

NURSERIES IN JORDAN
FINDINGS FROM THE
QUEEN RANIA
FOUNDATION
NATIONAL EARLY
CHILDHOOD
DEVELOPMENT
SURVEY 2015



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DISCLAIMER

The views expressed are solely those of the authors and do not represent the views of the Queen Rania Foundation for Education and Development or its affiliations.

METHODOLOGY

A detailed description of the QRF National ECD Survey 2015 methodology is available [here](#).



CBO	Community-based organization
ECD	Early Childhood Development
ECCE	Early Childhood Care and Education
ECERS-R	Early Childhood Environment Rating Scale - Revised
HRD	Human Resource Development
KG1	Kindergarten 1
KG2	Kindergarten 2
MoE	Ministry of Education
MoSD	Ministry of Social Development
NAEYC	National Association for the Education of Young Children
QRF	Queen Rania Foundation for Education and Development



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JORDAN'S NURSERIES: **KEY FINDINGS**

The Queen Rania Foundation (QRF) Early Childhood Development (ECD) Survey is a nationally representative survey providing a bird's-eye view of the current ECD landscape in Jordan. This report draws from the study's surveys of nursery administrators and caregivers to describe the nature of early childhood care and education (ECCE) offered by registered nurseries in Jordan. The main findings are as follows:

- Nursery conditions varied widely by provider type. Private nurseries tended to be the best resourced, whereas nurseries run through workplaces ("work-based"), community-based organizations ("CBO-based") and by teachers in Ministry of Education schools ("MoE-based") had fewer resources.
- The majority of nursery administrators reported having basic furnishing, hygiene and infrastructure resources available, although fewer than half reported having smoke detectors, and nearly half of work-based and MoE-based caregivers' reported their outdoor facilities were unsuitable.
- Not all nursery classrooms provided materials that encourage learning and play. Although more than 9 in 10 nurseries had televisions, only 4 in 10 MoE-based and 5 in 10 work-based nurseries had books. Fewer than a third of nursery administrators reported using a formal curriculum.
- Caregivers enter the profession with little formal preparation. Fewer than one quarter of caregivers had Bachelor's degrees, and nearly one third of MoE-based and CBO-based caregivers did not have Tawjihi (secondary) certificates.
- The majority of nursery caregivers reported they did not receive any formal pre-service training, from universities or otherwise. More than 7 in 10 of nursery caregivers reported not receiving any in-service training in the previous two years, with especially low training rates at MoE-based (5%) and private nurseries (12%).
- Some nursery caregiver beliefs and practices were not in line with international best practices. Fifty percent of caregivers reported that learning through direct instruction was more effective than learning through play, and 20% of caregivers reported using physical child discipline within the previous four weeks.
- A substantial percentage of caregivers reported not receiving benefits such as health insurance or social security. Survey results also suggest that many caregivers were receiving gross salaries below minimum wage.



INTRODUCTION

GENERAL BACKGROUND

The importance of the first five years of life for cognitive, physical and socio-emotional development is indisputable (Shonkoff & Phillips, 2000). Research has shown the effects early experiences leave on individuals (Pianta, Barnett, Burchinal, & Thornburg, 2009; NICHD Early Child Care Research Network, 2002) and their brain architecture (UNICEF, 2009). Evidently, there are extensive developmental benefits resulting from investing in Early Childhood Care and Education (ECCE),^[1] along with economic and social public benefits (Engle et al. 2011), and returns for individuals who attended ECCE (Heckman et al., 2009). For example, Engle et al. found that increasing pre-primary enrollment to 25-50% yielded a US\$ 6.4-17.6 return for every dollar invested in low and middle income countries. In Jordan, each dollar invested in ECCE was estimated to yield a minimum of US\$ 9 return on investment, if children were to attend pre-primary consistently for three years (Fink et al., 2017).

However, it is not sufficient to provide pre-primary education for children. Other factors, such as the quality of services offered at nurseries, pre-primary and kindergartens (KGs), influence children's developmental trajectories (Hall, Sylva, & Melhuish, 2009; Melhuish, Phan, Sammons, Siraj-Blatchford, & Taggart, 2008; Hayes, Palmer, & Zaslow, 1990). Research on ECCE has highlighted certain characteristics that pre-primary environments must possess to provide the necessary conditions for optimal cognitive, physical and socio-emotional development. These characteristics include, but are not limited to, pre-primary caregivers'^[2] qualifications (Mathers, Roberts & Sylva, 2013), relevance and quality of curriculum and quality of caregiver-child interactions (Sylva et al., 2007)^[3]. Research also highlights the role of the home learning environment in shaping children's developmental outcomes (Rodriguez & Tamis-lemonda, 2017). Studies have highlighted home learning environment activities that promote optimal development, including parents reading with their children, taking them on educational visits, and drawing with them (Sammons et al., 2015).

[1] ECCE is commonly referred to in research as the services provided to children aged zero until the end of pre-primary or 0-8. In this report, ECCE encompasses services provided for children aged 0-4: nursery aged children in Jordan.

[2] For the purpose of this report, teachers, caregivers or other staff who provide education and care to children at nurseries are referred to as caregivers.

[3] Pre-primary is used to indicate the formal schooling of children prior to Grade 1, including nursery, Kindergarten 1 (KG1) and Kindergarten 2 (KG2).



LANDSCAPE OF PRE-PRIMARY EDUCATION IN JORDAN

Despite the global evidence supporting the importance of investing in ECCE, existing data and research suggests gaps in both quality and access within Jordan's ECCE sector.

ACCESS

Formal ECCE in Jordan encompasses services offered to children from birth to age six; distributed across three main stages. The three stages include: 1) Nursery services for children aged three months to age four, 2) Kindergarten 1 (KG1) for children aged four to five and 3) Kindergarten 2 (KG2) for children aged five to six (UNESCO, 2011). The Ministry of Education (MoE) classifies the majority of KG services (82% of KG1&2 classrooms) as private,^[4] i.e. not provided by the government (MoE, 2015). While the MoE is the entity regulating Jordan's KGs, nurseries are regulated by the Ministry of Social Development (MoSD). According to the MoSD's registry, the majority of nurseries in Jordan were private or MoE-based nurseries. Nurseries in MoE schools are not public, but only offer private services to the children of teachers working at that school. These nurseries are set up by the school teachers, who pay caregiver salaries and provide basic materials. There are also community-based organizations (CBOs), which provide services to the general public, and work-based nurseries who serve children of parents working at private and public institutions or companies (MoSD representative, personal communication, April 2015).^[5]

Although the aforementioned services exist, enrollment in ECCE in Jordan is low in comparison to other middle-income countries and some Arab states. Government data showed 38% of eligible children were enrolled in KG1&2 for the year 2014-2015 (MoE, 2015). While data on ECCE enrollment for younger children is collected less frequently, only 22% of three to four year-olds were enrolled in ECCE in Jordan in 2012 (Department of Statistics Jordan & ICF International, 2013). Meanwhile, average gross pre-primary enrollment for middle income countries was 49% in 2015. Some Arab countries also had higher enrollment than Jordan: in 2015, Lebanon's gross pre-primary enrollment stood at 78%, Morocco at 57% and the West Bank and Gaza at 52% (UNESCO Institute of Statistics, 2016).

[4] The MoE classified the KG classroom providers as public or private. Based on these classifications, private KGs could include CBO-based and work-based KGs. There were no UNRWA or other governmental KG providers listed in the MoE data.

[5] This information was obtained from key informant interviews that were conducted for the QRF National ECD Survey 2015, with individuals from the ministries of Education and Social Development, from local initiatives and professors from local universities.



To address low ECCE enrollment, the National Human Resource Development (HRD) Strategy (National Committee for Human Resources Development, 2015) called for universalization of KG2 and expansion of KG1 and nursery levels. In July 2017, the MoE and UNICEF launched an 8-year executive plan to universalize access to KG2 (UNICEF, 2017).

QUALITY

In addition to expanding access, the National HRD Strategy recommended projects for improving the quality of ECCE services offered in Jordan (National Committee for Human Resources Development, 2016). The quality of pre-primary services plays a crucial role in children's socio-emotional, literacy, numeracy and cognitive development (Hall et al., 2009; Melhuish et al., 2008). The higher the quality of ECCE settings, the better and longer lasting the cognitive and social gains of children (Sylva et al., 2011).

Two components comprise ECCE quality: 1) process quality, that is, the day-to-day experiences of a child at the ECCE setting, such as caregiver-child interactions, materials and language experiences, and 2) structural quality, which includes aspects such as caregiver qualifications, experience and student-to-caregiver ratios (Cryer, 1999). In Jordan, these aspects of formal ECCE quality have scarcely been evaluated. To the authors' knowledge, only three such published studies exist.

Only one study has investigated both the structural and process aspects of quality: a study of 118 KG classrooms in Jordan (Abu Taleb, 2013). Evaluative guidelines were used to investigate quality among private and public classrooms. Public KG classroom practices were observed to be more in line with best practices, when compared to private programs. Additionally, caregivers with Bachelor's degrees or backgrounds in early childhood education outperformed their counterparts in practicing developmentally appropriate activities.

The two other available studies only investigated process quality, both using a structured observational tool, the Early Childhood Education Rating Scale – Revised (ECERS-R; Harms, Clifford, & Cryer, 2005). Using this tool, Al-Hassan, Obeidat and Lansford (2010) found that the 107 public and private KGs they studied ranged in quality of services offered, from minimal to good quality. Aldarab'h, Alrub, and Al-Mohtadi's (2015) study did not give a general score for the quality of the 19 public KGs they observed; rather, it reported scores on specific sub-components of quality, as measured by the observational tool. The areas of quality that received highest ratings were that of program structure (schedule, play opportunities) and interactions (including caregiver-child interactions, or child-child interactions) (Harms et al., 2005). Nonetheless, the ratings on those aspects of quality were still not high as measured by the observational tool. Five hundred caregivers also filled in a questionnaire rating the quality of the public KGs at which they were employed (Aldarab'h et al., 2015). Based on caregivers' average ratings, different aspects of nursery quality ranged from "good" to "high."

While these three studies have made important contributions to ECCE research in Jordan, all focus on the KG level. To the authors' knowledge, no studies have previously comprehensively explored nursery quality in Jordan or surveyed a nationally representative sample of nurseries.



RESEARCH OBJECTIVES AND QUESTIONS

In contrast to the abundance of literature investigating home learning and pre-primary school environments worldwide (Anders et al., 2012; Gregoriadis & Grammatikopoulos, 2014; Tayler, Ishimine, Cloney, Cleveland, & Thorpe, 2013), few such studies exist in Jordan. To provide a better picture of the ECCE landscape in Jordan, including nursery, KG1 and home learning environments, the Queen Rania Foundation for Education and Development (QRF) launched its National Early Childhood Development (ECD) Survey in 2015.^[6] Drawing from the QRF ECD Survey data, this report focuses on the quality of nursery education in Jordan, to provide policymakers with a clear bird's-eye view of the current nursery landscape so they may better direct future plans to improve the quality of ECCE services in Jordan. The report also aims to support ECCE providers and advocates by highlighting potential areas for improvement and increased support. Finally, the findings of this report may be used to raise awareness among parents and the general public in Jordan about the need for improving ECCE quality.

Hence, the main focus of this report is on aspects of nursery quality, as investigated by two surveys included in QRF's 2015 study: one with nursery caregivers and one with nursery directors or administrators.^[7,8] The objectives of these two surveys were to explore the following research questions:

- What are the basic capacities of registered nurseries in Jordan, including the size and nature of services they provide?
- What are the conditions of registered nurseries' physical environments?
- What curriculum, learning resources and activities do registered nurseries provide?

[6] The QRF National ECD survey comprised four major components; 1) a survey with 1,800 Jordanian mothers, 2) a survey with 437 nursery caregivers, 3) a survey with 437 nursery administrators and 4) a survey of 306 KG1 administrators. Sixteen focus groups were conducted with a small sample of MoE-based and private nursery caregivers and Jordanian mothers. Additionally, interviews were conducted with key individuals from ECD entities in Jordan, such as ministries, initiatives or universities.

[7] These surveys were conducted in a representative sample of registered nurseries in May-June of 2015. The sample distribution of caregivers and directors/administrators was as follows: 39% recruited from the private sector, 50% were MoE-based providers, 4% from work-based and 7% from community-based organization providers. Details on the survey methodology can be found on the QRF website.

[8] The director/administrator survey was conducted either with the nursery director or nursery administrator, who would have been the most qualified staff member that could answer questions about the nursery. The report will refer to respondents from the director/administrator survey as administrators.



- What is the extent of professionalization of caregivers at registered nurseries, as shown by their education and training, working conditions and nature of employment?
- What is the nature of registered nursery caregivers' reported motivations and attitudes about their work?

The current report will first describe the landscape of registered nurseries in Jordan, summarizing basic facts such as their years of operation, size, services provided, costs, and profiles of nursery staff. It will then explore three key aspects of nursery quality in depth: physical environment, learning resources, and caregiver quality.



FINDINGS

PROFILE OF REGISTERED NURSERIES IN JORDAN

Beyond the number of nurseries registered with the MoSD, to date there is little public information about the characteristics of these nurseries. As such, this section will draw from the QRF National ECD Survey results to briefly describe nurseries' basic characteristics such as size, the services they provide, and their cost structures. Following that, the section provides a brief profile of nursery caregivers.

NURSERY CHARACTERISTICS

First, it is worth noting that all nurseries surveyed were registered with the MoSD, such that they were formal providers of ECCE. Other informal nursery providers exist, such as home-based nurseries (Global Communities Partners for Good, 2015), which are not registered with the MoSD; these nursery types were not explored in this survey due to the difficulty of obtaining a representative sample. The four types of nurseries sampled were: 1) registered private nurseries, 2) MoE school-based nurseries^[9], which are located in MoE schools and run by the school teachers for their own children rather than MoE-run and accessible to the public; 3) Work-based nurseries that are set up by private companies or organizations for the children of the women working at those institutions; and 4) CBO-based nurseries operated by registered charities who sometimes offer free or subsidized provision to children (Sultana, 2009).

At the time of the QRF National ECD Survey, most registered nurseries in Jordan were private or run by MoE-teachers, falling in the first and second groups above. More than half (55%) of registered nurseries were run by MoE-teachers; around 20% of women in Jordan were employed as teachers for the MoE in the same year.^[10] Approximately 37% of registered nurseries were privately owned and run (outside of workplaces). Only 3% of registered nurseries were run by work-based nurseries. Article 72 of in Jordan mandates that any private company with 20 working mothers who collectively have 10 nursery-aged children must provide a nursery classroom in the company (Ministry of Labor , 1998)^[11]. However, not all companies are found to comply with this

[9] These nurseries will be referred to as "MoE-based" nurseries throughout the report.

[10] In 2015, approximately 49,000 women were working as teachers at MoE schools (MoE, 2015) out of a total of 271,000 employed women in Jordan (Department of Statistics, 2016).

[11] As of February 2018, the Labor Committee in Jordan approved removing the gender stipulation of Article 72 of the Labor Law, and increasing the required number of children to open a nursery at the work-place to 15 nursery-aged children. <https://goo.gl/rjyEiK>.



law, which may be a result of lack of awareness or enforcement (Shomali, 2016). Five percent of registered nurseries were run by CBO-based providers. The distribution of the QRF National ECD Survey sample reflects the size of providers within the population; 50% of sampled nurseries were MoE-based, 39% were private, 4% were work-based and 7% were CBO-based providers.

The majority of the nurseries surveyed were in urban areas, primarily in the Central region of Jordan in Amman, although a somewhat larger proportion of CBO-based nurseries were located in rural areas. Private providers operated relatively new nurseries, while the other three nursery types had been established for longer (Table 1).

TABLE 1: PROFILE OF SAMPLED NURSERIES, QRF NATIONAL ECD SURVEY 2015 [12]

		Private	MoE-based	Work-based	CBO-based
Area type	Urban	98%	79%	77%	58%
	Rural	2%	21%	24%	42%
Region	Central	81%	54%	65%	32%
	North	16%	26%	29%	36%
	South	3%	20%	6%	32%
Governorate	Amman	58%	32%	53%	17%
	Zarqa	8%	14%	12%	7%
	Balqa	11%	6%	-	7%
	Madaba	4%	3%	-	3%
	Irbid	15%	20%	18%	13%
	Jerash	-	1%	-	7%
	Mafraq	1%	3%	6%	7%
	Ajloun	1%	2%	6%	10%
	Karak	-	1%	6%	10%
	Tafilah	-	10%	-	13%
	Ma'an	2%	4%	-	7%
Aqaba	1%	5%	-	3%	
Years since establishment	25 years or older	13%	28%	18%	39%
	15 to 24 years	13%	35%	59%	13%
	5 to 14 years	37%	31%	24%	32%
	4 years or newer	37%	6%	-	16%
n		171	218	17	31

[12] Some totals exceed 100% due to rounding.



Nurseries across different provider types varied widely in size, or the number of children served (Table 2). Administrators of work-based nurseries reported serving an average of 50 children, while those in MoE-based nurseries reported serving an average of just 14. Both work-based and MoE-based nurseries' services are contingent on the number of children of their female employees.

In terms of average child-to-caregiver ratios, providers of all nursery types were roughly the same, with administrators across nursery types reporting ratios of approximately six to seven children per caregiver. Caregivers themselves reported supervising an average of 10 or 11 children at a time and this ratio was consistent across nursery type. The disparity in ratio reported by administrators and caregivers may be due to question interpretation: caregivers were asked how many children they typically supervised at a time but not necessarily on their own; multiple caregivers may have been supervising the same group of children in some cases. Lower child-to-caregiver ratios can yield better child outcomes as more attention is paid to the individual child with more individual interactions possible (Perlman et al., 2017). The MoSD has regulated the maximum number of children allowed per caregiver, which differ slightly based on provider type. For private providers, a maximum of six children per caregiver for children aged 12 months or below, eight children per caregiver for those aged 12–24 months, and 10 children per caregiver aged 24–48 months (MoSD, 2008b). For MoE-based and work-based providers, one caregiver should be present for six children aged 12 months or below, and one caregiver for every 10 children aged 12–48 months (MoSD, 2008a; MoSD, 2013). These ratios are slightly higher than optimal ratios outlined in international standards (National Association for the Education of Young Children [NAEYC], 2008).

TABLE 2: NURSERY SERVICES PROVIDED ACROSS THE FOUR PROVIDER TYPES, BASED ON ADMINISTRATOR REPORTS

	Private	MoE-based	Work-based	CBO-based
Mean number of children served	32	14	50	23
Mean number of caregivers	5	2	8	4
Mean child-to-caregiver ratio	6.4:1	7:1	6.3:1	5.8:1
KG1 classroom provided	17%	6%	–	32%
KG2 classroom provided	13%	18%	–	29%
n	171	218	17	31



While nurseries tended to serve a wide range of ages, most did not provide services to children with special needs. More than 3 in 4 nurseries reported serving children from infancy (children older than 70 days) to just under four years of age (see Table 3). Many providers also accommodated newborns and four- to five-year-olds, and a few (less than 10%) served children of KG2 age. However, more than 9 in 10 administrators across providers reported they did not have any children with disabilities or chronic illnesses enrolled at their nurseries. Low reported enrollment of children with disabilities could be due to low awareness or failure to diagnose disabilities, or parents choosing to keep these children at home.

Fewer than one-third of private, MoE-based, and CBO-based administrators reported offering distinct KG classrooms. None of the work-based administrators reported offering distinct KG classrooms, which is unsurprising as the labor law mandates the availability of a nursery, but not KG classrooms (Ministry of Labor, 1998). Across provider types, the majority of nurseries taught in both Arabic and English with varying emphasis on the main language of instruction (Table 3).

TABLE 3: NURSERY SERVICES PROVIDED ACCORDING TO ADMINISTRATOR REPORTS, BY PROVIDER TYPE ^[13]

		Private	MoE-based	Work-based	CBO-based
Age groups served	New-born Children (70 Days or Less)	34%	18%	35%	39%
	Infants (71 Days to 1 Year)	92%	92%	94%	90%
	Toddlers (13 Months to 2 Years)	95%	95%	94%	100%
	Nursery I (25 Months to 3 Years)	96%	96%	94%	100%
	Nursery II (37 Months to 4 Years)	85%	84%	82%	77%
	Children I (49 Months to 5 Years)	19%	16%	18%	16%
	Children II (71 Months or Above)	6%	5%	6%	10%
Children with disabilities or chronic illnesses enrolled	Children with Disabilities	10%	4%	6%	-
	Children with Chronic Illnesses	1%	1%	-	3%
Languages taught at the nursery	Arabic only	22%	27%	24%	32%
	Arabic and English (mostly English)	10%	14%	-	3%
	Arabic and English (mostly Arabic)	39%	36%	59%	42%
	Arabic and English in equal measure	29%	23%	18%	23%
n		171	218	17	31

[13] Some totals exceed 100% due to rounding.



Nurseries also differed in terms of the costs they incurred for providing services (Tables 4)^[14]. The reported mean per pupil cost per month was highest among private providers (JOD 69 per pupil per month), and lowest for MoE-based providers (JOD 24 per pupil per month).

TABLE 4 : ADMINISTRATOR-REPORTED MONTHLY COSTS FOR PROVIDING NURSERY SERVICES

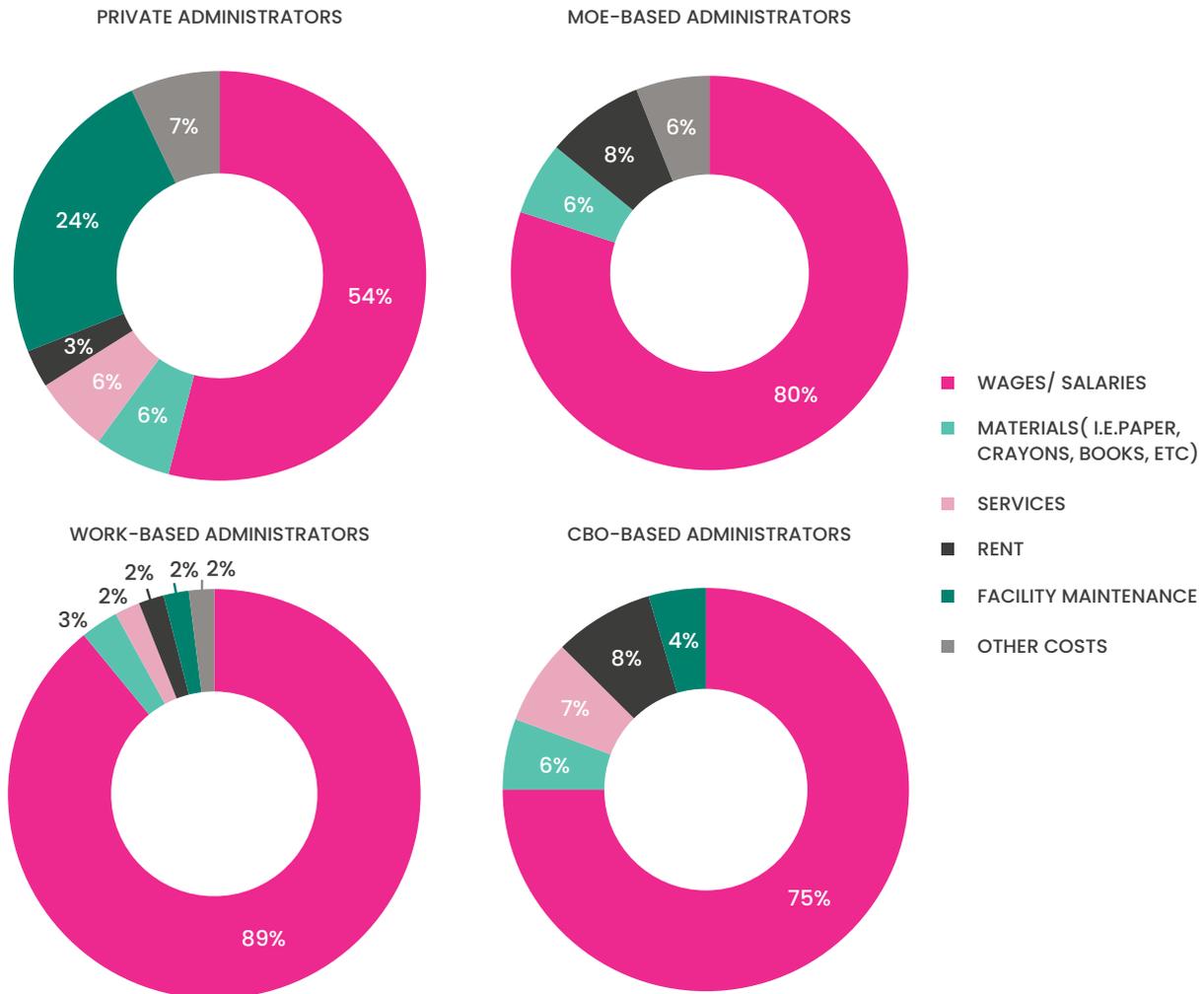
	Private	MoE-based	Work-based	CBO-based
Mean total monthly cost of providing services (JOD)	1,921	313	2,721	1,010
Mean monthly cost per pupil (JOD)	69	24	49	51
n	171	218	17	31

Across all provider types, the main bulk of cost incurred was for caregivers' salaries and wages, making up more than half of total costs for private and CBO-based nurseries, 80% of MoE-based and 90% of work-based nurseries' total costs (Figure 1). Oddly, 8% of MoE-based administrators reported paying rent as part of their monthly costs. The MoE-based nurseries are typically not required to pay rent to the schools; therefore, further investigation is required to ascertain why 8% of monthly costs were attributed to rent.

[14] Data on fees charged by nursery providers has been excluded from the analysis due to insufficient data collected.



FIGURE 1: ADMINISTRATOR-REPORTED DISTRIBUTION OF MEAN MONTHLY NURSERY COSTS, BY PROVIDER TYPE



CAREGIVER PROFILE

The QRF National ECD Survey allows for the first ever national summary of the characteristics of Jordan's nursery caregivers, at least for those working in MoSD-registered nurseries. Table 5 provides an overview of registered nursery caregivers' age, gender and qualifications based on the nursery caregivers' questionnaire data, with more thorough analysis of their training and attitudes described in subsequent sections of the report. It is worth noting that while the nurseries selected for the study were largely representative of nurseries on the registered MoSD list, only one caregiver was selected per nursery, which could introduce some selection bias or leave larger nurseries slightly under-represented in this profile.



All caregivers were female. Caregivers at private and CBO-based providers were relatively young, where 55% of private caregivers were under 30. Greater age variation existed among MoE-based and work-based providers. Community college/post-secondary two-year diplomas^[15] were the most common degrees held by caregivers across provider types; however, more than half of MoE-based and CBO-based caregivers did not report having post-secondary educations.

TABLE 5 : NURSERY CAREGIVER DEMOGRAPHICS BY PROVIDER TYPE ^[16]

		Private	MoE-based	Work-Based	CBO-based
Age	Under 25	28%	7%	6%	7%
	26 to 30	27%	17%	35%	29%
	31 to 35	16%	23%	12%	26%
	36 to 40	12%	21%	12%	19%
	41 to 45	8%	15%	24%	10%
	Above 45	9%	17%	12%	10%
Highest Level of Education	Illiterate/ uneducated	-	-	-	-
	Below Tawjihi	11%	29%	18%	29%
	Tawjihi certificate	25%	40%	18%	23%
	2-year diploma/ Community College	40%	26%	41%	32%
	Bachelor's or higher	25%	5%	24%	16%
Gross annual household income (JOD)	Up to 3,000	37%	43%	44%	42%
	3,000-4,800	22%	24%	25%	36%
	4,800-7,000	21%	27%	19%	10%
	7,000-10,000	15%	6%	6%	7%
	Greater than 10,000	7%	1%	6%	7%
Marital status	Single	42%	27%	41%	36%
	Engaged	4%	2%	-	7%
	Married	49%	63%	53%	48%
	Separated	3%	1%	-	3%
	Divorced	2%	5%	6%	7%
	Widowed	1%	2%	-	-
n		171	218	17	31

[15] These diplomas are attained in post-secondary education institutions, at community colleges or other institutions where programs typically last for two years. They are not attained at universities. For the purpose of the report, they are referred to as 2-year post-secondary diplomas.

[16] Some of the totals exceed 100% due to rounding.



NURSERY LICENSING

The MoSD sets regulations for nursery licensure in Jordan. These regulations cover multiple aspects, such as infrastructure, health and safety, learning resources, student ages, and caregiver and director qualifications. There is one general licensing bylaw (MoSD, 2005), from which three different licensing regulations were developed for the different types of nursery providers^[17]. The three different versions of the MoSD licensing regulations include versions for private providers (MoSD, 2008b), MoE-based providers (MoSD, 2008a), and public and private work-based providers (MoSD, 2013; MoSD representative, personal communication, April 2015).

The bylaw covers general guidelines for all providers; however, the regulations for each provider type have minor variations in the instructions. These differences include specific instructions on where to locate the nursery within the MoE school for MoE-based providers (MoSD 2008a). The most comprehensive regulations are the private nursery regulations, which include specifications such as the number of learning materials provided; at least one toy should be provided for each child (MoSD, 2008b). As previously mentioned, there are slight differences in the required student-to-caregiver ratios (MoSD, 2008a; MoSD, 2013). There are no differences in the required types of learning materials provided, specifications regarding furnishing and caregiver qualifications.

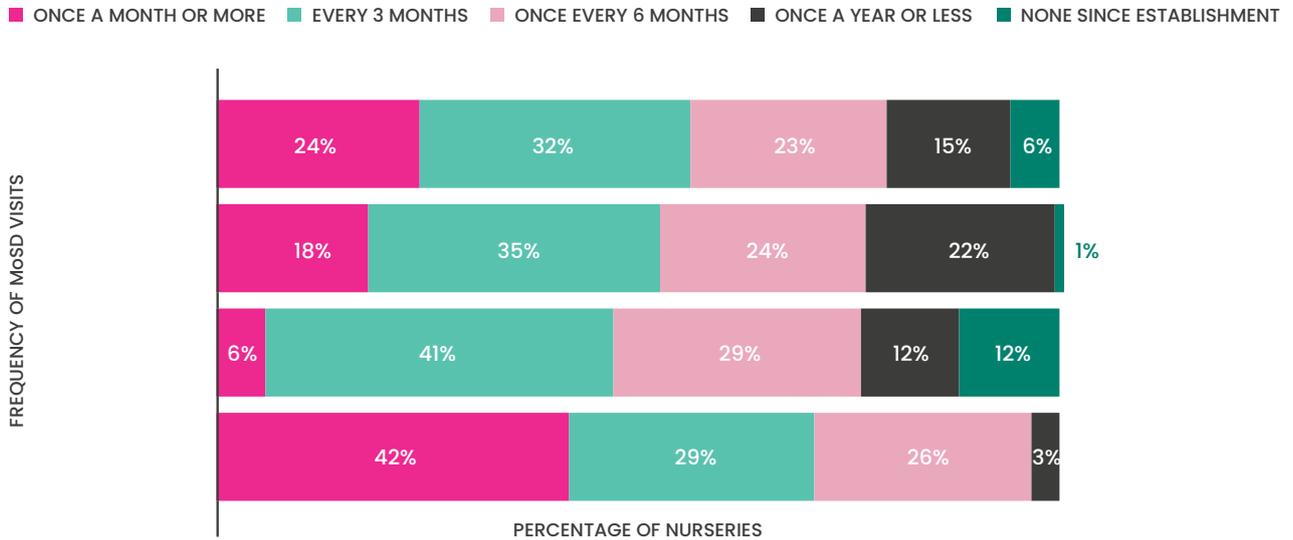
These MoSD regulations must be met for the initial licensure of nurseries. According to the MoSD bylaw, at least three members from a local committee consisting of directorate representatives of the MoSD, the MoE, Ministry of Health, Ministry of Public Works and Housing, local municipality and Civil Defense Department must visit and evaluate the nursery site before it is given its initial license (MoSD, 2005). Correspondingly, most nursery administrators reported that these regulatory bodies did indeed visit their nurseries for inspection as part of the licensing process.

This committee is also responsible for field visits, including annual inspection and licensing renewal (MoSD, 2005). Many nursery administrators reported that the MoSD also visited their nurseries on a more frequent basis than the annual licensure inspection (Figure 2).

[17] The general licensing bylaw can be found on the MoSD website: http://www.mosd.gov.jo/index.php?option=com_content&view=article&id=2003:-52-2005&catid=14:14.

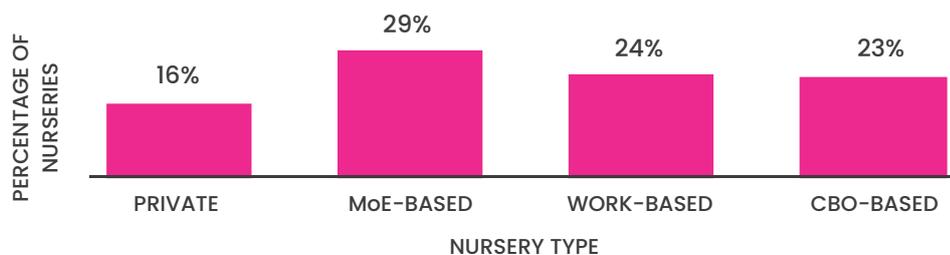


FIGURE 2: FREQUENCY OF MOSD VISITS TO NURSERIES, AS REPORTED BY NURSERY ADMINISTRATORS [18]



According to the MoSD bylaw, if a nursery is not observed during inspections to adhere to any of the outlined standards regarding caregivers, health and safety, infrastructure and equipment, the nursery is issued a written warning (MoSD, 2005). Around a quarter of administrators reported receiving such warnings by inspectors regarding the condition of the nursery (Figure 3). The majority of these warnings were regarding the lack of or the condition of infrastructure or equipment. Specifically, the warnings were related to the safety of the physical environment; safety of windows, unsafe heating, lack of ventilation and poor infrastructure. Hygiene and health was also stated by administrators as one of the reasons for receiving warnings. Less frequent reasons for warnings included unqualified caregivers, administration or management issues, or expiration of the nursery license.

FIGURE 3: ADMINISTRATOR-REPORTED INSTANCES OF WARNINGS RECEIVED BY NURSERY TYPE



[18] Some totals fall under or over 100% due to rounding.



PHYSICAL ENVIRONMENT

The physical environment of a classroom is highly important for children’s development, as it can facilitate learning and play (Biddle, Garcia-Nevarez, Henderson, & Valero-Kerrick, 2015). Classroom environments should be safe in order to encourage children’s exploration (Biddle et al., 2015). According to international standards, specific furnishing and infrastructure components, such as floor-mats, temperature control systems, and sufficient numbers of child-sized tables and chairs should be available for classrooms to be considered high in quality (Harms, Clifford, & Cryer, 2014).

Given the importance of physical environments, the MoSD licensing regulations include specifications regarding the height, length and depth of shelves, tables, and chairs to ensure that they are child-appropriate. Regulations also mandate that the nursery is supplied with central heating or another form of temperature control (MoSD, 2008a; MoSD, 2008b; MoSD, 2013). To assess the extent to which nurseries in Jordan followed MoSD regulations and international best practices, aspects of infrastructure and physical environment were investigated in the administrators’ survey.

TABLE 6 : ADMINISTRATOR-REPORTED AVAILABILITY OF PHYSICAL ENVIRONMENT RESOURCES ^[19]

	Private	MoE-based	Work-based	CBO-based	
Furnishing facilities	Child-sized chairs	98%	65%	88%	97%
	Child-sized tables	96%	57%	88%	90%
	Child-sized washing sinks	83%	64%	82%	74%
	Child-sized toilets	85%	67%	82%	71%
	Training potty	49%	35%	53%	39%
	Child-height windows	46%	39%	35%	42%
	Security/bars on windows	77%	64%	59%	74%
	Floor-mat/play-mat	91%	92%	94%	90%
n	171	218	17	31	

[19] Some of the resources surveyed in Table 7 were adapted from the MoSD regulations for nursery licensing; other items were added by QRF staff.

		Private	MoE-based	Work-based	CBO-based
Health and safety facilities	Fire extinguisher	88%	72%	100%	81%
	Smoke detector	42%	13%	47%	29%
	First-aid kit/pharmacy	89%	73%	94%	81%
Hygiene and temperature control facilities	Soap	89%	85%	94%	87%
	Running cold water	87%	85%	94%	90%
	Running hot water	89%	81%	88%	84%
	Heating radiator	53%	28%	82%	42%
	Hot air conditioning	60%	17%	47%	42%
	Cold air conditioning	60%	17%	47%	45%
Gross motor and outdoor play resources	Electric fan	61%	62%	82%	68%
	Balls	89%	78%	76%	87%
	Swings	86%	29%	65%	81%
	Slides	87%	30%	76%	74%
	See-Saw	56%	13%	47%	48%
	Sandbox	65%	17%	53%	52%
n		171	218	17	31

Providers appeared to exhibit similar trends in provision of basic physical infrastructure (Table 6). Almost all administrators reported availability of floor-mats; however, less than half of administrators reported having child-height windows. This is not surprising given that floor-mats were part of the standards regulated by the MoSD, while child-height windows were not. Similarly, administrators across providers reported having essential hygiene components, including soap and running hot and cold water. Across nursery types, at least 7 in 10 administrators reported having at least one form of heating facility, including 90% of private nursery administrators and 16 of the 17 work-based administrators.

Gross motor and outdoor play resources that develop children's gross motor skills^[20] were also explored. With the exception of MoE-based administrators, most administrators reported availability of swings, slides and sandboxes. Less than a third of MoE-based administrators reported offering these resources. This is unsurprising given that the MoSD has not set regulations for MoE-based nurseries requiring the provision of outdoor facilities such as age-appropriate swings, see-saws and slides.

Considering all aspects of the physical environment, MoE-based administrators reported the least availability of resources. This may be due to the unique funding mechanism for these nurseries: the MoE is not responsible for financing the physical resources of nurseries located in its schools. The school provides the space for the classroom, and other costs such as caregiver salaries, outdoor play resources, air conditioning and other basic necessities are paid by the

[20] Gross motor skills include the ability of an individual to use large muscle groups that work to coordinate movements, such as walking, balancing, throwing objects and jumping (Esposito & Vivanti, 2013).



mothers, i.e. the teachers from the MoE-school whose children are enrolled in the nursery.

The availability of physical environment resources and facilities cannot be considered in isolation; the condition of these resources should be taken into account. As such, caregivers' opinions regarding the adequacy of the infrastructure and the learning environment resources were gathered. More than 6 in 10 of caregivers completely agreed that their workplaces had adequate safety and hygiene facilities and heating and ventilation systems. However, nearly half of MoE-based and work-based caregivers disagreed with the statement that the outdoor facilities at their nurseries were suitable ^[21]. This finding is unsurprising for work-based nurseries, as many of these nurseries are housed in larger institutions, such as banks or hospitals, which may not have the appropriate outdoor space for children. As such, MoSD licensing regulations for work-based providers are less stringent on the provision of outdoor space, and regulations do not mandate its provision (MoSD, 2008a; MoSD, 2008b; MoSD 2013; MoSD representative, personal interview, April 2015). The same is applicable to MoE-based nurseries (MoSD representative, personal communication, April 2015). Caregiver reports suggest that indoor facilities may be better than outdoor, with more than 8 in 10 caregivers agreeing that indoor facilities were suitable. Finally, 10–20% of caregivers across provider types reported that the single most pressing professional challenge they faced was related to the conditions of the infrastructure, facilities and resources. This suggests that for some caregivers, their physical working environment is poor enough to surmount typical educator challenges such a low salary and lack of professional development. This pattern was present among administrator reports as well: more than one-third of MoE-based and 18% of work-based administrators reported their single most pressing challenge was related to poor infrastructure.

[21] Caregivers were asked to rate how much they agreed or disagreed with statements made about their nurseries on a 4-point scale ranging from: totally disagree, somewhat disagree, somewhat agree, totally agree. The statement related to outdoor facilities was: "There are suitable outdoor facilities in the nursery."

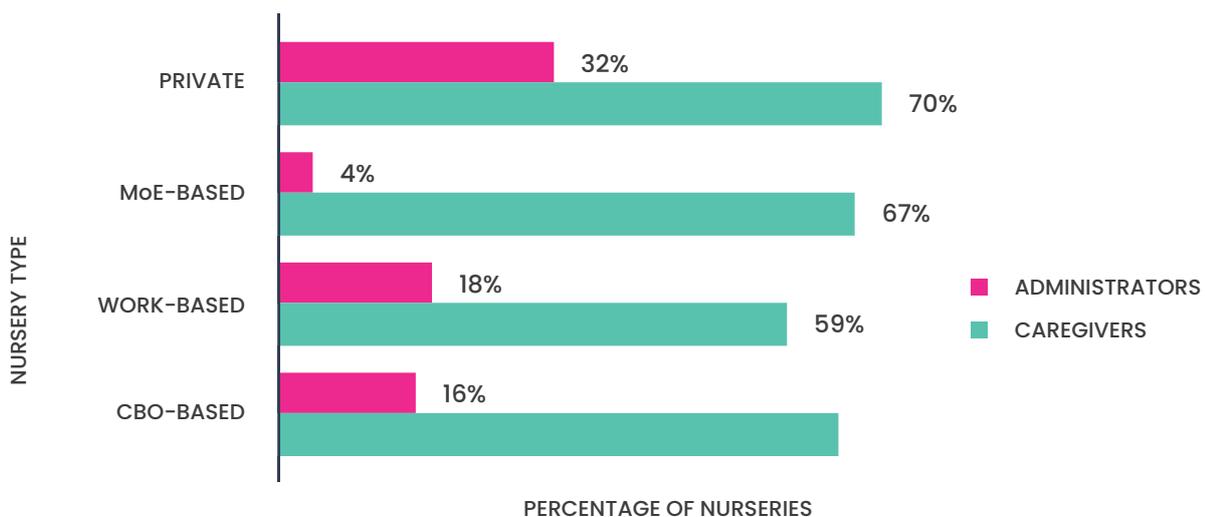


CURRICULUM, LEARNING MATERIALS AND ACTIVITIES

CURRICULUM AND LEARNING ACTIVITIES

An important characteristic of quality in ECCE settings is the curriculum and domains of curriculum used (Sylva et al., 2007). With the appropriate curricular components and teaching strategies, caregivers can support a child's development (Domitrovich et al., 2009). In the QRF National ECD Survey, administrator reports indicated low implementation of curricula across nursery providers, with especially low usage reported among MoE-based administrators (only 4%, see Figure 4). This may be because the implementation of a curriculum is not mandatory for nurseries (MoSD representative, personal interview, April 2015). The implementation of a curriculum may also incur added costs for the nurseries, such as teacher training or provision of learning materials.

FIGURE 4: PERCENTAGE OF NURSERIES IMPLEMENTING A CURRICULUM BASED ON ADMINISTRATOR AND CAREGIVER REPORTS [22]



[22] The caregivers and administrators were asked two different questions. The caregiver questionnaire asked: "Do you use specific curricula to teach the children you provide care for? By children, we mean all children you provide care for?" The administrators' questionnaire asked: "Does the nursery follow any particular, identifiable curriculum or a preschool model? By this we mean a proven international, regional, or local preschool nursery model."

It is worth noting that caregivers reported much higher curriculum usage than administrators (Figure 4). This may be partially due to variation in how administrators and caregivers were asked about the use of curricula – administrators were asked about use of a “proven” curricular model whereas caregivers were only asked if they used “specific curricula”.^[23] The discrepancy may also indicate caregivers and administrators had different notions of what constitutes an established curriculum. For example, it may be the case that caregivers were using elements of a curriculum, yet considered it a complete curriculum (Table 7). On the other hand, it might be the case that administrators were unaware that caregivers were using elements of curricula.

TABLE 7: PERCENTAGE OF ADMINISTRATORS REPORTING IMPLEMENTATION OF CURRICULA, OR ELEMENTS OF CURRICULA AT THEIR SETTINGS ^[24]

	Private	MoE-based	Work-based	CBO-based
Yes - one model entirely	21%	3%	0%	10%
Yes - some elements of single model	5%	1%	6%	0%
Yes - several elements of multiple models	7%	1%	12%	7%
No curriculum used	68%	96%	82%	84%
n	171	218	17	31

Fifty-four percent of MoE-based, 45% of CBO-based and 20% of work-based caregivers who reported using curricula did not believe their nursery followed an appropriate curriculum to teach young children. While caregivers were not asked which curriculum they used, among the smaller numbers of administrators who reported using curricula, there was variation in types of curricula used, including the Montessori method, the National Council for Family Affairs curriculum, and the Reggio Emilia Approach.

Perhaps unsurprisingly given the lack of curricula, not all caregivers reported preparing lesson plans to teach children (Figure 5). While more than half of private caregivers reported preparing lesson plans, only one-third of MoE-based reported such preparations. During focus group discussions with private and MoE-based caregivers, many caregivers reported using their own experience to teach children, others described mainly reading stories with children, and some mentioned only taking care of the children, with minimal learning activities conducted with children.^[25]

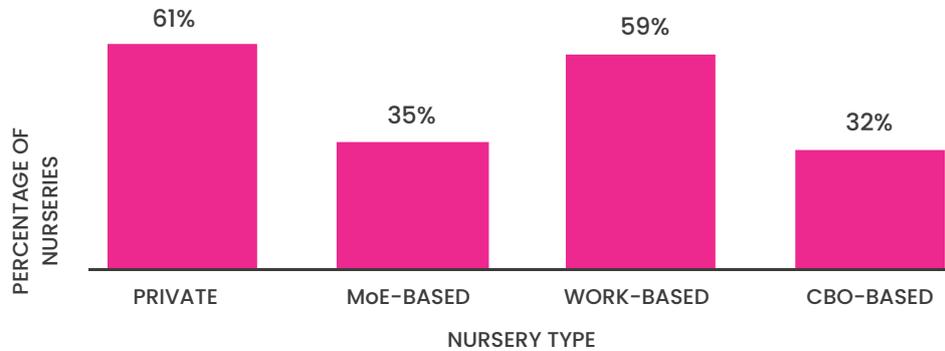
[23] See previous footnote.

[24] Some totals exceed 100% due to rounding.

[25] Focus groups were conducted with a sub-sample, post-survey administration and gathering of main results, to further expound on the main issues highlighted in the questionnaire data. More details are available in the survey methodology document.



FIGURE 5: PERCENTAGE OF CAREGIVERS WHO REPORTED PREPARING LESSON PLANS, BY NURSERY TYPE

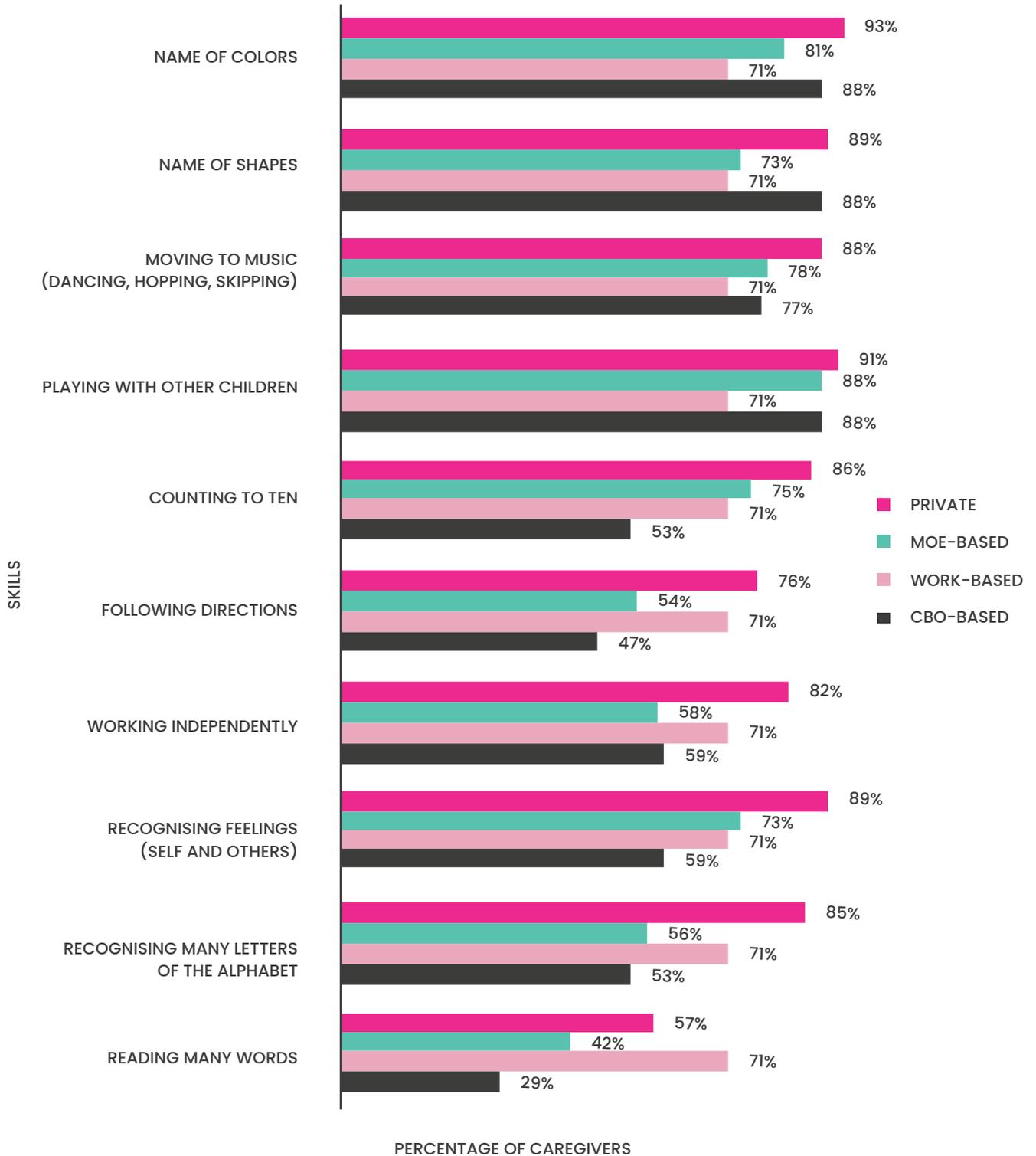


International research indicates that high-quality ECCE settings “engage children in stimulating and cognitively facilitating activities” (Sylva et al., 2007; p.50). As such, the QRF National ECD Survey asked caregivers about the learning activities they conduct with the children (Figure 6). Most caregivers at nurseries serving children aged three to five years reported teaching the names of shapes, colors, moving to music and playing with other children. More than 8 in 10 caregivers at private and CBO-based nurseries reported teaching children names of colors and shapes. Eighty percent of caregivers from MoE-based nurseries also reported teaching children names of colors. More than 7 in 10 private, MoE-based and work-based caregivers reported teaching children how to recognize their own feelings, or feelings of others. Fewer caregivers reported teaching children skills such as following directions or working independently.

Caregivers were also asked about the pre-literacy skills they taught (Figure 6). More than 8 in 10 of private caregivers in nurseries serving children aged three to five reported teaching children to recognize many letters of the alphabet; however, nearly half of MoE-based and CBO-based caregivers (in nurseries serving children in the same age level) reported not teaching these basics. The least frequently taught skill was “reading many words”; approximately one third of CBO-based, 42% of MoE-based and 57% of private caregivers reported teaching this skill.



FIGURE 6: CAREGIVER-REPORTED SKILLS TAUGHT AT NURSERIES SERVING THREE- TO FIVE-YEAR-OLDS, BY NURSERY TYPE [26]



[26] These questions were adapted from the Early Care and Education Provider Survey. The questions in this section of the survey were only asked to providers who had programs for 3-5 year olds. <https://www.researchconnections.org/childcare/resources/3304?classifCode=11&paging.startRow=1&publicationYear=2002&recency=TWOYEAR&author=Groark%252C+Christina+J.>



LEARNING MATERIALS

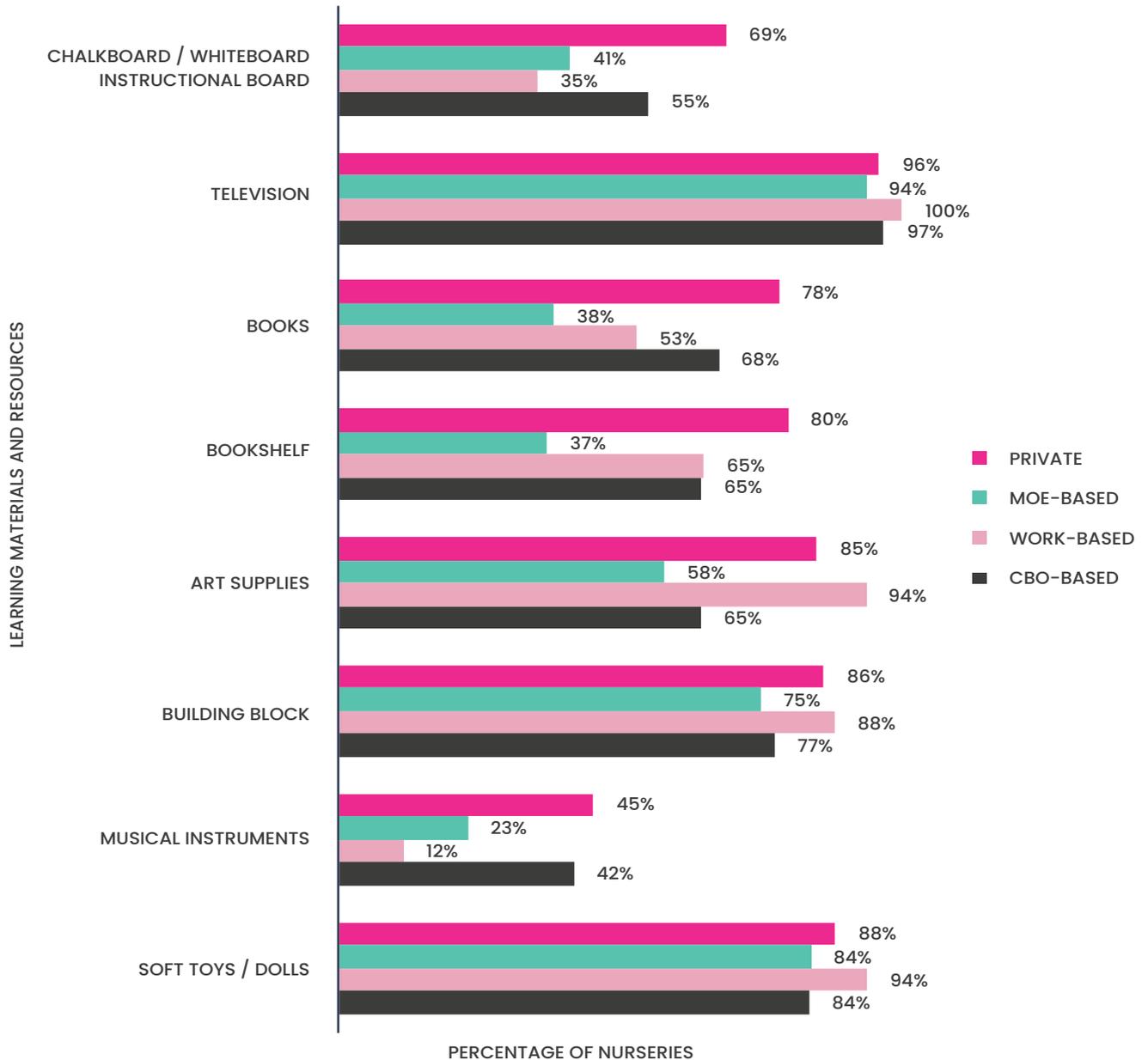
The availability of learning resources is important for children’s physical, language, cognitive and socio-emotional development (Biddle et al., 2015). For example, children can become familiar with letters or words by using materials that have words or letters on them. The Early Years’ Foundation Stage framework outlines that enabling environments for young children include resources that can allow them to develop several skills (Moylett & Stewart, 2012)^[27]. For example, props and dolls can be used to encourage a child’s listening and responsiveness, or to encourage children’s engagement in imaginary play. Additionally, providing toys that have buttons, or play-dough like resources to stimulate younger children and encourage them to handle and manipulate items with their hands (Moylett & Stewart, 2012). Children in higher quality settings tend to spend more time carrying out activities such as dramatic play or art (Sylva et al., 2007), which may require specific learning resources (props, soft toys/dolls or art supplies). The MoSD has therefore set standards for the toys and materials that must be available in nurseries. The standards mandate that age-appropriate, safe and diverse tools of educational value are provided, including building blocks, musical instruments, art supplies and books.

Although more than 7 in 10 nursery administrators reported availability of soft toys/dolls and building blocks, meeting some of the MoSD standards regarding learning material provision, a strikingly large proportion of administrators reported that their nurseries did not own books. Only 38% of MoE-based nursery administrators reported that books were available in their settings (Figure 7). The quantity and condition of these resources is also important. While most caregivers reported availability of adequate learning materials, nearly half of MoE-based caregivers reported that both the quality and quantity of instructional and learning materials were inadequate.

[27] The Early Years Foundation Stage is a statutory framework, which sets learning, development and care standards for children aged 0-5: <https://www.foundationyears.org.uk/eyfs-statutory-framework/>



FIGURE 7: ADMINISTRATOR-REPORTED AVAILABILITY OF RESOURCES AND LEARNING MATERIALS AT NURSERIES



Nearly all administrators across nursery types reported the availability of a television in the classroom (Figure 7). Caregivers reported spending an average of two hours daily watching television with the children, and 25% of caregivers reported watching three to five hours of television daily with the children. These results are concerning; according to the American Academy of Pediatrics children ages two to five should be limited to one hour of screen time per day, and children less than a year and a half of age should avoid any screen time (American Academy of Pediatrics, 2016). Although some research suggests technology can improve learning when used appropriately (National Association for the Education of Young Children & the Fred Rogers Center for Early Learning and Children’s Media, 2012), the Canadian Pediatric Society has suggested excessive television watching can have detrimental influences on children’s learning and health (Ford-Jones & Nieman, 2003). More time spent watching television may indicate less time available for engaging in other activities. Future research could investigate how much time in Jordanian nurseries is spent on various learning activities or use of various learning materials since global research has found that children in higher quality settings were observed to spend more time coloring, playing with blocks or painting than children in lower quality settings (Howes & Smith, 1995).

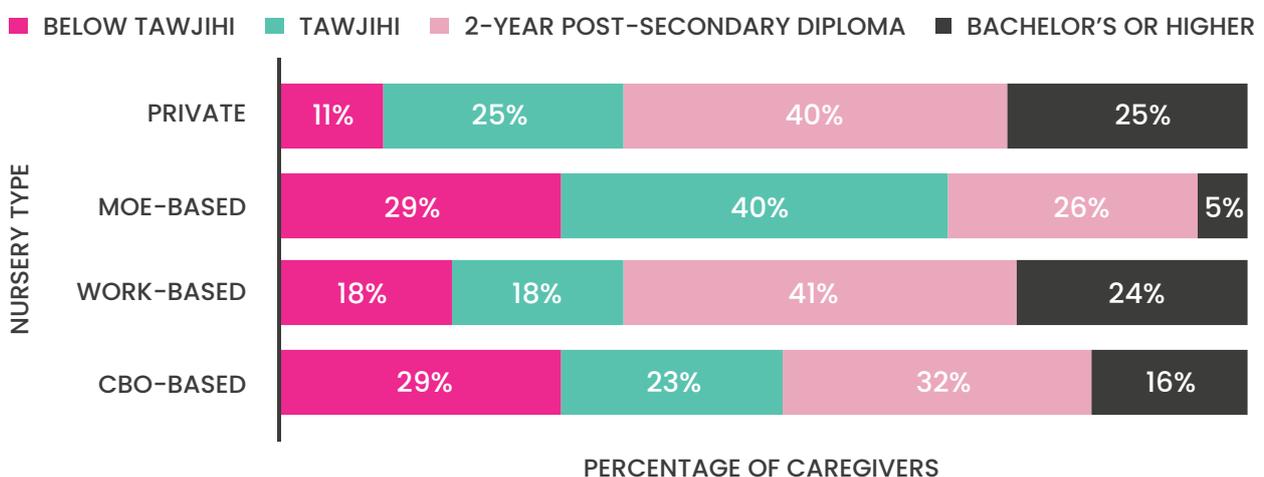


CAREGIVER QUALITY

CAREGIVER QUALIFICATIONS AND MOTIVATIONS

The benefits of pre-primary enrolment depend on the quality of provision, including caregiver training and qualifications (Yoshikawa & Kabay, 2015; National Institute of Child Health and Human Development, 2006). Global research has shown the significant relationship between caregiver qualifications and quality of ECCE provision (Manning, Garvis, Fleming & Wong, 2017). In Jordan, caregivers with higher levels of education or early childhood education specializations outperformed their counterparts in employing more developmentally-appropriate methods (Abu Taleb, 2013). The MoSD's standards for hiring nursery staff outline that caregivers must hold either post-secondary 2-year diplomas in an ECCE-related field or a Tawjihi certificate with two years of relevant experience (MoSD 2008a; MoSD 2008b; MoSD, 2013). The QRF National ECD Survey showed the majority of nursery caregivers held post-secondary 2-year diplomas or below (Figure 8). A substantial percentage of caregivers across provider types reported education levels below Tawjihi, and many caregivers with Tawjihi certificates or below did not report having the experience necessary that meets MoSD's standards for caregiver qualifications. Based on caregiver reports, an estimated 38% of caregiver respondents were unqualified according to MoSD standards, as they did not have post-secondary education degrees or Tawjihi certificates and two years' experience. Despite this, only 2-3% of MoE-based, CBO-based and private administrators reported receiving regulatory warnings as a result of inappropriate caregiver qualifications.

FIGURE 8: NURSERY CAREGIVERS' REPORTED HIGHEST LEVEL OF EDUCATION, BY NURSERY TYPE



Furthermore, it is important to investigate the specializations of caregivers who completed post-secondary education to identify the relevance of caregivers' specializations to their work (Table 8). Research suggests that caregivers who have specialized knowledge in early childhood can improve their competencies, knowledge, skills and attitudes (Fukkink & Lont, 2007), and spend more time conducting developmentally-appropriate activities with children (Abu Taleb, 2013). As such, only half of private, MoE-based and work-based caregivers reported completing education-related post-secondary education. Approximately one third of private, work-based and CBO-based caregivers and 20% of MoE-based caregivers completed early childhood education specializations. Other education-related fields of study included child-rearing, curriculum/instruction, educational psychology and special education.

TABLE 8: DISTRIBUTION OF NURSERY CAREGIVERS' REPORTED POST-SECONDARY SPECIALIZATIONS, BY NURSERY TYPE [28]

	Private	MoE-based	Work-based	CBO-based
Anthropology	1%	-	-	-
Business Management	6%	-	-	-
Chemical Engineering	1%	-	-	-
Civil Engineering	-	-	9%	-
Computer Science	1%	-	-	-
Economics	6%	8%	18%	-
Education	52%	57%	46%	73%
Finance	1%	-	-	-
History	5%	5%	9%	-
Management Information Systems	1%	2%	9%	7%
Marketing	-	2%	-	-
Mathematics	1%	-	-	-
Nursing	-	2%	-	-
Psychology	6%	2%	9%	-
Religion	-	2%	-	7%
Sociology	22%	24%	-	13%
n	110	67	11	15

[28] Some totals exceed 100% due to rounding.



Of the caregivers who studied education at the post-secondary level, more than 4 in 10 MoE-based and approximately 6 in 10 private caregivers reported that the reason for choosing education-related fields of study was their Tawjihi grade. This follows the trend for basic and secondary public school teachers in Jordan: in 2014, 30% of public school teachers reported choosing education as a field of study at university because of their academic circumstances (Qarout, Pylvainen, Dahdah & Palmer, 2015). This is unsurprising as students' options for university study in Jordan are dependent on their Tawjihi scores. Fields such as education at university level have lower entry requirements than medicine or engineering (Higher Education Council, 2015). Other motivations for pursuing education-related post-secondary degrees included a positive desire to enter the profession. More than 4 in 10 private and MoE-based caregivers reported this as one of the main factors for specializing in education at post-secondary level.

CAREGIVER TRAINING OPPORTUNITIES

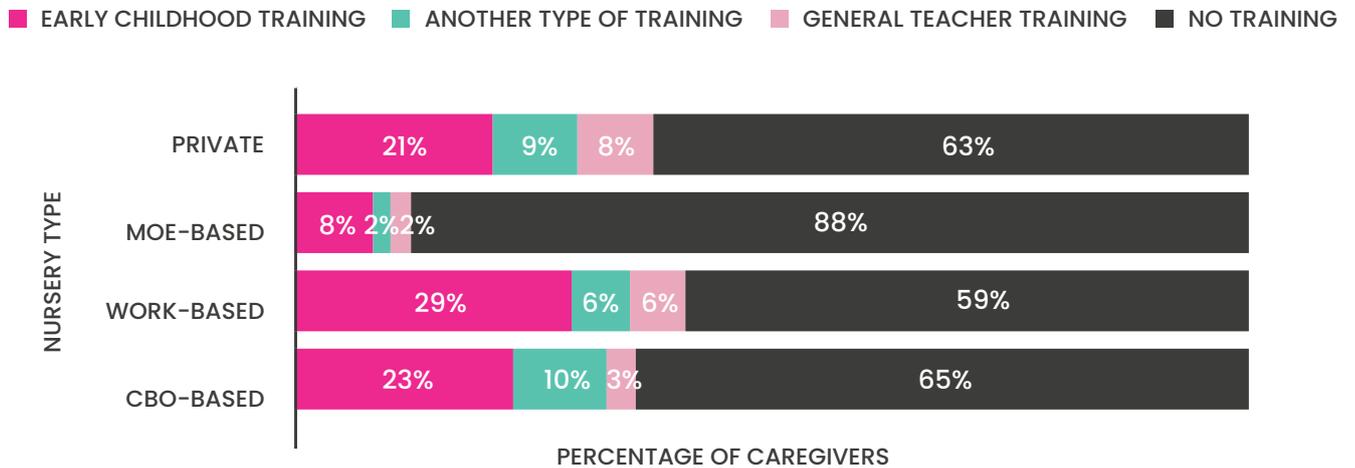
Well-trained caregivers are an indicator of high quality early childhood programs (Sylva, Melhuish, Sammons, Siraj-Blatchford, & Taggart, 2004). However, specialized training is required for caregivers to nurture children's learning and development (Fukkink & Lont, 2007) and positively influence teaching practices (Mitter & Putcha, 2018). Since nursery caregivers come from diverse educational backgrounds, training offers opportunities to supply skills and knowledge to all caregivers (Mitter & Putcha, 2018).

Seeing as the majority of Jordan's nursery caregivers have not specialized in ECCE-related fields at the post-secondary level, it is essential to investigate the training opportunities they received. More than 60% of caregivers across all nursery types reported not receiving any pre-service training (Figure 9). Fewer than one-third of caregivers who received pre-service training reported the training was relevant to early childhood. Training implementation bodies differed widely, and included caregivers' previous or current employers, specialized centers, the United Nations Children's Fund, the Jordan River Foundation, the Young Women's Christian Association, the MoSD, Qawasmeh Hospital, and Civil Defense Directorate, or training as part of university studies.

Research has found that on-site training sessions and sessions with active learning that combine the teaching of theoretical and practical skills are more effective than trainings conducted through lectures or seminars (Ginsburg et al., 2012; Feiman-Nemser, 2008; Hammerness et al., 2005). A quarter of private, a third of MoE-based, 14% of work-based and 46% of CBO-based who received trainings reported that these trainings were lectures or seminars only. A third of MoE-based and work-based, 44% of private and 10% of CBO-based caregivers reported having trainings that were fully conducted on-site. The rest of the caregivers reported receiving a mix of both on-site and lecture/seminar based trainings (approximately a third of MoE-based and private, 46% of CBO-based and 57% of work-based caregivers).



FIGURE 9: PRE-SERVICE TRAINING REPORTED BY NURSERY CAREGIVERS, BY NURSERY TYPE ^[29]

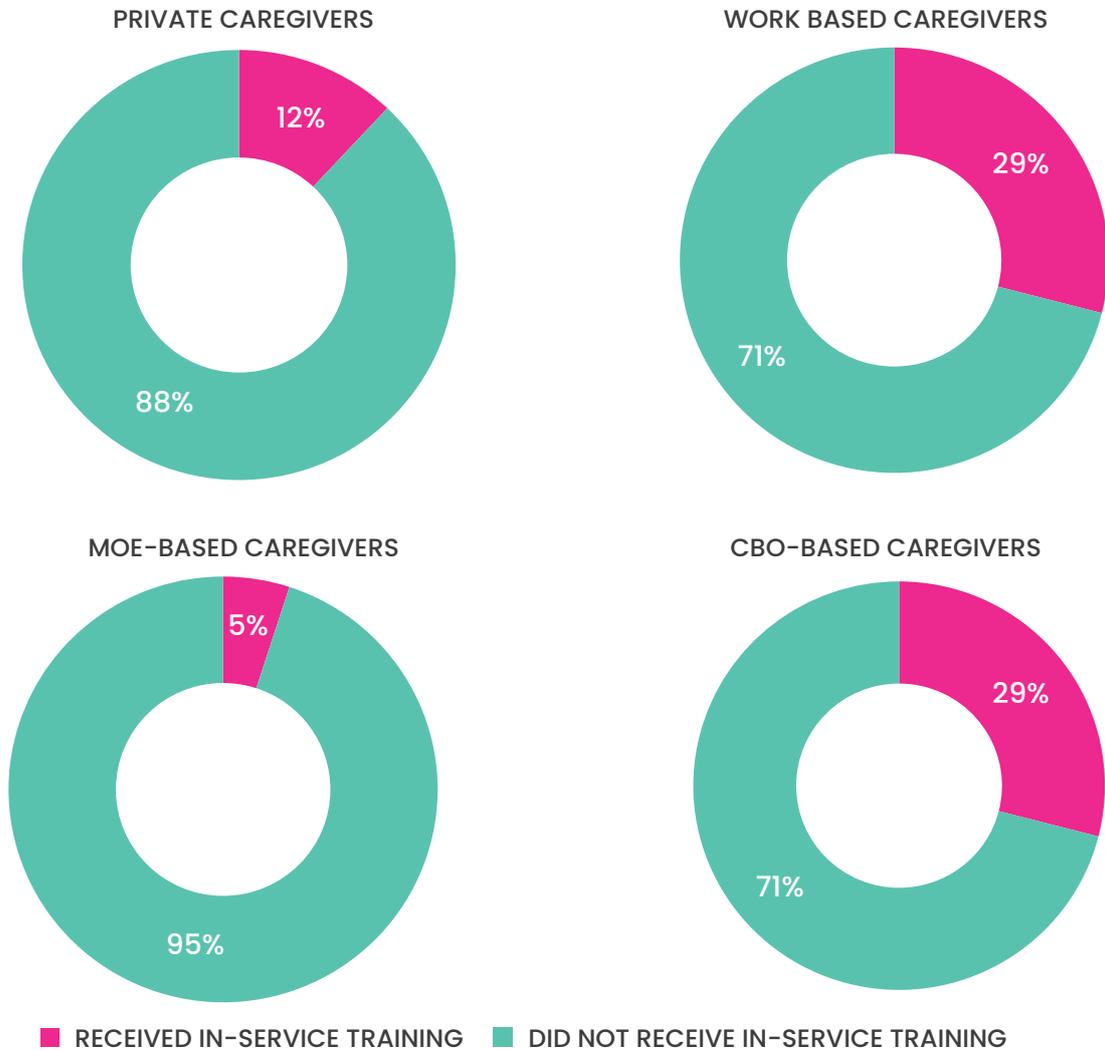


In addition to pre-service training, the continuous professional development of nursery caregivers is another critical component affecting process quality and the learning experiences children receive (Singapore Ministry of Social and Family Development, 2012). Responses on the caregivers' questionnaire revealed in-service training opportunities were rare in Jordan (Figure 10). Around 9 in 10 MoE-based and private caregivers reported not receiving any in-service training in the previous two years. Caregivers at work-based and CBO-based nurseries were more likely to receive in-service training; approximately 7 in 10 caregivers reported not receiving in-service training in the previous two years. Rates of in-service training among nursery caregivers were much lower than those reported by secondary public school teachers in Jordan; almost half of public school teachers reported receiving in-service training in the previous two years (Qarout et al., 2015).

[29] Some totals exceed 100% due to rounding.



FIGURE 10 : CAREGIVER-REPORTED IN-SERVICE TRAINING COMPLETED WITHIN PREVIOUS TWO YEARS, BY PROVIDER TYPE



Many caregivers acknowledged their need to acquire more skills. More than 5 in 10 caregivers across all provider types agreed or strongly agreed with the statement that they “still have much to learn before considering themselves skilled professionals” (Table 9). The majority of caregivers reported they wished more training opportunities were available to them; however, most viewed it as a low priority. The questionnaire also aimed to identify caregivers’ perceptions on the quality of available trainings. More than one-third of caregivers perceived typical trainings as irrelevant to their day-to-day jobs.



TABLE 9: REPORTED AGREEMENT OF NURSERY CAREGIVERS WITH STATEMENTS REGARDING THEIR PROFESSIONAL DEVELOPMENT, BY NURSERY TYPE ^[30]

	Private	MoE-based	Work-based	CBO-based
Improving my skills as a nursery caregiver is a priority for me.	96%	84%	88%	90%
Training sessions typically cover information I already know and are not a good use of my time.	36%	44%	53%	39%
I am confident in my ability as a childcare provider.	96%	97%	94%	94%
I see additional training as a low priority.	45%	52%	53%	58%
I wish there were more childcare training opportunities available to me.	83%	71%	65%	74%
I still have a lot to learn about children and teaching before I consider myself a skilled professional.	77%	67%	53%	61%
I don't like to attend training workshops because they are all alike.	26%	45%	35%	26%
Most training for nursery caregivers lacks relevance to my day-to-day responsibilities.	38%	42%	41%	36%
Training is a waste when the instructor lacks experience as a nursery caregiver.	36%	44%	41%	55%
I regularly stay updated on the latest developments in early childhood care and development.	86%	76%	76%	77%
I would register to online training/e-learning if available.	78%	61%	59%	55%
n	171	218	17	31

Despite caregivers' lack of relevant educational background and pre-service training, around half of nursery administrators reported that caregivers employed at their nurseries did not need further professional development to improve their competencies. Of the administrators who reported that caregivers did require training, more than 55% reported that the training should be specific to pedagogy and teaching. These findings suggest a need for greater awareness among nursery providers regarding the need for the continuous professional development of caregivers working in nurseries.

[30] Several of these questions were borrowed from the Early Head Start Questionnaire for Child Care Providers in Centers: https://www.acf.hhs.gov/sites/default/files/opre/child_care_providers_in_centers.pdf.



CAREGIVER PERCEPTIONS AND BELIEFS

The QRF National ECD Survey provided evidence on the importance of providing Jordan's caregivers with training and professional development opportunities. Such opportunities are needed not only due to the minimal opportunities caregivers reported having to improve their skills, but also given their reported beliefs towards teaching practices and child discipline. Specific questions were included in the caregivers' survey on their perceptions on teaching practices and their roles. Importantly, more than 7 in 10 of caregivers across all provider types believed their function at the nursery was to provide care for the children, not education.^[31] This finding parallels the low frequency of teaching activities reported by caregivers (Figure 6) and the high prominence of televisions found across all providers, and may imply that many children in nurseries are not experiencing sufficient educational activities and opportunities to stimulate their cognitive development.

Further questions explored caregivers' perceptions on pedagogical approaches in the early years. Research suggests children who engage in play have greater developmental and cognitive outcomes than children who do not (Miller & Almon, 2009). According to the American Academy of Pediatrics, play is crucial for development; it can entice children's creativity, imagination, dexterity, healthy brain development and physical, cognitive and emotional strength. Play can also allow children to develop their own capacities, hence their confidence (Ginsburg, 2007). While more than 8 in 10 caregivers agreed that "exploring and playing is important for how children learn language and mathematics," half of nursery caregivers reported believing that children learned best through direct instruction, rather than activities. Further observational research is required to better understand the nature of educational experiences children receive, as the survey was only able to examine caregivers' reported perceptions. Nonetheless, future early childhood interventions in Jordan could raise nursery caregivers' awareness of the advantages of learning through play, and provide training to equip them to teach through play.

Training and professional development programs could also target caregivers' approaches to discipline. While the majority of caregivers did report emphasizing techniques such as explaining why a child's behavior was wrong or giving children something else to do, more than a third of caregivers reported screaming or shouting at children within the previous month (Table 10). Moreover, approximately 20% of caregivers reported hitting children as a form of discipline, with 10% of private, CBO-based and MoE-based caregivers reporting they believe physical discipline is required to educate a child properly.

[31] Caregivers were asked to rate the statement: "My main function as a nursery caregiver is to provide care not education," on a 4-point scale ranging from "totally disagree" to "totally agree." 73% of private, 85% of MoE-based, 82% of work-based and 81% of CBO-based caregivers reported "somewhat" or "totally" agreeing to this statement.



TABLE 10 : CAREGIVERS' REPORTED DISCIPLINE METHODS USED IN THE MONTH PRIOR TO SURVEY, BY NURSERY TYPE ^[32]

	Private	MoE-based	Work-based	CBO-based
Explained why behavior was wrong	96%	99%	100%	97%
Took privileges away/forbade something child liked	73%	76%	88%	52%
Forbade child to leave the classroom	52%	60%	47%	39%
Shouted or screamed at child	36%	50%	35%	36%
Gave child something else to do	66%	65%	47%	55%
Hit child with a hard object (e.g. belt, stick, etc...)	3%	1%	-	-
Hit/slapped child with bare hand on bottom	5%	5%	6%	7%
Hit/slapped child on face	1%	2%	6%	3%
Hit/slapped child on hand, arm, or leg	11%	14%	12%	10%
n	171	218	17	31

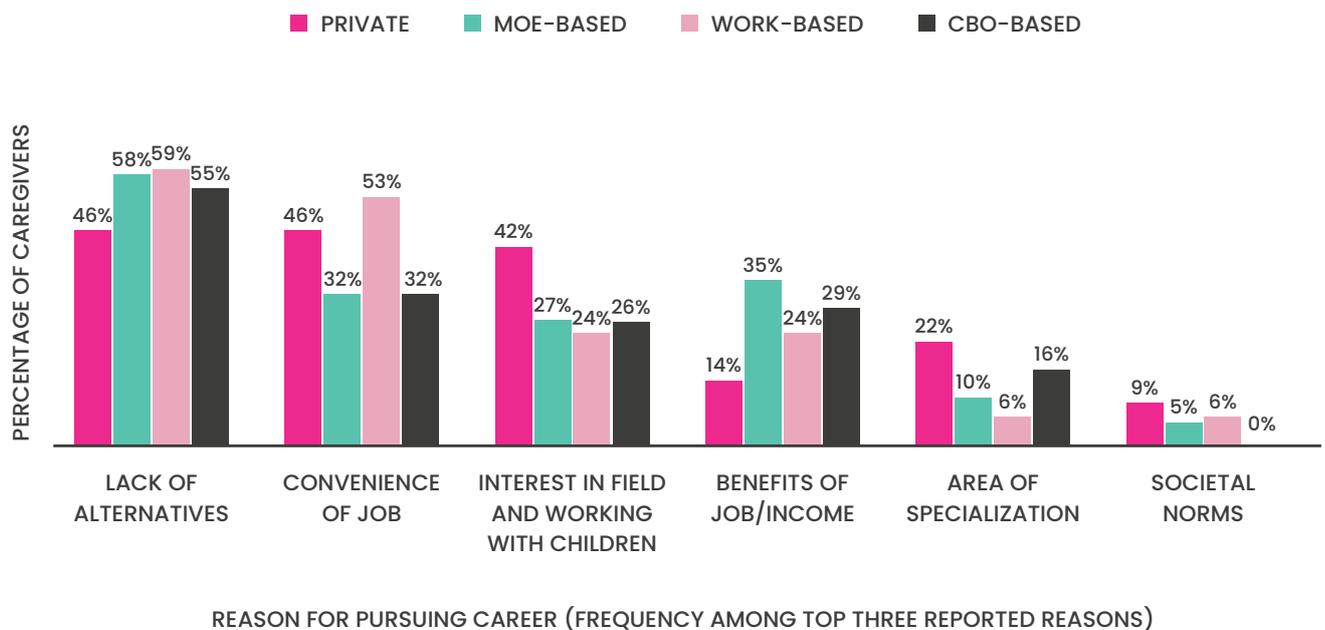
[32] These questions were adapted from the Multiple Indicator Cluster Survey developed by UNICEF. See <http://mics.unicef.org/>



CAREGIVER CAREER CHOICES AND MOTIVATIONS

Since few caregivers originally pursued early childhood education fields during their post-secondary education and research suggests caregiver motivations are closely linked to student motivation, teaching practices, and student outcomes (Han & Yin, 2016), it is important to identify why they pursued this career. The caregivers' questionnaire therefore asked caregivers to state their reasons for becoming a nursery caregiver.^[33] The most common reasons caregivers reported for choosing the profession were lack of alternatives, the convenience of the job, and an interest in the field or working with children (Figure 11). However, fewer than one-third of caregivers from MoE-based, CBO-based and work-based providers reported interest for field as one of the three main drivers for pursuing career. When caregivers were asked which single factor was the most influential (Figure 11), the most common reason reported was the lack of other alternatives. This is a common trend with educators in Jordan; in 2014, 2 in 10 public school teachers reported choosing the profession due to lack of other alternatives and 4 in 10 due to a passion for teaching (Qarout et al., 2015). However, the proportion entering the profession due to lack of alternatives appears to be much higher among nursery professionals than among primary and secondary educators, who more frequently reported pursuing their profession due to a passion for teaching or working with children. Further inquiry is needed to ascertain why nursery caregiving and education are viewed as a profession of last resort, and to identify ways to attract more individuals motivated primarily by a passion for working with children to the profession.

FIGURE 11: CAREGIVER-REPORTED REASONS FOR PURSUING CAREER, BY NURSERY TYPE^[34]



[33] The caregivers were asked: "What were the main reasons you decided to become a nursery caregiver?" The question was open-ended and respondents were allowed to list up to three reasons.

[34] Caregivers were allowed to list up to 3 reasons for pursuing this career.



CAREGIVER WORKING CONDITIONS

Most caregivers (more than 65% across all nursery types) reported being totally satisfied with their jobs. However, when asked about their satisfaction with specific job components, they reported that some areas of the job were less satisfactory than others (Table 11). Caregivers were asked to report their satisfaction with job components on a scale of 1 to 10, with 1 signifying total dissatisfaction and 10 signifying complete satisfaction. The highest mean satisfaction was with the nature of the job and work environment, while lowest mean satisfaction was with salary.

Low satisfaction with salaries was common across caregivers at all types of nurseries, which is unsurprising considering the low reported average gross salaries received. Average reported caregiver monthly salaries were JOD 190 for private caregivers, JOD 130 for MoE-based caregivers, JOD 150 for CBO-based caregivers and JOD 260 for work-based caregivers. The survey did not filter out for part-time employees for this question, so average salaries may include responses from some part-time caregivers. However, based on administrator reports, only a very small percentage of paid caregivers were part-time employees. Specifically, 5% of private, 7% of MoE-based, 6% of work-based and 15% of CBO-based paid caregivers were part-time employees, based on administrator reports.

Despite the fact that the survey did not filter for part-time respondents for this question, it is reasonable to conclude based on the low proportion of part-time caregivers that average caregiver salaries were quite low. Many caregivers were receiving salaries below minimum wage, despite almost all reporting that they were working as paid employees and not unpaid volunteers. The average caregiver salary reported for private nurseries, JOD 190 per month, was the minimum wage in Jordan in 2015. ^[35, 36] These findings are in line with previous research in Jordan that showed teachers in private schools more generally received low salaries; often at minimum wage or below (Labor Watch, 2010). The reported average salaries received by MoE-based and CBO-based nursery caregivers (130 and 150 JOD per month, respectively) were substantially below the minimum wage. However, CBO-based nurseries had the highest percentage of reported part-time caregivers, which may explain the lower average. Future research could explore why work-based nursery caregivers reported receiving an average of JOD 260, significantly higher than caregivers at other nursery types.

[35] The minimum wage in Jordan for the year 2015 was JOD 190; see <https://goo.gl/LN98JP>.

[36] Caregivers were asked about their gross salaries: "On average, how much are you paid monthly before any deductions (if applicable)?"



TABLE 11: NURSERY CAREGIVERS' MEAN REPORTED SATISFACTION WITH SPECIFIC JOB COMPONENTS, BY NURSERY TYPE

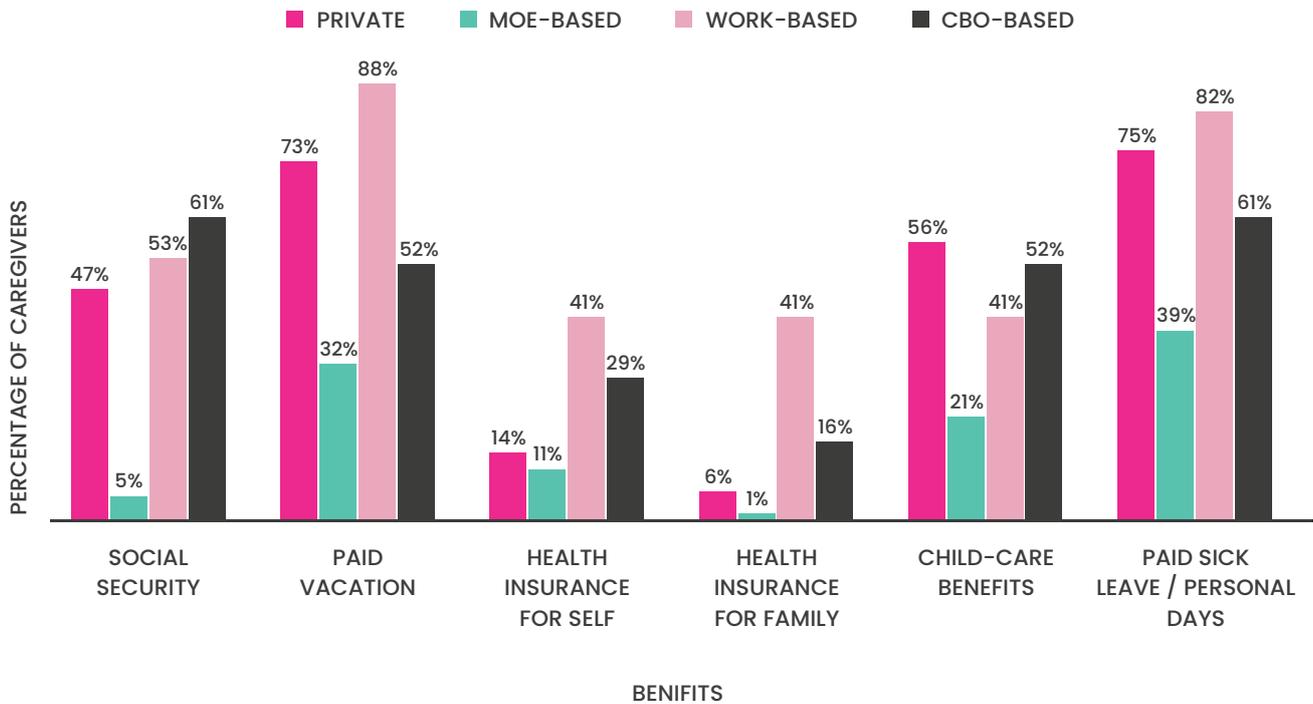
	Private	MoE-based	Work-based	CBO-based
Salary	7.0	5.3	5.8	6.0
Career prospects	7.1	5.6	7.0	7.0
Work environment	8.2	7.2	8.1	8.1
Job Security	7.9	6.2	7.2	8.0
Nature of Job	8.4	7.8	8.3	7.9
Working Hours	7.7	8.0	7.0	7.6
Opportunities for Advancement	7.4	5.9	7.0	6.7
Job Stress	6.9	6.6	6.8	7.0
n	171	218	17	31

Table 11 also depicts lower reported job security satisfaction among MoE-based and work-based caregivers. This may be because caregivers from both nursery types' services are contingent on demand from the school or company employees, as they are not open to the general public. This could mean the caregivers' services are not required consistently each year. Correspondingly, more than 40% of MoE-based and 53% of work-based caregivers reported not having signed agreements governing their employment, compared to just 19% of private caregivers.

In addition to low salaries, caregivers across all provider types reported receiving few benefits. Figure 12 highlights the lack of benefits provided to caregivers, with MoE-based caregivers receiving the fewest benefits. The majority of caregivers across all provider types reported not receiving retirement benefits, or health insurance for themselves or their families. More than 90% of MoE-based caregivers reported not receiving health insurance for themselves or their families, or social security.



FIGURE 12: CAREGIVER – REPORTED EMPLOYMENT BENEFITS RECEIVED, BY NURSERY TYPE ^[37]



Perhaps in response to reported challenges with salaries and working conditions, many caregivers reported intentions of leaving their jobs. Approximately one-third of CBO-based, private and MoE-based caregivers and 20% of work-based caregivers reported they would “probably” or “definitely” change their jobs and line of work within the next two years. While reporting lower job satisfaction was correlated with reporting intentions to change their careers, future research could explore the sources, incidence and impact of caregiver turnover on the nursery sector in Jordan.

[37] These questions were borrowed from the Early Care and Education Provider Survey.



JORDAN'S NURSERIES: **CONCLUSION**

The QRF National ECD Survey 2015 provided the first national picture of Jordan's nursery sector. A running theme across all findings was the wide variation between the four nursery types examined. The study's survey of nursery administrators yielded detailed information on the scope and magnitude of services provided as well as some challenges with nurseries' physical conditions and resources. Surveys with caregivers provided a picture of nursery caregivers' education and training, revealing substantial gaps in their qualifications, training rates, and attitudes towards ECCE. Caregivers reported low salaries and benefits, and frequently reported selecting the career as a last resort.

The QRF National ECD Survey's findings on nursery quality raise major issues for policymakers, nursery providers and ECCE advocates in Jordan to consider: how can the Kingdom ensure the physical environments of all nurseries are safe, clean, age-appropriate, and conducive to exploration, development and play? What kind of curricula could and should nurseries and Jordan use, and how can the government support curricular or other reforms to improve the nature of learning in nurseries? How can training and professional development opportunities for caregivers be expanded? And how can nursery caregiving become a professional vocation desired by the most qualified, passionate and driven individuals rather than a career chosen due to lack of alternatives?

While comprehensive, there were major limitations to the QRF National ECD Survey which leave opportunities for future research. There were specific components of quality that could not be addressed by this study, such as the nature of caregiver-child interactions or how learning resources are used in the classroom. Therefore, further observational research should be done to better direct resources to increase quality of pre-primary services. Additionally, since the QRF National ECD Survey only targeted MoSD-registered nurseries, future research should also explore the prevalence and quality of nurseries outside of the MoSD registry to provide a more complete depiction of nursery quality in Jordan.



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