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An Integrated Mother-Child Health and Education Services Program in India: An Example of Informal Preschool Education

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Abstract

Providing high quality and inclusive preschool education for children from families with low socio-economic status especially in developing countries remains a problem to be solved. Within this context, investigating good practices supporting children's holistic development, well-being and academic success and discussing all aspects of these practices can provide examples for developing countries in making cultural adaptations to their local practices considering their new understanding. An alternative early childhood education program that addresses the needs of the population in its host, India, and introducing this program to field experts and educators was the focus of this current study. The Integrated Child Development Services (ICDS) was launched in 1975. It is a model that differs from other programs for child development and care because it offers the world's largest mother-child health and education services together. ICDS, which is acknowledged as the flagship program of India, is a governmental program operated through Anganwadi Centers (AWC). The centers serve as an outpost for the first line of health, nutrition, and early learning services for disadvantaged groups including children aged 0 to 6 years, pregnant women, and lactating mothers. This study aims to introduce ICDS to early childhood education professionals, teachers, and policy makers.

Keywords

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Hindistan'da Uygulanan Bütünleştirilmiş Bir Anne-Çocuk Sağlık ve Eğitim Hizmetleri Programı: Bir İnformal Okul Öncesi Eğitim Örneği

Öz

Başta gelişmekte olan ülkeler olmak üzere düşük sosyoekonomik düzeylerdeki aileler için yüksek kaliteli ve kapsayıcı okul öncesi eğitim sağlamak, çözülmesi gereken bir sorun olmaya devam etmektedir. Bu bağlamda, farklı ülkelerden çocukların bütünsel gelişimi, esenliği ve akademik başarılarına katkıda bulunan uygulamaların araştırılması ve bunların tüm yönleriyle tartışılması, gelişmekte olan ülkelerin bu yeni uygulamaları dikkate alarak yerel uygulamalarına kültürel uyarlamalar yapmalarını sağlayabilir. Mevcut çalışmanın odağı Hindistan'daki nüfusun ihtiyaçlarını karşılayan alternatif bir erken çocukluk eğitimi programı olan Bütünleştirilmiş Çocuk Gelişim Hizmetleri (Integrated Child Development Services- ICDS)'ni alan uzmanları ve öğretmenlere tanıtmaktır. ICDS, 1975 yılında yürürlüğe girmiştir ve erken çocukluk bakımı ve gelişimi için dünyanın en büyük anne-çocuk sağlık ve eğitim hizmetlerinin bir arada sunması nedeniyle diğer programlardan farklı bir modeldir. Hindistan'ın öncü programı olarak kabul edilen ICDS, Anganwadi Merkezleri (AWC) aracılığıyla 0-6 yaş arasındaki çocuklara, hamile kadınlara ve emziren annelere eğitim ve sağlık hizmetlerini bir arada vermektedir. Bu çalışma; ICDS'yi erken çocukluk eğitimi profesyonellerine, öğretmenlere ve politika yapıcılara tanıtmayı amaçlamaktadır.

Anahtar Sözcükler

Bütünleştirilmiş sağlık ve eğitim hizmetleri
Anganwadi Merkezleri
Erken çocukluk eğitimi
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Genişletilmiş Türkçe Özet

Giriş

Çok sayıda ülke, daha sağlıklı bireylere ve dolayısıyla daha sağlıklı bir topluma ulaşmak için kültürlerine uygun erken çocukluk eğitimi modelleri geliştirme ve kültürel ihtiyaçlarını karşılama çabası içindedir. Montessori, Waldorf ve Reggio Emilia, High-Scope ve Piramit başta olmak üzere dönemin kültürel ve sosyal ihtiyaçlarına göre oluşturulmuş pek çok erken çocukluk eğitimi yaklaşımı; Head Start, Sure Start, HIPPY gibi birçok erken müdahale programı mevcuttur ve bu modellerin çoğu dünyada yaygın olarak kullanılmaktadır (Edwards; 2002; Gutek, 2004; New, 2007; Uhrmacher, 1995; Yalçın ve Aktan Acar, 2021). Bu dünya çapında bilinen yaklaşımların ve erken müdahale programlarının yanı sıra, dünyanın dört bir yanında coğrafyanın ihtiyaçlarına cevap veren ve evrensellik kazanmaya çalışan birçok erken çocukluk eğitimi modeli ve erken müdahale programları bulunmaktadır. Örneğin Persona Dolls, Sure Start ve Kendi Çocuğunuzu Eğitin programları, yerel toplumların kültürel ve sosyal ihtiyaçlarından kaynaklanan mevcut erken çocukluk eğitimi erken müdahale programlarıdır (Aktan Acar ve Çetin, 2017; Sarı, 2017; Yalçın ve Erden, 2017). Ayrıca, özellikle gelişmekte olan ülkeler için tüm sosyo-ekonomik seviyelerdeki çocuklara yönelik olarak nitelikli erken çocukluk eğitimi sağlamak, hâlâ önemli bir sorundur (Organisation for Economic Co-operation and Development [OECD], 2015). Bu bağlamda, farklı ülkelerde ortaya çıkan erken çocukluk eğitimi uygulamalarını araştırmak, gelişmekte olan ülkelerin, programlarını gözden geçirmelerini ve araştırdıkları uygulamalar doğrultusunda programlarına bazı uyarlamalar yapmalarını sağlar (Yalçın ve Erden, 2017).

Bu bilgiler ışığında bu çalışmada, alternatif bir erken çocukluk eğitimi programı olarak Hindistan'da uygulanan ve ülkenin ihtiyaçlarına cevap vermeye çalışan Bütünleştirilmiş Çocuk Gelişimi Hizmetleri (ICDS) programı sunulmuştur.

1951'den bu yana, küçük çocukların refahı, Hindistan'ın kalkınma planlarının gündeminde bulunmaktadır. Bu bakımdan Hindistan hükûmeti tarafından 1975 yılında, altı yaşına kadar olan küçük çocukların sağlık ve eğitim sorunlarıyla başa çıkma amacıyla ICDS programı kurulmuştur (Manhas ve Qadiri, 2010). ICDS, erken çocukluk bakımı ve gelişimi alanında dünyanın en büyük ve benzersiz modellerinden biri olarak kabul edilir. ICDS, kırsal alanda yaşayan 0-6 yaş arası çocuklar, hamile kadınlar ve emziren anneler için sağlık, beslenme ve erken öğrenme hizmetleri veren Anganwadi Merkezleri (AWC) aracılığıyla işletilen bir hükûmet programıdır. Bu hizmetlerin paket olarak sunulma fikri, bütünleşik hizmetlerin genel etkilerinin tek tek sunulan hizmetlerin kişilerin sağlıklı gelişimi üzerindeki etkilerinden daha büyük olacağı anlayışına dayanmaktadır (Ministry of Women & Child Development, 2009). Hindistan genelinde Bütünleşik Çocuk Gelişimi Hizmetleri'nin bir parçası olarak erken çocukluk eğitimi ve diğer belirtilen hizmetleri sunmak amacıyla 1.3 milyondan fazla Anganwadi Merkezi (AWC) bulunmaktadır (Timsit, 2019).

ICDS, çoğunlukla kentlerin kenar mahallelerine ve kırsal bölgelere odaklanmaktadır ve asıl amacı toplumun en çok ihtiyaç duyan üyeleri için paket program sağlamaktır. Women and Child Development Department (Kadın ve Çocuk Bölümü) (2014), ICDS programının hedeflerini, altı yaşından küçük çocukların beslenme ve sağlık koşullarını geliştirmek, çocuklara uygun sosyal, fiziksel ve psikolojik gelişim için temel sağlamak, bebek ölüm oranını, hastalık oranını, beslenme eksikliğini ve okulu terk etme oranını azaltmak, çocuk gelişimini iyileştirmeye yönelik politikalarla farklı birimlerin uygulamaları arasında tutarlılık sağlamak, uygun sağlık ve beslenme eğitimleri ile annelerin çocuklarının sağlık ve beslenme ihtiyaçlarını karşılama becerilerini geliştirmek olarak tanımlamıştır (Women and Child Development Department, 2014).

İnformal okul öncesi eğitim etkinlikleri, ICDS programının önemli parçalarındandır. Women and Child Development Department'a (2014) göre okul öncesi eğitim hizmeti, yaşam boyu öğrenme ve bütünsel gelişim sağlayan programın hayati bir bileşenidir. İnformal okul öncesi etkinlikler genellikle Anganwadi çalışanları tarafından verilen eğlenceli oyun temelli etkinlikleri kapsamaktadır. 3-6 yaş arasındaki çocuklar bu etkinliklerden günde yaklaşık üç saat yararlanabilmektedir. Bu etkinlikler örgün eğitim faaliyetleri değildir ve çocuklar için çevresel uyarımı sağlamayı, istendik tutumları, değerleri ve davranış modellerini geliştirmeyi, aynı zamanda çocukların okula hazırbulunuşluklarını desteklemeyi hedeflemektedir. Çocukları ilköğretime hazırlamanın yanı sıra, bu hizmet küçük kardeşlerinin bakımını üstlenen daha büyük çocukların (özellikle kız çocukları için) okula devam etmesini sağlamayı da amaçlamaktadır (Singh, 2013).

Tartışma ve Sonuç

Bu çalışma kapsamında incelenen etki, değerlendirme çalışmalarının da tespit ettiği gibi, ICDS programının çocukların hem sağlık hem de eğitim koşulları üzerinde olumlu etkileri vardır (örn. Kishor, 2000; National Institute for Public Cooperation and Child Development [NIPCCD], 1992). Örneğin; kırsal, kentsel ve kabile alanlarında yer alan 700 Anganwadi Merkezinden faydalanan 0-6 yaş çocuk, anne ve ailelerinin deney grubunda, bu programdan yararlanamayanların ise kontrol grubunda yer aldığı bir çalışma yürütülmüştür. Bu çalışma sonuçlarına göre ICDS programının çocukların sağlığı ve beslenmesi üzerinde olumlu etkileri vardır. Ayrıca deney

grubunda yer alan yeni doğanların doğum ağırlıklarının, kontrol grubunda yer alanlara göre daha yüksek olduğu bulunmuştur. Yine aynı çalışmada; programda yer alan çocukların 50'ye kadar sayma, renkleri ayırt etme ve isimlendirme, en az beş nesneyi isimlendirme, kalem tutma gibi becerilerinin geliştiği de tespit edilmiştir. Bu programdan faydalanan çocukların, 5-14 yaş aralığındaki okullaşma oranının, programdan faydalanmayan gruba göre daha yüksek olduğu da bulunmuştur (NIPCCD, 1992). Kishor (2000) tarafından yürütülen bir çalışmada ise programın, çocukların ve annelerin tıbbi ve beslenme koşulları üzerinde olumlu etkileri olduğu sonucuna ulaşılmıştır. Örneğin, programdan faydalanan çocukların beslenme durumlarında artış söz konusuyken bebek ölüm oranlarında düşüş gözlemlenmiştir. Benzer şekilde programdan faydalanan çocukların faydalanmayanlara göre daha iyi dilsel ve bilişsel performans ve davranışlar sergiledikleri, özellikle ilkokulda okulu bırakma oranlarının daha düşük olduğu görülmüştür. Ancak 1992 yılında yapılan çalışmaya kıyasla 1999 yılında daha kapsamlı bir örneklemle yürütülen bir başka çalışmada, çocukların okula hazırbulunuşlukları bu amaca hizmet eden bir testle değerlendirilmiş ve örneklemde yer alan çocukların yarısından daha azının basit kelimeleri okuma, nesneleri ayırt etme ve sayma gibi becerileri kazandığı gözlemlenmiştir (National Council of Applied Economic Research [NCAER], 2001). Benzer şekilde, Anganwadi Merkezlerinde verilen informal okul öncesi eğitim hizmetinin yararlarının beklenen seviyeye ulaşamadığını ifade eden çalışmalar da bulunmaktadır (örn. Gragnolati, Shekar, Das Gupta, Bredenkamp ve Lee, 2005; Ledlie, 2011). Bu merkezlerde verilen eğitim; akademik başarı, bilişsel gelişim ve çocukların okula hazırlık becerileri açısından gelişmeler sağlasa da normal anaokullarındaki eğitim, aynı yaş grubundaki çocuklar üzerinde daha olumlu etkilere sahiptir. Ancak bu durumun sadece Anganwadi Merkezlerinde verilen informal okul öncesi eğitimle ilişkili olmadığı düşünülmektedir. Diğer okullarda, özellikle özel okullarda eğitim alan çocuklar sıklıkla sosyoekonomik düzeyi yüksek ailelerden gelmektedir (Rao, Ranganathan, Kaur ve Mukhopadhayay, 2021). ICDS ise toplumun her bakımdan dezavantajlı gruplarını hedef almaktadır. Araştırmalar, okula hazırbulunuşluk veya diğer akademik becerilere ilişkin ailenin sosyoekonomik düzeyinin, oldukça yordayıcı bir değişken olduğunu ortaya koymuştur (Bergen, Zuijen, Bishop ve Jong, 2016; Buckingham, Wheldall ve Beaman-Wheldall, 2013). Dolayısıyla diğer formal ve özel okullarda eğitim alan çocuklarla aynı gelişim çıktılarını beklemenin ve bunu programın yeterince başarılı olmadığı şeklinde yorumlamanın anlamlı olmadığı düşünülmektedir. Zira, ICDS programından faydalanan çocukları, benzer sosyoekonomik düzeyde hiçbir okul öncesi eğitiminden faydalanmayan çocuklarla gelişim çıktıları bakımından kıyaslayan çalışmalar, ICDS programının olumlu etkileri olduğunu ortaya koymuştur (Baiju, 2014; Kaur, 2021). Ancak Anganwadi Merkezlerinin fiziksel koşulları ve eğitim şartları arasında eşitsizlikler bulunmaktadır. Örneğin bazı Anganwadi Merkezlerinde kapalı alan olmamakla birlikte sadece sağlık hizmetleri için gerekli olan materyaller sağlanabilmektedir. Yapılan çalışmalar bu eşitsizliklerin Anganwadi Merkezlerinde kullanılan öğretim yöntemlerinin ve materyallerin kısıtlanmasına neden olduğunu göstermekte (NCAER, 2004) ve sadece oyun temelli kullanılan yöntemlerin bilişsel becerileri tek yönlü olarak fazla öne çıkarsa da istenen başarıya ulaşamadığını vurgulamaktadır (Manhas ve Qadiri, 2010; Swaminathan, 1990). Ancak, Gragnolati ve diğ. (2005) ICDS programının Hindistan'daki hâlihazırdaki duruma uygun olarak oldukça iyi tasarlanmış olduğunu fakat programın kuramsal tasarımı ile uygulamaları arasında büyük tutarsızlıklar bulunduğunu ve bu durumun programın potansiyel başarısını engellediğini iddia etmektedir.

ICDS programıyla Türkiye'de hâlihazırda yürütülen erken çocukluk gelişimi ve eğitim projeleri kıyaslandığında ise ICDS programı ile ülkemizde uygulanan programların arasında birtakım benzerlikler olduğu görülmüştür. Örneğin; erken çocukluk dönemindeki çocukların, hamileler ve annelerin hedef kitle olarak seçilmesi, onların beslenme ve sağlık koşullarının iyileştirilmesi, annelerin bebek bakımı ve sağlığı konusunda eğitilmesi ve erken çocukluk dönemindeki çocukların gelişiminin bütüncül olarak desteklenmesi gibi hedeflerin ortak olarak yer aldığı görülmüştür. Öte yandan, bu projelerin yapısı ve yönetiminde bazı farklılıklar bulunmaktadır. Türkiye'de genel olarak projeler daha kısa sürede yürütülmekte, yerel uygulama alanlarında ve daha küçük gruplar tarafından yönetilmektedir (Anne Çocuk Eğitim Vakfı [AÇEV], 2020). Ayrıca Türkiye'deki çalışmalar daha küçük çapta, genellikle sosyal sorumluluk projeleri şeklinde, yerel yönetimler ve sivil toplum örgütleri tarafından yürütülen, sıklıkla kurumsal ya da aile temelli programlardır (Yalçın ve Aktan Acar, 2021). Ancak ICDS, 0-6 yaş aralığını kapsayan, çocukların hem sağlık hem eğitimine odaklanan ve hükûmet tarafından daha büyük çapta yürütülen kapsayıcı bir programdır.

Çalışma sonucunda, ICDS programının etkili bir yapıya sahip olduğu ancak hizmetlerin niteliklerinin artırılması gerektiği ortaya konulduğundan ICDS programına dayalı olarak annelerin ve çocukların refahını iyileştirmek için kapsamlı bir programın daha gelişmiş ülkelerde tasarlanabilir ve uygulanabilir olduğu ileri sürülmüştür. Kalite ve ekonomik koşullar arasındaki doğru orantı göz önüne alındığında bu programın, nispeten daha gelişmiş ülkelerde uygulanmasının daha etkili sonuçlar ortaya çıkarabileceği düşünülmektedir.

Bu program özelinde gelişmekte olan ülkeler ve Hindistan'a benzer sosyoekonomik yapıya sahip ülkeler için şu öneriler sunulabilir: Öncelikle ICDS, sistematik ve bütüncül kuramsal yapısı nedeniyle oldukça iyi tasarlanmış bir program örneğidir. Bu anlamda, birbirinden kopuk ve bağımsız politikalar geliştirmek yerine daha kapsayıcı bir

sistem geliştirmesi açısından politika yapıcılar için iyi bir model olabilir. Bu sürecin ülkelere emek ve maliyet bakımından daha yararlı olacağı düşünülmektedir. Yanı sıra özellikle doğum öncesi ve sonrası beslenme, bağışıklık sisteminin güçlendirilmesi, sağlık kontrolleri gibi önleyici hizmetlere odaklanması, ortaya çıkabilecek daha büyük ve geri dönülmesi zor olan problemlere dönüşmeden kök nedenleri hedef alması da programın diğer ülkeler için örnek oluşturan yönlerindendir. Özellikle, Hindistan gibi sosyoekonomik problemlerle baş etmek durumunda olan ülkeler için bu durum daha da önem arz etmektedir. Ancak, yukarıda ifade edildiği gibi ekonomik nedenlerden kaynaklanan yeterince materyalin olmaması, ortam ve nitelikli personelin sağlanamaması, programdan beklenen başarıya ulaşılmasını engellemektedir.

Introduction

The importance of early childhood education (ECE) has been proven through several studies. While some of these studies focus on the effects of early childhood education regarding the holistic development of children (Barnett, 1995; Burger, 2010; Melhuish et al., 2015), others investigate the effects of early childhood education in specific areas such as cognitive development and academic success (Barnett, 1998; Cortázar 2015) as well as social and emotional development (Gormley Jr., Phillips, Newmark, Welti, & Adelstein, 2011). This is the reason why many countries design programs to invest in young children because they have realized that providing proper early childhood education is a cost-effective way to overcome inequality and raise generations of healthier individuals (Timsit, 2019). To create healthier individuals, and thus, a healthier society, an increasing number of countries have made efforts to develop their own early childhood education models which are suitable for meeting the needs of their own cultures. Montessori, Waldorf, and Reggio Emilia are examples of early childhood education approaches formed according to the cultural and social needs of a specific period and have ultimately become widespread around the world (Edwards, 2002; Gutek, 2004; New, 2007; Uhrmacher, 1995). Other than these well-known approaches, there are several early childhood education models, approaches, and early intervention programs in use worldwide that address the needs of the local population and strive to achieve a sense of universality. To illustrate, Pyramid, High/Scope, Te Whariki, Persona Dolls, and Pikler are current early childhood education methods, approaches, and programs, whereas Sure Start, HIPPY, Educate Your Child are the early intervention programs originated from the cultural and social needs of local societies (Aktan Acar & Çetin, 2017; Sarı, 2017; Yalçın & Aktan Acar, 2021; Yalçın & Erden, 2017).

Nevertheless, providing high quality and inclusive preschool education for children from all socio-economic status, especially in developing countries, remains a problem to be solved (Organisation for Economic Co-operation and Development [OECD], 2015). As a result, children, particularly the ones coming from poor or other disadvantaged backgrounds, might not reach developmental milestones due to the cumulative effects of diverse risk parameters such as lack of access to clean water and qualified health services, insufficient nutrition, lack of access to quality early childhood education institutions, parents having low educational background (Adams, Bartram, Chartier, & Sims, 2009). India is one of the many countries struggling with poverty and several other problems such as illness, lack of hygiene and lack of education (Humairah, 2017). Inspired by the US Head Start Program, India developed the Integrated Child Development Services (ICDS) to eliminate the cumulative effects of poverty on children in India and thereby, on society. The ICDS program aims to reach the poor and marginalized parts of Indian society (Kaul & Bhattacharjea, 2019). The ICDS was launched in 1975 and symbolizes one of the world's largest and most unique models for early childhood care and development. ICDS, which is acknowledged as the flagship program of India, is a governmental program operated through Anganwadi enters (AWC). The centers serve as an outpost for the first line of health, nutrition, and early learning services for disadvantaged groups including children aged 0 to 6 years, pregnant women, and lactating mothers. The idea of presenting a package of services is principally based on the opinion that for the healthy development of individuals, the overall effects of integrated services are much greater than the impact of separate services (Ministry of Women & Child Development, 2009).

Based on the following rationale, this study aimed to introduce ICDS to readers including the stakeholders, early childhood education professionals, teachers, and others interested in. Investigating good practices which provide wide range of individual activities, policies, and programmatic approaches achieving positive changes in student attitudes or academic behaviors from different countries and discussing all aspects of these practices may provide examples for developing countries in making cultural adaptations to their local practices considering their new understanding (Yalçın & Erden, 2017). That is why, as researchers, we thought it was worth introducing ICDS as it is a comprehensive and integrated program that includes bundled health, education, and nutrition services for people from different socio-economic status in both rural and urban areas of India (Mehta, 2016). At this point, it is important to point out that early childhood covers a child's prenatal development through age 8. Brain researchers frequently emphasize the critical importance of this period (Lipkowitz & Poppe, 2014; Raban, 2014; Sripada, 2012). For this reason, early childhood education models focus not only on the short-term learning and development of children but also on their health, education, and nutrition over a longer period including the prenatal term. From this point of view, to introduce ICDS, internalizing a holistic approach to early childhood development, might be a good example for integrated programs applied in various countries across the world.

This study aims to evaluate the ICDS through the review of empirical studies and to generate some educational implications from the ICDS that may benefit the rest of the world, particularly developing countries. To this end, descriptive information regarding the ICDS is presented in the text as well as the studies exploring the outcomes of the ICDS. Furthermore, information on India's demographic characteristics and the ECE system in India is introduced to allow the reader to better understand and interpret the ICDS program. Then, the information regarding the ICDS is reported under various subtitles. Firstly, the ICDS's development process is explained and its informal preschool education service is presented. Following this, AWCs and Anganwadi workers (AWW) are

introduced. Then, under the subtitles of the effectiveness of ICDS and the current status of ICDS, the studies investigating the ICDS from different perspectives are chronologically presented in order to reveal how the ICDS evolved over time. Subsequently, some recommendations for the ICDS program are offered and finally, some educational implications are provided.

India as a Country

India is a country in South Asia that has a landmass of approximately 3,287,590 km², making it the seventh largest country in the world by area. It is a constitutional republic including 29 states, each having a substantial degree of control over their own affairs. There are also 6 less fully empowered union territories and the Delhi national capital territory, which includes India's capital city, New Delhi. India is the world's second most populous nation with an estimated population of over 1.34 billion people which makes it home to 17.85% of the global population. In addition, the largest population of children between the ages of 3 to 6-years-old lives in India. Furthermore, the population in India is one of the most ethnically diverse populations in the world. Along with various religions like Islam, Christianity, Sikhism, Buddhism and Jainism, India is also made up of many castes and tribes. Moreover, more than a dozen major and hundreds of minor linguistic groups from several language families exist within India (Alam et al., 2018; Chandramouli & General, 2011; Sharma, Garg, & Sharma, 2016). As an increasing economic powerhouse and nuclear-armed state, India has emerged as an important power in the region (BBC, 2018). According to the results of the World Economic Outlook Database prepared by the IMF (International Monetary Fund) on October 6th of 2015, India is the world's third-largest economy at $8.027 trillion dollars (IMF, 2015). In 2015, the Indian government allocated only 3.4% of its state budget towards education expenditures. This figure is even lower for health care expenditures at only 1.2%, as a result, human development and inclusive growth in India remain low. According to the Human Development Report 2016, India ranks 131st among 187 countries in human development (Jāhāna, 2016).

Due to high population, India struggles with a deluge of fiscal and social problems. For example, along with a high maternal and infant mortality rate at around 40 per 1000 births in 2013 (National Institution for Transforming India [NITI], 2016), other problems such as illness, lack of hygiene, and lack of education; continue to plague India (Humairah, 2017).

After presenting the profile of India, the following section introduces Indian formal early childhood education. As previously mentioned, presenting ECE in India might allow the reader to better understand and interpret the ICDS program within the framework of Indian early childhood education.

Early Childhood Education in India

In India the formal preschool education curriculum, published in 2018, describes preschool education as education for children aged 3 to 5 years old provided in any educational setting. The different educational settings are classified as Anganwadi, balwadi, nursery school, preparatory school, pre-primary school, lower kindergarten (LKG), upper kindergarten (UKG), and so forth (National Council of Educational Research and Training [NCERT], 2018; Shabnam, 2003). Also, in NCERT (2018) the three main objectives of preschool education are as follows:

1. enhancing all developmental domains and personality of children together with healthy attitudes, life skills, and values,
2. lying the basis for a healthy, active, and competent life by helping children reach his/her maximum potential in terms of physical well-being, health and motor development, personal, social and emotional development, language, communication and literacy development, cognitive development, environmental awareness, and development of a scientific mindset as well as developing mathematical thinking and reasoning,
3. preparing children for a smooth transition period from the home environment to preschool and from preschool to the primary school environment.

As mentioned previously, India, as a developing country, suffers from a variety of social, economic, and educational problems. One of these problems is accessibility to education. In this case, accessibility to preschool education corresponds directly with class and wealth factors of families in India (Rao, Ranganathan, Kaur, & Mukhopadhayay, 2021). For example, only rich and educated families can send their children to kindergarten and Montessori schools, which are available in the affluent neighborhoods of the country. As a result, to meet the diversified demands of early childhood education and care, different organizations across public, private, and non-governmental sectors work to provide various early childhood education and care programs throughout India (Ohara, 2013). According to the results of the Seventh All India Education Survey (NCERT, 2005), there are 493,700 pre-primary institutions in India, of which 456.994 are in rural areas. However, the percentage of enrollment in primary schools with pre-primary facilities is low (10% in 2007-08 compared to 7.7in the 2004-05 school year). In the third round (2005-06) of National Family Health Survey data (International Institute for

Population Sciences [IIPS], 2007) it is shown that approximately 56% of children in preschool are enrolled in ICDS Services for early childhood care and education. Among them only 31% of children are attending the centers regularly. Accessibility of early childhood education and care varies across states within India (Bandyopadhyay & Behera, 2010). ICDS provided in AWCs, which is the most common early child education and care program in India, is presented in the oncoming sections of this current study.

The Development Process of Integrated Child Development Services (ICDS)

Since 1951, the well-being of young children has been an important part of India's agenda for development. In this respect, the most significant attempt by the Indian Government to deal with severe health and education problems of young children up to the age of six is the ICDS program established in 1975 (Manhas & Qadiri, 2010). The ICDS is one of the most comprehensive programs in India operating at the state level to meet children's health, nutrition, and educational needs (Humairah, 2017). The Department of Women and Child Development and the Ministry of Human Resources Development are the organizations responsible for implementation of this program. The ICDS is provided in AWCs which have a broad network with these centers being based on a rationale that good early childhood education and care can be provided at a low cost (Manhas & Qadiri, 2010). The number of AWCs serving young children aged 0-6-years-old and women 15-45-years-old has reached 1.346.000 with 7075 operational projects as of March 2015 (Ali, 2020).

ICDS is primarily focuses on serving the urban slums, tribal areas, and rural regions of the country with its main purpose to provide a package program of health care and education for the most vulnerable members of Indian society. The major objectives of the ICDS scheme according to the Women and Child Development Department (2014) are listed as:

1. to develop the nutritional and health conditions of children under the age of six,
2. to provide a foundation for appropriate social, physical, and psychological development of children,
3. to decrease infant mortality, illness rate, nutritional deficiency, and school dropout,
4. to provide consistency between policy and implementations from differing departments to improve child development, and
5. to improve the caring skills of mothers to meet the health and nutritional needs of their children through proper health and nutrition training.

To achieve the objectives of the ICDS scheme, services are delivered as a package program for beneficiaries. According to the Women and Child Development Department (2014), the ICDS scheme includes the services presented in Figure 1.

Supplementary Nutrition	• Hot meal and ready to eat snack (300 calories for children under 6 years old, 500 calories for pregnant and lactating women). Protein (8-10 gr for children under 6 years old, 20-25 gr for pregnant lactating women), IFA, and vitamin A supplementation for children.
Immunization	• Refers to immunization of children under 6 years old against measles, tuberculosis, diptheria, pertussis, tetanus, and poliomyelitis. Tetanus toxoid vaccine for expecting women.
Health Check-up	• Includes health check-ups, treatment of diarrhea, minor ailments, deworming, and referral of more severe illnesses for children under 6 years old. Prenatal medical screening for expectant women and postnatal medical screening for lactating women.
Referral Services	• Beneficiaries are those with severe health problems and malnutrition who are referred to the Primary Health Cener or sub-center.
Nutrition and Health Education	• Expactant and lactating women are trained relating to newborn feeding, development and care, access to health services, family planning, and sanitation.
Informal Preschool Education	• Provide early stimulation and play-based learning activities for children under 6 years old.

Figure 1. Integrated child development services

The ICDS scheme is operated in all of India's 29 states and 7 Union territories. Beneficiaries of this nationwide program include children under six years old as well as pregnant and lactating mothers between the ages of 15 and 45. Mothers can utilize the ICDS services for both the prenatal and postnatal processes due to their nutrition during

these times affecting the children's development (Rao, 2005). According to the Women and Child Development Department (2014), every beneficiary living below the poverty line can utilize the ICDS services regardless of other criteria. As of September 30, 2013, the number of children (6 months to 6 years old) utilizing the AWCs by receiving supplementary nutrition was over 84 million whereas, the number of children (age from 3 - 6 years) utilizing AWCs by enrolling preschools was over 34 million (Tirath, 2014).

Informal Preschool Education Service Under the ICDS Scheme

Informal preschool education activities make up a significant part of the ICDS scheme. According to the Women and Child Development Department (2014), preschool education is a vital component of the ICDS scheme to foster lifelong learning and holistic development. According to National Institute of Public Cooperation and Child Development (2004), the aims of this service are providing education for the whole development of children from the ages 0-6 years, providing educational readiness for formal schooling and learning, and supporting normal growth of children through opportunities, a conducive environment, and appropriate play activities. Informal preschool activities generally cover joyful play-based activities carried out through the institution of Anganwadi set up in each village by AWWs. Children between 0 and 6 years of age benefit from these activities for about three hours each day of services. These activities are not formal education activities and aimed to provide environmental stimulation, desirable attitudes, values, behavioral patterns for children, and academic learning. In addition to preparing children for primary education, this service provides an additional opportunity for older children (especially for girls) to attend school, while the ICDS serves as a substitute care for their younger siblings (Singh, 2013).

As stated in Monitoring Visits of ICDS Report (2015), more than 75% of the total child population between 3 and 6 years old benefit from ICDS services. According to the same data, more than half of the children are enrolled in informal preschool activities at AWCs. In other words, approximately 40% of the total child population aged between 3 and 6 years old utilize informal preschool education through ICDS.

Generally, the AWCs are in outdoor locations, but some centers have rented buildings composed of one room for all educational activities and referral services (Manhas & Qadiri, 2010). According to Das (1999), the learning activities provided by AWWs generally focus on academic skills for young children like listening, writing, counting, and memorizing. Unfortunately, activities regarding physical, aesthetic, and social development of children are undervalued within these centers. Presenting activities through a play-way is the most used instructional method in AWCs. To improve the quality of preschool education service in AWCs, the National Institute for Public Cooperation and Child Development [NIPCCD] published a guidebook for the planning and organizing of preschool educational activities for AWCs. The guidebook was published for several purposes. The first purpose is to provide a variety of preschool activities applicable for AWCs. The second one is to enable AWWs to better understand the appropriateness of activities regarding children's development. Another purpose is to bridge the gap between theoretical child development knowledge and the practices of AWWs. In other words, this guidebook includes both methodological and content knowledge regarding preschool activities for AWWs, caregivers, and other ICDS providers (NIPCCD, 2004). Although play is described as the children's main way of learning in this book, rich, stimulating, interactive and active, direct, and firsthand experiences are also emphasized together with observation and investigation in teaching activities (NIPCCD, 2004).

A sample daily plan which was prepared according to the NIPCCD guidebook includes individual choice time, circle time, free play time, creative time, concept time, lunch and resting time. During the individual choice time, children have their pick of the 14 items offered to them (wooden and plastic blocks of different shapes, puzzles, Kidikut (balls of various sizes), stacking cubes, colored beads, geometric pin boards, lacing boards, shape and color sorter, wooden shape sorter 3D, English and Tamil alphabet insets, wooden numbers, shape size and color game, sorting and sequencing frame with wooden picture pieces, maze chase). Circle Time includes activities like free conversation, sharing schedule of the day, weather and calendar, health and hygiene, and singing. Creative play activities include structured plays, stories, role play, dumb charades, or rhythmic movements. During concept time, children are engaged in thematic discussions, Tamil, English, math, and environmental science. AWWs accompany the children throughout the activities as instructors (State Planning Commission, 2013).

As for the roles of AWWs relating to informal preschool education activities, they are listed as follows: planning daily preschool activities, implementing and organizing these activities, organizing a suitable and stimulating environment for children, identifying children's strengths and interests as well as being capable of managing informal preschool education activities overall (NIPCCD, 2004).

A description of the makeup of AWCs is provided in the following section.

AWCs

An Anganwadi is a center where whole ICDS services are provided to beneficiaries. The term Anganwadi was developed from the idea that a high-quality early childhood care and development center could be operated with low-cost materials within areas such as an "angan" or "courtyard" (Manhas & Qadiri 2010). The AWCs are placed in the villages or slums and needy women and children benefit from these centers. An Anganwadi can also serve as a meeting place for women and AWWs for sharing ideas and improving the development of women and children. The centers are managed by the AWWs as well as Anganwadi helpers who are also responsible for delivery of the services (Kumar & Rai, 2015).

The location of an Anganwadi is critical for the effective delivery of all ICDS services. For example, the centers should be easily accessible yet located in a place free from noise and traffic. In addition, these centers must be located somewhere safe but also near the less developed parts of a city or village to meet the needs of those in need (NIPCCD, 2004).

Detailed info regarding the staff who coordinate and implement the ICDS is presented in the following section.

Anganwadi Workers. Under the ICDS scheme, services are delivered by a team of Anganwadi members including a child development project officer, supervisor, AWWs, Anganwadi helper, and health functionaries. Each team member has his/her own role and responsibilities, while the child development project officers are generally responsible for the planning and implementation of projects. Project officers are supported by 4-5 Anganwadi supervisors (MukhyaSevika) who guide and supervise AWWs. The number of AWWs being supervised changes according to the regions that projects serve, and supervisors are normally responsible for the guidance of 17, 20, and 25 AWWs in tribal, rural, and urban regions. The responsibility of supervisors includes the guidance of AWWs regarding the planning and implementation of services at AWCs. Also, the supervisors provide training for Anganwadi center workers based on the worker's needs (NIPCCD, 2006a; Sondankar, Kotnis, & Kumavat, 2015).

An AWW is generally a woman and all ICDS services in the AWCs are provided by AWWs (Rao, 2005). In 2013, the Ministry of Women and Child Development published guidelines for state governments regarding the assignment of AWWs. According to these guidelines, an AWW should be chosen from women living near the AWC in which they work as well as be accepted by the locals as someone they can easily communicate with regarding the AWC and ICDS services. Extreme care should be taken in the AWW selection process so that the AWCs are accessible and free for children in the immediate area as well as in less developed parts of the society. Also, AWWs can be selected by local committees made up of members from both local governmental and non-governmental institutions like the Primary Health Center and State Social Welfare Advisory Board.

The roles of the AWWs are defined as manager, organizer, coordinator, or services provider. Moreover, the AWWs serve also as counselor, communicator, educator, planner and implementer of the ICDS scheme. Therefore, AWWs selected from the society are very close to the local community and function as not only a teacher but also a health worker. AWWs have a wide range of responsibilities ranging from making home visits to educate parents, to enable mothers to plan an effective role in the child's development, and to motivate married women to adopt family planning measures (Humairah, 2017). These roles and responsibilities also make the definitions of service providers in the Anganwadi system different from the definitions of teachers and healthcare workers in other early childhood programs. In addition, besides the AWWs, there are Anganwadi helpers who have specific responsibilities, for example, they are responsible for assisting AWWs while conducting activities such as counseling mothers and other caregivers for children, helping with preschool education activities, assisting health and well-being check-ups, weighing and immunization of children, immunization of mothers, arranging mother and community meetings, and providing supervision of participating children (NIPCCD, 2006a; Sondankar, Kotnis, & Kumavat, 2014).

Each ICDS worker is responsible for 1000 people including expectant and lactating mothers, adolescent girls, and children from 0 to 6 years old. In 2011, the number of AWWs was about 2 million in India. These workers are the key informant regarding healthcare issues in addition to their social work profile. Moreover, many other activities are being added to their heavy workload (Humairah, 2017). Daily activities of an AWW and Anganwadi helper include cleaning the AWC, supplying potable water, planning preschool activities, preparing supplementary food, and preparing food for distribution (NIPCCD, 2006a; Sondankar, Kotnis, & Kumavat, 2014). In Table 1 there is an outline of the types of services, target group for the services, and the staff who provide these services within the ICDS.

Table 1
Services, target groups, service provider in ICDS

Services	Target Group	Service Providers
Supplementary Nutrition	Children under six years of age: Expectant & Lactating Mothers	AWW and Anganwadi Helper Primary
Immunization	Children under six years of age: Expectant & Lactating Mothers	Health Center Staff (PHCS)
Health Check-up	Children under six years of age: Expectant & Lactating Mothers	AWW/PHCS
Referral Services	Children under six years of age: Expectant & Lactating Mothers	AWW/PHCS
Informal Preschool Education	Children in the age group of 0-6 year	AWW
Nutrition & Health Education	Women in the age group of 15-45 year	AWW/PHCS

As presented in Table 1, services of ICDS were provided by AWWs, Anganwadi Helper Primary and Health Center Staff (PHCS). Supplementary Nutrition service is provided by AWWs and PHCS for the target groups including children under six years of age and expectant- lactating mothers. For the same target group, immunization, health check-up and referral services are provided by AWWs and PHCS. The workers also provide informal preschool education service for children between 3 and 6 years of age. Lastly, nutrition and health education for women between 15-45 years of age is led by PHCS.

In the current study, up to present, the ICDS program was introduced by referring to its components such as the overall schema of the program, the informal early childhood education program, the AWCs and the workers. In the following sections, with respect to empirical studies, the effectiveness and the current situation of the program, recommendations regarding the program and the educational implications are presented.

Effectiveness of ICDS Program. Although the ICDS is known as one the most comprehensive early childhood programs around the world, there remains uncertainty about the success of the program (Lokshin, Dasgupta, Gragnolati, & Ivashenko, 2005). Even with a budget of 1.5 billion in 2008, for all the services provided through the ICDS scheme, the program remained ineffective in achieving its objectives (Ledlie, 2011). Yet, the claim of Ledlie could be justified by a different perspective. As previously mentioned, the six services of the ICDS are expected to be provided by a single staff; a local multipurpose officer named the AWW (Kaul & Bhattacharjea, 2019). The researchers Kaul and Sharma (2017) revealed that the AWW, along with a helper, had difficulty providing these services at a high level of quality due to their minimal skills and training. Consequently, Kaul and Sankar (2009) (cited in Kaul, 2019) stated that the focus of the program tended to lean towards the health components, particularly nutrition supplementation, although the purpose of the ICDS was to offer all these six services, including free preschool education. This uneven focus may lead to the diminishment of the program's success in all intended goals, particularly in the quality of preschool education. The effects of ICDS have been a very attractive topic for researchers, for example, between 1975 and 1995 more than 1000 annual surveys and 720 research studies were carried out to evaluate the effects of the ICDS (National Council of Applied Economic Research, 2001). In addition, according to Rao (2005), although the number of studies is very high, all these studies have a limited sample size, focus on small geographic regions, or on a specific part of the ICDS program. However, compared to small scale studies, NIPCCD and National Council of Applied Economic Research (NCAER) conducted a comprehensive evaluation of the ICDS in both 1990 and 1999, and these studies are presented in the following sections.

The NIPCCD study was conducted to identify problems regarding the implementation of ICDS services, community perception, and attendance. The study covers 700 AWCs from rural, urban, and tribal areas. Also, children in the age group of 0 to 6 years, mothers, and the families make up the sample group for this study, moreover, children and mothers living in non-ICDS areas are used as a control group. Data of the study were gathered from the ICDS records and according to the results, expectant mothers get more prenatal care and supplementary immunization in areas served by the ICDS. Moreover, the program has positive effects on children's health and alimentary conditions, and in ICDS areas the average birth weight of newborns is higher (NIPCCD, 1992).

When children's progress was evaluated, it is shown in the results that about half of the children enrolled in informal preschool education services can count to 50 and identify up to at least five objects. Less than half of the

preschool age children were able to recognize and label colors. In addition, these children can hold crayons and color. Furthermore, the primary school enrollment rate of ICDS children from five to 14 years of age is higher than children who are not enrolled in ICDS for the same age group (NIPCCD, 1992).

On the other hand, another study was conducted in 1999 by NCAER, and in this case there is a larger sample, and the aim of the study is to recommend public policy regarding the objectives and performance of ICDS programs. Through the study findings, it is determined that only 30% of children could utilize the monitoring services. A bit more than half of the children benefit from informal preschool education services and service effectiveness is assessed by investigating the school readiness performance of participating children. It is also shown in the findings that only less than half of these children can read simple words, identify objects, and count (NCAER, 2001).

It is found in these two comprehensive studies that the ICDS program does have positive effects on the health conditions, nutritional, and educational status of young children. Yet, the program also has challenges regarding the training, program content, and coordination between differing services to support the holistic development of children as well as to provide adequate support for women (Rao, 2005). Kishor (2000) defines the effectiveness and shortcomings of the ICDS program by stating that the ICDS program does have positive effects on the medical and nutritional conditions of children and mothers. For example, it is shown that the nutritional status of children under the ICDS scheme increased while the infant mortality rate decreased. Also, the program is found to contribute to the educational conditions of beneficiary children and that children enrolled in informal preschool education within the AWC show better language, intellectual/conceptual performance, and behaviors when compared with children from non-ICDS areas. Consistent with the previous results, ICDS children have lower drop-out rates in their primary school years. As reported in the same study, insufficient physical conditions, undervaluing preschool education in relation to health and nutrition services, and a lack of parent and community involvement are the most important shortcomings of the ICDS program.

The NIPCCD (2006b) conducted research on the benefits and outcomes of the ICDS, and the findings of this research were compared with the findings of the previous studies conducted over the past 30 years. To this end, the outcomes obtained from earlier studies (NIPCDD, 1992 and NCAER, 2001) were compared to the current study to evaluate the trend of the program in terms of the target variables over the years. It was observed that there were certain improvements in several components of the ICDS program. For example, the building structures of AWCs have changed from kucha buildings to pucca buildings over the period of 14 years. In 1992, only 43.1% of the centers were located in pucca buildings, whereas in 2005 and 2006 75.4% of the centers were in pucca buildings. Similarly, the percentage of AWCs having preschool education kits in good condition has improved from 32.9% to 55.9% over five years. These improvements were attributed to the support provided by UNICEF, World Bank and the District Primary Education Program (DPEP). Similarly, in the years between 1992–2006, the percentage of new-born infants weighing less than 2500 gm decreased from 41% to 29%, whereas the percentage of those weighing more than 2500 gm increased from 58.9% to 71%. However, over the years, the percentage of children attending preschool education has decreased (43% in 1992 and 37% in 2006). This could have been due to the opening of numerous alternative services, particularly nurseries and/or convent schools. Additionally, alternative programs in India other than the ICDS, such as Sarva Shiksha Abhiyan (SSA) and Mid-Day Meals (MDM), were presented as another possible reason for this decline. Nevertheless, the report concluded that on the whole, the ICDS program offers quite a positive and prudential picture to Indian children and women, although some components of the program require more efforts to improve.

Current Status of Informal Preschool Education Services in ICDS. To ensure the quality of ICDS, NCAER has continued to survey and assess the substructures of AWCs throughout the 2000s. These surveys include information about building structures, outdoor and indoor environments, equipment for education activities, drinking water, and the quality of restroom facilities necessary for high quality service delivery in AWCs (Dhingra & Sharma, 2011). One of these quality surveys conducted in 2004 reveals that more than 40% of the AWCs neither have their own buildings nor rented buildings Also, only 46% of AWCs are in well-structured buildings, while almost 10% of the centers are in open air locations (NCAER, 2004). In the same report, it is mentioned that 37% of AWC do not have adequate materials or aids for use in preschool education activities, and half of the AWC neither have space for storing materials nor a place for children to sit or play. This is a problem because the lack of teaching materials and preschool kits limits the organization and application process of preschool activities within the AWC (Asha Jyothi, 2014). In Anganwadi Centers, preschool activities should include conversations, learning the alphabet, recitation of poems and songs, playing and basic motor activities like running and jumping. Although the informal preschool education service aims to enhance children's social, physical, and cognitive development, the quality of services is found to be average because of the lack of an adequate amount of teaching and learning materials. Also, traditional handmade materials are scarcely used by AWWs and/or their helpers for the preschool activities (Bhadwal, 2009).

While more than half of the AWC's do not have suitable substructures for delivering high quality services and materials, provision of services is reported as being frequent. The informal education service is provided 28 days in a month for children and preschool education activities are the second most frequent activities after the provision of supplementary foods (NCAER, 2004).

The insufficiency of informal preschool education services in ICDS is compared with the health and nutritional services in the Mid-Term Evaluation of the Tenth Five Year Plan. The weakness of preschool education programs is seen as a reason for high dropout rates within the first and second classes, so the quality of preschool education programs and providing a comprehensive preschool education continue to be concerns of the Indian government. To improve the quality of services, several recommendations are presented in the Mid-Term Evaluation of the Eleventh Five Year Plan. These recommendations are to provide need-based training for ICDS workers, provide play-way equipment, support the development of curriculum and materials as well as arrange joint training programs for AWWs and primary school teachers to provide for a smooth transition for children from the ICDS preschool services to primary school (Working Group on Development of Children for the Eleventh Five Year Plan [2007-2012], 2007).

According to a more recent study evaluating the ICDS program, Samridhi, Bharti and Sharma (2007) argue that children enrolled in informal preschool education services under ICDS show better cognitive skills than children who are not enrolled in ICDS. Manhas and Qadiri (2010) compared preschool education provided in AWC and in other public and private preschools serving nationwide in terms of their physical qualities, the nature of early childhood education, and developmental activities. It is shown in their results that AWCs generally have buildings with only one covered room and that all ICDS services are provided in that one room along with the preschool activities. Because of problems with space, children cannot engage in indoor activities within AWC. Moreover, it is revealed in the study that AWCs fail to provide adequate materials for children and preschool activities, for example, only 15% of AWCs provide at best a limited number of counting and literacy books. Furthermore, there are a variety of differences between preschool education provided in AWC and other nationwide preschools regarding the physical facilities, teaching methods, and activities carried out. Informal preschool education in AWC focuses on play-based teaching methods and overly emphasizes the cognitive development of children (Manhas & Qadiri, 2010; Swaminathan, 1990).

In 2012, a comparative research was conducted to compare children attending to AWCs (n = 200) and the ones not utilizing any type of early childhood services, home-based ones (n = 200). The focus of this comparison was children's cognitive skills such as conception skills, information comprehension, visual perception, memory, and object vocabulary. As a result, they found that children attending to AWCS, compared to home-based ones, performed better on all dimensions of target cognitive skills (Rajni & Anupa, 2012).

Another study was conducted by Baiju (2014) to examine the practice of the ICDS and its impact on children's specific developmental skills. To this end, the researcher selected the Anganwadi Centres of the Thrissur District of Kerala, and 30 children in total participated in the study. The findings of this study reported that the ICDS had a positive impact of on the children's development: 26% of the participating children could speak in simple sentences, whereas 96% of them could count numbers. Similarly, 85% of them were able to write alphabets/words and differentiate between various colors. Teaching in these centers was reported to be carried out through various creative games to support different domains and skills such as recognition, language, and categorization. However, other studies claim that the learning skills of children enrolled in informal preschool education services through AWCs are below expected levels. For example, Kular (2015) conducted a study involving 120 children from 20 AWCs in the Barnala district of Punjab. The researcher found that children in these centers could not count to 100, only 6% could identify vegetables and even fewer were able to name colors. Kular (2015) reasoned that these unsuccessful results were due to the huge workload of the AWWs, they were responsible for a high volume of paperwork, which resulted in inadequate time for them to provide a sufficient level of informal preschool education services. In addition, the researcher claimed that the AWWs in the studied AWCs were not adequately skilled to conduct learning activities with children, therefore, children achieved low scores in the learning assessment (Kular, 2015).

In a more recent study (Samanta et al., 2017), the current status of the ECE under the ICDS program in the Bankura Municipality, West Bengal was evaluated through the assessment of children's school readiness and other aspects of the ECE. To this end, a cross-sectional study involving 30 AWCs was conducted. From each center, seven 5-year-old children and their caregivers were randomly selected as participants. The researchers used several tools such as the ECE Program Evaluation Package developed by the World Bank, the school readiness instrument kit for children and an interview protocol for AWWs and the caregivers of children. As a result, in relation to the organization and management of the centers, the researchers found that only 40% of the AWCs had a display wall, yet those were too high. They also found that most of the AWCs had a favorable adult-child ratio (1:25); only 13% had an unfavorable ratio. Additionally, only 10% of the AWCs had free indoor activities and although they had a schedule, none of the AWCs implemented a pre-planned schedule. Furthermore, the researchers reported that they

did not observe age-appropriate activities, and differently-abled children were not given any service or facilities in any of the AWCs. The researchers also found that only 33% of enrolled children attended the AWCs when the research was conducted. Conversation, storytelling, free play with material, reading and writing and routine activities were the most frequently observed activities, whereas activities such as coloring, painting, drawing, dramatization and puppet play, outdoor play and unplanned indoor play were rarely observed. As for the children's school readiness, the researchers found that only 25% of the 210 children achieved a score above 17, and the average score of the children was 14 out of 40. The researchers declared that the children's low performance in their school readiness assessments was related to poor classroom performance and inadequate physical environments. In addition, parental support was found to be another determining factor of better school readiness skills. Due to this, the researchers suggested that parents should be informed of the ways in which they can support their children for formal schooling.

The aim of a more recent study by Kaur (2021) was to understand the ICDS practices of the AWCs of Punjab and to conduct the Social Impact Assessment of the services presented under the ICDS scheme in these centers. Thus, 24 AWCs from six districts were selected, and from each AWC, one administrative officer, one AWW, one Anganwadi helper, 12 Child Development Program Officers and 10 respondents were included as the participants of the study. Observation and interview were the main data collection methods to obtain data from primary sources, yet institutions such as the District Program Office, Department of Census, Department of Social Security, Department of Women and Child Development and other relevant government institutions and books, the internet, etc. were also used as secondary sources of information. Based on the data obtained from the primary and secondary sources, the researcher reported the positive impacts of the ICDS on children. For instance, it was reported that children's physical development was supported by supplemental nutrition. In addition, as most of the beneficiaries were from poor families in India, their financial burden on their families were reduced by the ICDS. The researcher also suggested that a wide range of activities involving teaching of physical hygiene rules and practices, alphabets, counting, shapes and color names, identification of vegetables and fruits from pictures, religious prayers, poems and national anthems were carried out in the AWCs. According to this research, these activities improved the children's mental development. Moreover, the researcher claimed that the free vaccinations, health check-ups, nutrition and health education supported the children's wellbeing. All these activities decreased the economic burden of the children's families.

Compared to Kaur's study (2021), Jairam and Chopra (2020) suggested several inadequacies regarding the current status and impacts of informal preschool activities conducted in AWCs. Jairam and Chopra conducted their research with multiple aims. Their first aim was to investigate the status of the physical infrastructure available at AWCs. The second was to explore informal preschool activities applied in AWCS and the last was to determine the availability of materials for beneficiary children in AWCs. Depending on these aims, they conducted a literature review study of 21articles published between 2008-2018. Based on the findings of the reviewed articles, the researchers claimed that AWCs were struggling with building spaces due to the fact that many of them were either rented or were operated in panchayat ghar/religious spaces. In addition, AWCs were carrying out kitchen work within the classroom space; beneficiary children were asked to sit on mats/rugs or, in several cases, on bare floors.

Additionally, it was found that collectively, the AWCs implemented both outdoor and indoor activities such as storytelling, informal conversations, paper activities, poetry, puppet shows, role play, science activities, building blocks, activities for motor and cognitive development, quizzes/songs/riddles, reading, creative activities, naming or identification, describing objects, water activities, games and nature walks. Nevertheless, not a single center was found to be conducting all the activities, only one or a few of the activities were conducted. A few centers were not conducting any activities at all. Finally, the research asserted that the AWCs owned stationary equipment and materials such as flannel boards, blackboards, colored chalks, whiteboards, paper, scissors, pens, pencils, and sketch pads. Print materials such as maps, charts, posters, and many others as well as manipulative materials including pebbles, seeds, soft peas and so on were all available in the AWCs. The striking point suggested by the researchers is that the materials were readily available, yet they were unused by the centers.

With the consideration of the studies from both positive and negative perspectives, it may be stated that the ICDS is a program supporting children's health and well-being, particularly those from low socio-economic backgrounds. The studies mentioned above and the comparison of ICDS beneficiaries and the children not utilizing any type of preschool services verified this assumption. Nonetheless, the positive impacts might not be as satisfactory as those of regular preschool or private kindergartens. This might be elucidated through several rational assumptions. For instance, as previously mentioned, AWWs are responsible for conducting both health and education services, which requires a wide range of skills including knowledge of health care and pedagogy. The lack of such skills, particularly those of pedagogy, might result in the negligence of preschool activities in AWCs. This is also highlighted in the aforementioned studies in this and previous chapters. The other possible assumption about ICDS's positive impact being not satisfactory is presented in this study's conclusion section.

Recommendations and Suggestions for the Informal Education Services. Based on the results of the evaluation in this current study, a variety of important and useful recommendations are provided to enhance the quality and success of ICDS informal preschool education services.

To begin, the number of publications such as the Guidebook for Planning and Organization of Preschool Education Activities in AWCs should be increased and training related to the planning and organization of preschool education activities should also be provided to AWWs. The supervision and guidance of Anganwadi supervisors (MukyhaSevika) should be increased regarding the oversight of AWWs. Finally, the supervisors in AWCs should take control of the materials and preschool activities which are applied in AWC.

As a regulation of the ICDS, preschool education services should be evaluated as equally important as the health and nutrition services. In addition, parents and community members should be aware of the importance of early childhood education and the parents should also be included in the process of their children's education. Importantly, the physical condition, play, and educational materials, nature of preschool education activities and teaching aids within the AWC should be measured by project officers and equal opportunities to all should be provided in each AWC.

Conclusion

As can be concluded from the evaluation in this current study, the ICDS program carried out throughout India had positive effects on the health and educational conditions of the children being served. However, it was shown that the benefits of informal preschool education service provided in AWC did not reach expected levels. Although informal preschool education did provide improvements in terms of academic achievement, cognitive development, and school readiness skills of children, it was determined that the education provided in regular preschools had more positive effects on children within the same age group. It is reasonable to understand this difference between private schools and AWCs. As previously mentioned, accessibility to ECE corresponds immediately with class and wealth factors of parents in India (Rao et al., 2021). To illustrate, just educated and rich parents are able to enroll their children to private preschools and Montessori kindergartens, which are available in the affluent neighborhoods of India. From this point of view, it might not be rational to compare beneficiaries of ICDS with children coming from high socio-economic background. As strong body of research (Bergen, Zuijen, Bishop, & Jong, 2016; Buckingham, Wheldall, & Beaman-Wheldall, 2013) indicates, children coming from families with high socio-economic status have better performance in fundamental skills of reading acquisition, such as phonological awareness, vocabulary, and oral language than the ones from low socioeconomic status families. Also, there were inequalities between the physical and educational conditions of preschools and AWCs. The studies presented in previous parts verified these inequalities (Jairam & Chopra, 2020; Samanta et al., 2017). This might be the reason for the discrepancies between the impact studies focusing on the effects of the ICDS on child development. The inequalities between AWCs might be one of the underlying reasons of the outcomes reposting low impact on children's development. On the other hand, the health, nutrition, monitoring, and immunization services provided under the auspices of the ICDS had a positive effect on both the children and women that were served. In addition, higher birth weight, nutritional, and health status as well as lower infant mortality rate were indicators of the positive impacts ICDS had on beneficiaries. These positive impacts also reduce the economic burden of the families since these health expenditures are covered by ICDS resources.

Different from other child development and education services, the ICDS programs include both children and mothers in both the prenatal and postnatal process. Also, it is considered in the program that the health conditions of both children and mothers are important. The management of services are provided in a hierarchical order and this order provides discipline for each worker. Moreover, the training of workers is considered, and the aim was to provide the same quality and conditions in each individual AWC. Besides, the simple and basic structure of AWCs enables the ICDS to easily become widespread and increase the number of beneficiaries, yet due to the high workload of AWWs and poor physical conditions of AWCs, there is a decrease in the quality and effectiveness of services.

It might be claimed that the ICDS program has an effective structure, but the quality of services needs to be clarified, improved, and increased. When we consider the direct proportion between the quality and economic conditions, the programs might be more effective when adopted in relatively more developed countries. For example, in developing countries such as Turkey, an ICDS-type program can be applied in underserved parts of the country with disadvantaged groups when the necessary cultural adaptations have been made. For example, there are similar child development projects and programs such as the Dad Send Me to School *'Baba Beni Okula Gönder',* Girls, Let's Go to School *'Haydi Kızlar Okula'*- the girls' education campaign as it is known in Turkey, Mother-Child Education Program '*Anne Çocuk Eğitim Programı'* which have been applied in Turkey and managed by a variety of sectors such as the Ministry of National Education, Ministry of Family and Social Policies, Mother Child Education Foundation (AÇEV), Early Child Cooperation Center, and several non-governmental organizations (AÇEV, 2020). In general, these projects aim to provide compulsory, continuous and free education

practices for children and especially for girls who are often kept at home from school because parents need their labor in the household or on the land (Çengelci Köse, 2018).

There are a lot of common characteristics between the early childhood development and education projects conducted in Turkey and the ICDS program such as their objectives and the audience. On the other hand, there are also several differences in structure and management of these projects. In Turkey, generally projects are conducted over a shorter period, have a local scope of application, and are managed by smaller groups (AÇEV, 2020; Yalçın & Aktan Acar, 2021). As a result, based on the ICDS program, a comprehensive program to improve the well-being of mothers and children can be designed and implemented in more developed countries.

Educational Implications

Considering the ICDS, the following recommendations can be made for developing countries and countries sharing similar socioeconomic characteristics with India. First of all, ICDS is an example of a well-designed education and development program due to the systematic and holistic structure it offers theoretically. In this sense, ICDS can be a good program model for policymakers as it has a more inclusive system rather than developing separate and independent policies. It is thought that this model will be more beneficial to countries in terms of labor and cost. Moreover, focusing on preventive services such as prenatal and postnatal supplementary nutrition, immunization, health checkups, and referral services concentrating on problems that may arise later and which are difficult to return are among the aspects of the program that set an example for other countries. This situation is even more important for countries that have to deal with socio-economic problems such as India. However, as stated before, the lack of materials, usage area, and qualified personnel due to economic reasons cause the program not to achieve the targeted success. When such deficiencies are eliminated, much more successful results may be attainable for different countries.

Limitations

In this current study, only scientific studies (both empirical and literature reviews), documents produced by the India government, and other written materials were utilized as resources for evaluation. That is to say, a secondary source of information was utilized as a data source and based on those sources the researchers made an effort to introduce and evaluate the ICDS. Further studies can be conducted by using a variety of data sources to reach an in-depth understanding of information regarding these programs and centers. Further studies may also be conducted by involving primary sources of information through observation or interview. In addition, the researchers are not originally Indians, thus, they just followed and involved the documents written in English. Further studies may be conducted by collocating with Indian researchers in order to involve resources written in Indian regional languages.

Declaration of Competing Interest

There is no competing financial or non-financial interest that may affect the current study.

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References / Kaynakça

Adams, J., Bartram, J., Chartier, Y., & Sims, J. (2009). *Water, sanitation and hygiene standards for schools in low-cost settings*. World Health Organization. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/44159/9789241547796_eng.pdf?sequence=1&isAllowed=y

Aktan Acar, E. ve Çetin. H. (2017). Kimlikli bebeklerle farklılıklarla buluşmak: Erken çocuklukta başlayan bir düş. E. Aktan Acar (Ed.), *Erken Çocukluk Eğitimi Mozaiği* içinde (ss. 285-305). Ankara: Nobel Yayıncılık.

Alam, M., Wolpert, S., Dikshit, K., Thapar, R., Champakalakshmi, R., & Srivastava, A. (2018). *India.* Retrieved from https://www.britannica.com/place/India.

Ali, A. (2020). Samagra Shiksha Abhiyan-A paradigm shift in pre-primary education. *I-Manager's Journal on School Educational Technology*, *16*(2), 52.

Anne Çocuk Eğitim Vakfı [AÇEV]. (2020). *2020 Faaliyet raporu*. https://www.acev.org/wp-content/uploads/2021/08/ACEV2020_Faaliyet-Raporu.pdf adresinden elde edildi.

Asha Jyothi, T. (2014). *Impact of ICDS On the developmental milestones of children under five in Andhra Pradesh villages*. (Unpublished dissertation). Acharya Ng Ranga Agricultural University, Rajendranagar, Hyderabad.

Baiju, K. C. (2014). Role of Integrated Child Development Services (ICDS) Program in early childhood care vis-a- vis human development: A micro level study in Kerala, India. *Journal of Governance and Development*, *10*(1), 241-264. Retrieved from https://www.e-journal.uum.edu.my/index.php/jgd/article/view/13893

Bandyopadhyay, M., & Behera, J. (2010). *Pre-primary education in India create India policy brief 1 December-2010*. Retrieved from http://www.create-rpc.org/pdf_documents/India_Policy_Brief_1.pdf

Barnett, W. S. (1995). Long-term effects of early childhood programs on cognitive and school outcomes. *The Future of Cildren*, *5*(3), 25-50.

Barnett, W. S. (1998). Long-term cognitive and academic effects of early childhood education on children in poverty. *Preventive Medicine*, *27*(2), 204-207.

Bergen, E., Zuijen, T., Bishop, D., & Jong, P. F. (2017). Why are home literacy environment and children's reading skills associated? What parental skills reveal. *Reading Research Quarterly*, *52*(2), 147-160.

Bhadwal, S. (2009). *An evaluation of services provided in ICDS centres of Samba Districts.* (Unpublished MSc. dissertation), University of Jammu. Jammu Tawi, India.

British Broadcasting Corporation [BBC]. (2018). *India country profile.* Retrieved from http://www.bbc.com/news/world-south-asia-12557384

Buckingham, J., Wheldall, K., & Beaman-Wheldall, R. (2013). Why poor children are more likely to become poor readers: The school years. *Australian Journal of Education*, *57*(3), 190-213. doi: 10.1177/0004944113495500

Burger, K. (2010). How does early childhood care and education affect cognitive development? An international review of the effects of early interventions for children from different social backgrounds. *Early Childhood Research Quarterly*, *25*(2), 140-165.

Chandramouli, C., & General, R. (2011). *Census of India 2011*: *Provisional population totals.* New Delhi: Government of India.

Cortázar, A. (2015). Long-term effects of public early childhood education on academic achievement in Chile. *Early Childhood Research Quarterly*, *32*, 13-22.

Çengelci Köse, T. (2018). The complexity of teaching values in social studies teacher education in Turkey a gender perspective. In Gunel, E. (Ed.), *Controversial Issues in Social Studies Education in Turkey: The Contemporary Debates* (pp. 73-99). Charlotte, NG: Information Age Publishing.

Das, S. K. (1999) *Early childhood education in Haryana: An evaluative study of Anganwadi programmes*. Haryana: Krukshetra University.

Dhingra, R., & Sharma, I. (2011). Assessment of preschool education component of ICDS Scheme in Jammu District. *Global Journal of Human Social Science*, *11*(6), 13-18. Retrieved from https://globaljournals.org/GJHSS_Volume11/2-Assessment-of-Preschool-Education-Component-of-ICDS-Scheme-in.pdf

Edwards, C. P. (2002). Three approaches from Europe: Waldorf, Montessori, and Reggio Emilia. *Early Childhood Research & Practice*, *4*(1), 1-8.

Gormley Jr., W. T., Phillips, D. A., Newmark, K., Welti, K., & Adelstein, S. (2011). Social-emotional effects of early childhood education programs in Tulsa. *Child Development*, *82*(6), 2095-2109.

Gragnolati, M., Shekar, M. Das Gupta, M. Bredenkamp, C., & Lee, Y. K. (2005). *India's undernourished children: A call for reform and action.* Washington, DC: World Bank. Retrieved from https://openknowledge.worldbank.org/handle/10986/13644 License: CC BY 3.0 IG

Gutek, G. L. (2004). *The Montessori method: The origins of an educational innovation: Including an abridged and annotated edition of Maria Montessori's The Montessori method*. Abridged – Annotated: Rowman & Littlefield Publishers, Inc.

Humairah, I. (2017). *The Anganwadi workers of India–Connecting for health at the grassroots.* Retrieved from https://xojagogs.wordpress.com/2017/09/10/the-anganwadi-workers-of-india-connecting-for-health-at-the-grassroots/

International Institute for Population Sciences [IIPS] and Macro International. (2007). *National Family Health Survey (NFHS-3), 2005–06: India: Volume I.* Mumbai: IIPS. https://dhsprogram.com/pubs/pdf/frind3/frind3-vol1andvol2.pdf

International Monetary Fund [IMF]. (2015). *World economic outlook: Adjusting to lower commodity prices*. Washington, DC: International Monetary Fund.

Jāhāna, S. (2016). *Human development report 2016: Human development for everyone*. New York, NY: United Nations Publications. Retrieved from http://hdr.undp.org/sites/default/files/2016_human_development_report.pdf

Jairam, M., & Chopra, G. (2020). Current status of non-formal preschool education in ICDS: A Review of Research. *International Journal of Multidisciplinary Educational Research*, *9*(5), 117-124. Retrieved from https://www.researchgate.net/publication/344523623_CURRENT_STATUS_OF_NON_FORMAL_PRESCHOOL_EDUCATION_IN_ICDS_A_REVIEW_OF_RESEARCHES

Kaul, V., & Bhattacharjea, S. (2019). *Early childhood education and school readiness in India: Quality and diversity Singapore*. Singapore: Springer. doi: 10.1007/978-981-13-7006-9

Kaul, V., & Sankar, D. (2009). *Early childhood care and education in India. Education for All Mid-Decade Assessment.* New Delhi, India: National University of Educational Planning and Administration. Retrieved from https://www.educationforallinindia.com/early-childhood-care-and-education-in-india-1.pdf

Kaul, V., & Sharma, S. (2017). ECE policies in India: A historical analysis. In I. Miller, C. Cameron, & N. Barbour (Eds.), *The Sage handbook of early childhood policy* (pp. 32-48). London: Sage.

Kaur, R. (2021). Role of Anganwadis in child development: Socil impact assessment of Anganwadi Centers of Punjab. *International Journal of Social Science and Economic Research. 6*(7). 2342-2348. doi: 10.46609/IJSSER.2021.v06i07.019

Kishor, S. (2000). Empowerment of women in Egypt and links to the survival and health of their infants in Women's empowerment and demographic processes. In Harriet B. and Gita Sen Presser (Eds), *International studies in demography* (pp. 119-156). New York, NY: Oxford University Press.

Kular, S. S. (2015). A Study on preschool education program for children under ICDS in rural Punjab. *Punjab, 2*(4), 1216-1223.

Kumar, S., & Rai, R. K. (2015). Role of India's Anganwadi Center in securing food and nutrition for mothers and children. *Journal of Agricultural & Food Information*, *16*(2), 174-182.

Ledlie, N. A. (2011). *Integrated child development services scheme: Impact of water quality on child malnutrition in India*. (Unpublished dissertation). Georgetown University, Washington, DC, U.S.A.

Lipkowitz, R., & Poppe, J. (2014). Brain matters: Research into how the brain develops is shaping early childhood policies and programs. *State Legislatures*, *40*(1), 24–26. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip&db=cmedm&AN=24660248&site=eds-live

Lokshin, M., Dasgupta, M., Gragnolati, M., & Ivashenko, O. (2005). Improving child nutrition? The integrated child development services in India? *Development and Change*, *36*(4),613-640.

Manhas, S., & Qadiri, F. (2010). A comparative study of preschool education in early childhood education centres in India. *Contemporary Issues in Early Childhood*, *11*(4), 443-447.

Mehta, S. (2016). *An analytical study of Anganwadi scheme and its impact on rural economy with special reference to Nagpura sector of Durg district Chhattisgarh*. (Unpublished dissertation). Pt. Ravishanker University, Raipur.

Melhuish, E., Ereky-Stevens, K., Petrogiannis, K., Ariescu, A., Penderi, E., Rentzou, K., … Leseman, P. (2015). *A review of research on the effects of early childhood education and care (ECEC) upon child development*. Oxford, England: Department of Education, University of Oxford. Retrieved from https://ecec-care.org/fileadmin/careproject/Publications/reports/new_version_CARE_WP4_D4_1_Review_on_the_effects_of_ECEC.pdf

Ministry of Women & Child Development. (2009). *Integrated child development services (ICDS) scheme.* Retrieved from https://icds-wcd.nic.in/icds.aspx.

National Council of Applied Economic Research [NCAER]. (2001). *Concurrent Evaluation of Integrated Child Development Services: National Report*. New Delhi: NCAER.

National Council of Applied Economic Research [NCAER]. (2004). *Rapid Facility Survey on ICDS Infrastructure*. New Delhi: NCAER.

National Council of Educational Research and Training [NCERT]. (2005). *All-India educational survey*. New Delhi: NCERT.

National Council of Educational Research and Training [NCERT]. (2018). *Preschool curriculum*: New Delhi: NCERT.

National Institute of Public Cooperation and Child Development [NIPCCD]. (1992). *National evaluation of integrated child development services*. Retrieved from https://www.nipccd.nic.in/ecce-reports#gsc.tab=0

National Institute for Public Cooperation and Child Development [NIPCCD]. (2004). *Guidelines for monitoring & supervision of the scheme central monitoring unit (ICDS)*. Retrieved from https://www.nipccd.nic.in/uploads/pdf/Guidelinespdf-9da3e49d741896bc13a4bb0666a32c9f.pdf.

National Institute for Public Cooperation and Child Development [NIPCCD]. (2006a). *Handbook for Anganwadi Workers.* New Delhi-2: Power Prints.

National Institute for Public Cooperation and Child Development [NIPCCD]. (2006b). Three decades of ICDS: An appraisal. Chandu Press. Retrieved from Final Design ICDS (nipccd.nic.in)

National Institute for Public Cooperation and Child Development [NIPCCD]. (2015). *Monitoring visits of ICDS: A report*. Retrieved from https://www.nipccd.nic.in/file/cmu/Reports/2015-16/AWC-Ann.2015-16.pdf

National Institution for Transforming India [NITI]. (2016). *Report of the expert committee on land leasing*. New Delhi: Government of India.

New, R. S. (2007). Reggio Emilia as cultural activity theory in practice. *Theory into practice*, *46*(1), 5-13.

Ohara, Y. U. K. I. (2013). The regulation of unrecognised low-fee private schools in Delhi: Potential implications for India's right to education act. *Low-fee Private Schooling: Aggravating Equity or Mitigating Disadvantage*, *1*(3), 130-153.

Organisation for Economic Co-operation and Development [OECD]. (2015). *Education at glance: OECD indicators.* Paris: OECD publishing. Retrieved from http://www.oecdilibrary.org/docserver/download/9615031e.pdf?expires=1474977311&id=id&accname=guest&checksum=3578C2EFAAAF2B58269DEC4583117096

Raban, B. (2014). Brain research and early childhood education: Directions that could lead us astray. *Australian Educational Leader*, 36(4), 45-48.

Rao, N. (2005). Children's rights to survival, development, and early education in India: The critical role of the Integrated Child Development Services program. *International Journal of Early Childhood*, *37*(3), 15-31.

Rao, N., Ranganathan, N., Kaur, R., & Mukhopadhayay, R. (2021). Fostering equitable access to quality preschool education in India: challenges and opportunities. *International Journal of Child Care and Education Policy*, *15*(1), 1-22. doi: 10.1186/s40723-021-00086-6

Samanta, S., Basu, S. S., Haldar, D., Sarkar, A. P., Saren, A. B., & Sarkar, G. N. (2017). Status of early childhood education under integrated child development services scheme in Bankura municipality, West Bengal. *Indian journal of public health*, *61*(4), 261. doi: 10.4103/ijph.IJPH_369_16

Samridhi, A., Bharti, S., & Sharma, S. (2007). Comparative study of cognitive development of ICDS and non-ICDS children (3-6 years). *Journal of Human Ecology*, *22*(3), 201-204.

Sarı, B. (2017). Hayata kendinden emin adımlarla başlamak için Sure Start Programı. E. Aktan Acar (Ed.), *Erken Çocukluk Eğitimi Mozaiği* içinde (ss. 485-495). Ankara: Nobel yayıncılık.

Shabnam, N. (2003). *Preschool education and under privileged children*. New Delhi: Sarup & Sons.

Sharma, V., Garg, S. K., & Sharma, P. B. (2016). Identification of major drivers and roadblocks for remanufacturing in India. *Journal of Cleaner Production*, *112*, 1882-1892.

Singh, S. (2013). Impact of preschool education program of ICDS on children in rural Punjab. *International Journal of Humanities and Social Science Invention*, *3*, 25-31.

Sondankar, P. D., Kotnis, S. D., & Kumavat, A. P. (2015). Profile of Anganwadi workers and their knowledge regarding maternal and child health services in an urban area. *International Journal of Medical Science and Public Health*, *4*(4), 502-507. doi: 10.5455/ijmsph.2015.09122014100

Sripada, K. (2012). Neuroscience in the capital: Linking brain research and federal early childhood programs and policies. *Early Education & Development*, *23*(1), 120-130. doi: 10.1080/10409289.2012.617288

State Planning Commission. (2013). Early childhood education in Anganwadi Centers. Tamil Nadu. Retrieved from http://www.spc.tn.gov.in/spc_reports/Childhood.pdf

Swaminathan, I. (1990). *Cognitively oriented programme for preschool children: A record manual*. Bangalore: Karnataka.

Timsit, A. (2019). *Inside India's ambitious effort to provide early care and education to 400 million kids.* Retrieved from https://qz.com/india/1584703/indias-icds-anganwadi-system-is-a-challenged-but-impressive-effort/

Tirath, K. (2014). *Beneficiaries from Anganwadi Centers.* Retrieved from http://pib.nic.in/newsite/PrintRelease.aspx?relid=103220

Uhrmacher, P. B. (1995). Uncommon schooling: A historical look at Rudolf Steiner, anthroposophy, and Waldorf education. *Curriculum Inquiry*, *25*(4), 381-406.

Women and Child Development Department. (2014). *Objectives of integrated child development services scheme (ICDS).* Retrieved from http://delhi.gov.in/wps/wcm/connect/doit_wcd/wcd/Home/IntegratedChild Development Services/Objectives of ICDS.

Working Group on Development of Children for the Eleventh Five Year Plan [2007-2012]. (2007). *Report of the steering committee on human development for eleventh five year plan (2007-12).* New Delhi: Ministry of Women and Child Development, Government of India. Retrieved from http://wcd.nic.in/wgearlychild.pdf

Yalçın, F. ve Aktan Acar, E. (2021). 20. yüzyıla yön veren erken çocukluk eğitimi müfredat modelleri. E. Aktan Acar (Ed.), *Erken Çocukluk Eğitimine Giriş* içinde (ss. 347-412). Ankara: Nobel Yayıncılık.

Yalçın, F. ve Erden, F. T. (2017). Erken çocukluk eğitimine Küba perspektifinden alternatif bir bakış: Kendi çocuğunu eğit programı. *Ege Eğitim Dergisi*, *18*(1), 56-82. doi: 10.12984/egeefd.328376