have different opinion on disabilities. Some of them consider it as problem from birth, for some it as social discrimination and for some other it as physical problem but everyone said poverty attribution is the root cause of disability.

The pressure on IERT is huge. Visiting 15 children in different homes, at different times is very difficult for them. Further, IERTs have no job security, have low level status compared to general teachers, and did not get adequate support from government officials.

Parents do lack seriousness towards education and neglect their children.. Hence, it is important to increase the number of IERTs in each Mandal to cater to the requirement of special needs children. It is also important to start an elementary special education day-school at the Mandal level to teach basic skills and include them in high school. The IERTs should also have the freedom to practice their own methods of education. It is obvious that they expect social status on par with regular teachers.
Educational Placement: A task to be

The motto of the Indian education policy is to provide education to each and every child irrespective of caste, creed, religion, sex and disability. Inclusive Education with reference to special needs education is supposed to provide maximum accessibility to children with special needs. Educational placement can be understood through (1) maximum educational placement (2) accessibility in teaching (3) acceptance by teachers and (4) common syllabus to teach the different categories. The study came out with a finding that around half of the children are interested in schooling but only 20 percent are currently enrolled in schools and 12.2 percent are drop outs for different reasons. Among the few children enrolled in school, 31 percent have reading skills, 27.6 percent have writing skills, 6.9 percent have listening skills, and rest of them visit schools without gaining any learning abilities. It reveals that the common school system of education has failed to incorporate children with special needs.

A basic reason for less enrollment and drop out of children with special needs is non-availability of untrained teachers. As a result, these children visit school without any purpose and finally remain drop out of school. As most of the children could not mingle with other peer group they found no use of going to school. Hence they prefer to stay back at home. The untrained, teachers in general schools think that the time given to a special child is a loss to other students in the class. This argument further substantiates with the 10.3 percent of students having confessed that their school is inaccessible and available schools do not have a resource room facilities. The study unearthed the fact that the general teachers do not have clear ideas on many aspects of their respective job. While responding to the best teacher aspect of the study, student ratio, 33.3 percent of the teachers opines 1:25 as the best ratio, where as 44.4 percent teachers says 1:30 and 22.2 percent teachers is say, it is 1:40. The teaching methodology they follow is Learning Enhancement Program (LEP) by 77.8 percent of teachers and 22.2 percent of teachers follow their own methods. Following LEP would give maximum understanding of every child’s abilities and disabilities. But the study shows 33.3 percent of the teachers follow SSA style, and 44.4 percent teachers follow their own Strategy. Hence, it is understood that 66.6 percent of the teachers are not
following LEP to identify children’s disabilities. Hence, teachers should be given orientation to identify disabilities in children.

With regard to understanding the teacher’s perception on disability the study shows that, 22.2 percent considers that it as a problem, 55.6 percent considers it as God’s creation, and 22.2 percent consider it as a physical problem. It shows that majority of the teachers do not have proper understanding on disability which in turn hinders the progress of inclusive education. Their perception on disability has an impact on time they spend on children with special needs. 77.8 percent of teachers say that they spend only free time with children with special needs, and 22.2 percent of the teachers say that they have no time to spare. The reasons for not spending time with special needs children are lack of awareness on inclusive education, CWSN programs, and the difficulties they face while teaching children with special needs. 77.8 percent of the teachers do not know anything about inclusive education and 22.2 percent of teacher’s could not give clear description; similarly, none of the teachers was aware of programs related to special needs education. In addition to this, 77.8 percent of the teachers said that they never got orientation from any Inclusive Education Resource Teacher and 22.2 percent of the teachers accepted that they have received suggestions to deal with mainstreamed children from Home Based Education only for a short period. With these limitations, general teachers are trying to create conducive atmosphere among CWSN and other children depend on their understanding of disability. The study shows that, 33.3 percent of teachers create friendships by explaining the difference, 22.2 percent of the teachers teach humanity to peer groups and 44.4 percent of the teachers are creating sympathy to accept children with disabilities in the school. Considering these revelations, it may be important to train every teacher in special education so that there would be no need of special educator and every teacher could understand every student’s needs in class.
(G) Aids and Appliances: Replacing confidence

Educational aids and appliances can give the confidence to the children affected with impairments. They include Braille kits, hearing machines, crutches and wheel chairs, etc. Though the district records mentioned that thousands of aids and appliances were distributed to children with special needs in the villages, but on the ground it was found none of the children selected in the sample had received these aids. It implies that distribution is limited to only few members. The study highlights the need for increasing the number of accessories to cater the needs of these children.

(H) Architectural Barriers: Never understood

Inclusive Education cannot be successful as long as the physical structures of the school building are not made accessible to students with motor impairment. It must be made compulsory that every school need should have ramps and railings which enable the disabled children to access the buildings. The surface must be accessible to walk and wheel friendly. This accessibility is an encouragement to children with motor impairments to join school. The study did not find any ramp constructed for the purpose of children with special needs. It also shows that 20.7 percent from school enrolled have problems with infrastructure and another 20.7 percent drop-out of schools due to such problems. Few ramps in Mandapeta are constructed during elections and Alamuru, Chintaluru, Gorripudi, Penuguduru, and Velangi did not have ramps because their floor is very low from the ground. It was learnt from the Community Mobilisation Officer that schools construct ramps because funds are released for construction, but they are unaware of their purposes. In some cases, the fund was returned because they do not need a ramp because their building height was low. Hence, it is very important to create a perception on the architectural barriers. Every school has toilet facilities separately for boys and girls, and equipped with sufficient water, but they remained closed because of poor maintenance.
(I) Invisible Factors

Poverty: Champion of the cause

Poverty apparently the major factor behind the special needs children. It has a multi-dimensional impact on their lives. The internal and external factors of poverty have impacted on parents’ thoughts and restricted them to think within their economic capacities. It has affected all other parts of life. The maximum number of families is living with minimum amount of annual income. Though the income ranges between Rs.10,000 to Rs.60,000/- in the sample, but 57.8 percent of the families are living with only Rs.10,000-15,000/- annual income. The study says that more than half of the children with special needs would be better if physiotherapy is given. Around 40 percent of the families could not afford of it, 10 percent families could give for few days, and 2.2 percent of the families only could continue. Hence, there is a need for providing regular work, supply of nutritious food, regular medical visits, and conducting consistent survey by teachers, and Anganwadis, so that the frequency of the issue can be estimated in time.

Culture Change: System Change

Disability is not an individual issue. This society labels them as unproductive and stigmatises with persons with disabilities. The value given to disability is unproductive and stigma. These factors hamper the growth of children with special needs. They feel devalued, ignored, misinterpreted, under represented and set in particular design in which they cannot think and act beyond their social setup. Society has to think about their wellbeing. There is an urgent need for assessing the abilities of children with disabilities from their childhood. If it so, the results can be very encouraging and can contribute to the society. The study shows that 64.4 percent of the children are interested to play but only 6.6 percent of children got an opportunity to play. Inclusive education emphasizes on learning through play as a successful method. Apart from creating awareness, implementing the solution mentioned in the earlier chapter would change the conventional understanding of disability and education and move to new cultural aspects of inclusive education. This new approach
would transform the lives of children with special needs into a better form of learning skills.

It can be concluded by saying that until and unless we cultivate a favorable culture, no policy or program designed for children with special needs can give estimated results. ‘The way of life” as explained by Raymond Williams (1981) , needs to be explored to see transformation. Thus, disability does not affect only the individual, but impacts the whole community rather. The cost of excluding people with disabilities from taking an active part in community life is high and has to be borne by society, particularly those who take on the burden of care. This exclusion often leads to loss in productivity and human potential [DFID, Feb; 2000]. Education is an important area of acquiring knowledge and exclusion in this area results in the under-development of the whole society. That is, the society has to focus on expanding the scope of the educational system. The whole inclusive education process is about breaking barriers, on-going search to respond to diversity, and equal participation of all students within the mainstream education system. To achieve this, education system should be more flexible and accommodating without losing quality. It means that all the support required by children should be made available in every school. It also implies to capacity building of teachers, parents, and communities to negotiate with the education system and governments to develop policies wherein inclusion is perceived as vital element of the education system [Confluence; SSA].

The special needs education in Andhra Pradesh has high aims in creating an inclusive society with reference to children with disabilities. The intended inclusiveness is not completely seen in the empirical study. The reasons are social, economical and cultural in understanding of the special needs of children with reference to education. The efforts of the state government are not enough in providing appropriate education. The structural changes are needed both at teaching methodology and valuing the child. The multilevel convergence of different departments related to children could be a big hope to empower the child both in terms of education and health.