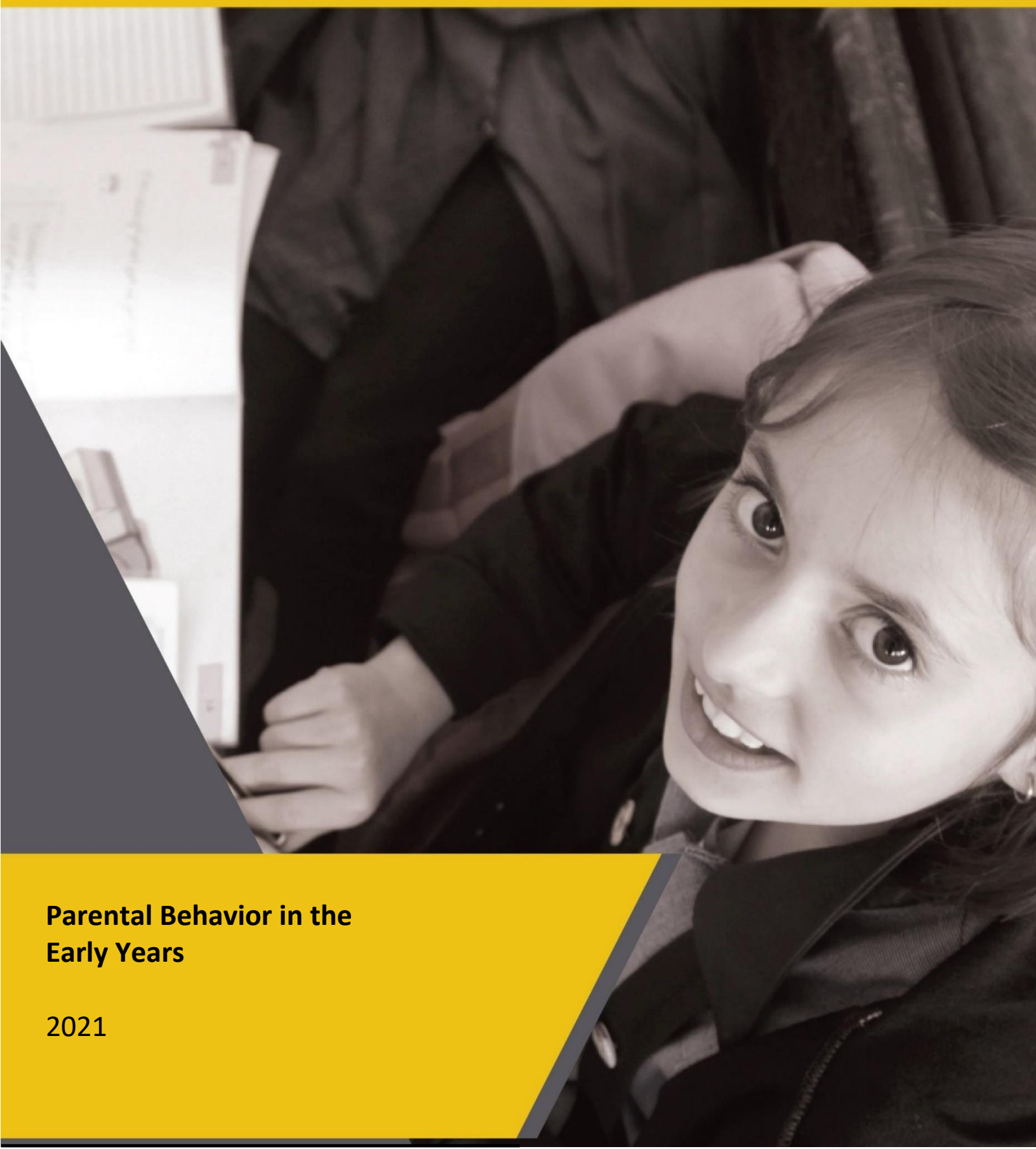

Parental Behavior in the Early Years

2021

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The Parental Behaviors in the Early Years - Phase 1 is a comprehensive nationally representative study conducted through a partnership between World Education, Inc, Jordan's Ministry of Education (MoE), and the Queen Rania Foundation for Education and Development (QRF), with funding from Foreign, Commonwealth and Development Office (formerly the Department for International Development) and QRF.

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This report is dedicated to Dr. Haiyan Hua, who cared deeply about his colleagues, his students, his work, and the impact of his work on the lives of children.

Disclaimer

Executive Summary

The Parental Behaviors in the Early Years - Phase 1 is a comprehensive, nationally representative study conducted through a partnership between World Education, Inc, Jordan's Ministry of Education (MoE), and the Queen Rania Foundation for Education and Development (QRF), with funding from the Foreign, Commonwealth and Development Office (formerly the Department for International Development) and QRF. The aims of this research project were to establish a baseline for parental behavior and to gather insights that will inform the design of effective parenting programs to support the development of parental behaviors that build their 0–5-year-old children's readiness to learn. For the purposes of this study, "readiness to learn" was defined as how prepared a child is to be successful when they first enter formal school. A child is ready to learn when he or she has the physical, cognitive, socio-emotional, and behavioral competencies needed to learn at a developmentally appropriate level (Al-Hassan & Landsford, 2009). A child's *readiness to learn* is therefore developed through the interplay between their biology, their environment, and their relationships. In early childhood, the most important relationships are the relationships within the family, especially between the parents and child (Pianta, 2002). For this study, the particular behaviors of parents related to readiness to learn primarily focused on singing, talking, reading, counting, and playing.

The target sample was Jordanian and Syrian mothers and fathers of children aged below 6, to answer the following research questions:

1. To what extent are parents in Jordan aware of best practices with regard to their role in ensuring their children are ready to learn?
2. How do parents in Jordan gain knowledge about best practices with regard to their role in ensuring their children are ready to learn (e.g., through what channels, such as personal, social, mass media...)?
3. What are the barriers of parenting behaviors linked to readiness to learn?
4. What are the drivers of parenting behaviors linked to readiness to learn?
5. How do the barriers to parenting behaviors vary across different types of parents (e.g. social, economic, demographic behavioral and other differences)?
6. How do the drivers of parenting behaviors vary across different types of parents (e.g. social, economic, demographic behavioral and other differences)?
7. What issues (e.g., information parents need to be aware of or behaviors that need to be changed or reinforced) should be targeted in campaigns aimed at parents?

Methods

The research consisted of a sequence of four parts: (1) desk research and a literature review, (2) qualitative interviews, (3) a nationally representative quantitative survey, and (4) several focus group discussions. As with any work conducted between 2020 and 2021, this research project was heavily impacted by the COVID-19 pandemic. The research team had to adapt to the needs of the interviewees and needed to conduct some surveys on the phone or virtual video conferencing. Besides the logistical and methodological challenges of COVID-19, the pandemic also impacted parental behaviors in ways that affected the study results. However, despite these challenges, the findings and implications of this study have value both for informing the next phase of this project, but also early childhood policy in Jordan.

The desk research and literature review found limited studies with a focus on Jordan and therefore drew on studies in the Arabic speaking region and studies from the United States, Europe, and East Asia.

The qualitative interviews involved 30 mothers and fathers of children below age six and lasted for one hour via phone or teleconference. The interview key findings related to parent involvement, parent motivation, barriers to involvement, reading behaviors, access to books, and sources of information helped structure the much more ambitious nationally representative quantitative survey, which served as the main data source for this study.

The nationally representative survey was designed, piloted, and revised based on the pilot. Trained enumerators completed 1,641 interviews, the majority of which were conducted in-person. The interviews were open-ended but the enumerator chose an answer from a predetermined list of available responses (including other) that were compiled from the qualitative interviews.

Finally, the focus group discussions (FGD) provided a source of information that may provide insights different from those collected in structured interviews. FGD insights can prove helpful in identifying existing positive beliefs and behaviors that can be built upon as well as negative beliefs and behaviors that should be addressed. FGD insights can also identify subgroups in relation to their existing beliefs and behaviors.

Results

The findings are organized by research question and include data from all of the sources: interviews, focus groups, and, most frequently, the nationally representative survey.

To what extent are parents in Jordan aware of best practices with regard to their role in ensuring their children are ready to learn?

The findings from this study suggest that parents in Jordan highly value education and that for many parents, their goals for their children include educational success and the benefits that come along with it, including a good career and financial stability. Almost all parents (81.1%) felt that it was the mother's responsibility to prepare the child for school entry, which is logical since more than four out of five children (88.4%) under the age of six in Jordan spend most of their time with their mother. More than half of parents mentioned that they feel it is their job to teach their child the alphabet before school, while some (35.3%) also indicated that they should prepare their child socio-emotionally by promoting a positive disposition toward school; other parents (28.3%) indicated they should improve their child's manners before school and some parents (32.6%) indicated they should improve their child's character before school.

Despite valuing education, this study found that only 6.8% of 4-year-old children were enrolled in KG1 and 56.6% of 5-year-old children were enrolled in KG2. This may be a sign of the impact of COVID-19: 56.8% of respondents mentioned that safety concerns due to the COVID-19 health crisis affected their decision (to a great extent) to not enroll in preschool, nursery, or KG. Parents also reported not sending their child to nursery, KG1, and KG 2 because the child was "too young" or cared for by a family member.

To know more about parents' understanding of how children acquire early learning skills, parents were also asked to name some of the ways that they could teach their child letters. By far, the two most common answers were by playing a video that teaches letters or by memorizing letters by referring to them in a book or by copying them onto paper. Both mothers and fathers held these beliefs at similar rates (approximately 45% mentioned these methods). Similarly, when asked to name some ways in which they could help their child learn numbers, quantities, and shapes, parents of focal children aged 2-6 most commonly identified playing (37.9%), with mothers (44.5%) answering this at higher rates than fathers (30.3%); watching a video that teaches numbers/shapes/quantities (27.7%); and making reference to numbers/shapes/quantities in daily conversations (24.8%), with many more mothers (31.9%) than fathers (16.8%) and answering this. These findings are encouraging since they indicate that parents, especially mothers, see the educational value in play and the opportunity for learning in everyday interactions. When asked to name some ways in which they could help their child manage his/her feelings, parents of focal children aged 4-6 most commonly identified talking to the child about their feelings (62.5%), involving the child in finding solutions to problems (23.2%), and asking the child questions about their feelings (22.8%). These actions are all considered best practices in supporting socio-emotional development.

How do parents in Jordan gain knowledge about best practices with regard to their role in ensuring their children are ready to learn (e.g., through what channels, such as personal, social, mass media...)?

Evidence from the survey and corroborated by interview data suggested that parents rely on a variety of sources of information about their child's development and other parenting-related topics. The most popular sources of information for all parents ranged from family members and peers, "experts" including doctors, specialists, and parenting experts, and media, especially informal media like social media, websites, and internet sources (compared to more formal media like books, newspapers, or radio). Many parents turned to their spouse at least sometimes when they had questions about their child (87.4%), and more fathers (75.5%) reported asking their spouse "very often" compared with mothers (55.6%). This is not surprising given that most parents in the sample felt that it was the mother's responsibility to prepare the child for school and that the mother is the person with whom most children spent the most time. Around two-thirds of fathers and mothers reported that they relied upon religious teachings to inform their parenting (63% of fathers reported consulting religious texts or teaching at least "sometimes" compared with 61.7% of mothers). However, more mothers reported at least sometimes using the internet (searches: 79.3%; social media: 65.2%; or websites: 58.6%) to answer their parenting questions compared with fathers (searches: 68.9%; social media: 59.7%; or websites: 54.9%) and this finding was echoed in the interview data as well. In addition, one low involvement father said he wished there was an MoE-approved list of media and resources that he could rely upon.

What are the barriers & drivers of parenting behaviors linked to readiness to learn and how do they vary across different types of parents (e.g. social, economic, demographic behavioral and other differences)***?***

According to data from interviews, many parents appear to choose their actions--at least to some extent--based on how it would help shape their child's character and future, not necessarily simply based on convenience or necessity. When asked during interviews about their hopes for their children's futures, many parents mentioned success in school or a university degree. When asked on the survey: "There are many different things that parents want in life for their children. What are the key things you desire most in life for focal child," 81.7% of parents mentioned that they desire the focal child to get a good education/for them to be smart and 24.5% of parents mentioned that they wish for happiness for their child.

To understand parents' level of involvement in early learning behaviors with their child, we developed a composite of 32 items that included activities associated with early learning (such as playing, talking with their child, reading, singing, or counting) that a parent may have reported engaging in within the past three days and beliefs about what is most important their children learn before starting grade 1 (such as teaching him/her the alphabet, how to pronounce, or how to play with other children). On average, parents only reported engaging in or believing in less than five of the items (in the past three days, in the case of the behaviors), with the five most common items being: playing, going to a park/play area/entertainment

venue, talking, teaching letters, singing. Because of how the involvement categories were constructed, 80% of all parents fell into the mid involvement category. Low involvement parents, on average, reported believing one item related to early learning or engaging in only one learning behavior with their child within the past three days, and high involvement parents, on average, reported approximately 11 activities/beliefs, which is still quite low and indicates that even among high involvement parents there is much room for improvement.

Parent characteristics

The research team examined the relationships between involvement levels and various characteristics of the parents, including gender, employment, nationality, age, and education level. More mothers (14.8%) fell in the high involvement category compared with fathers (8.8%), and more fathers (21%) fell in the low involvement category compared with mothers (5.8%). 11.2% of employed mothers fell in the high involvement category compared with only 9.9% of employed fathers. A larger percentage of Syrian fathers (10.9%) fell in the high involvement category compared with Jordanian fathers (8.7%) and four-fifths of all Syrian mothers (80.3%) and Jordanian mothers (79.3%) were categorized as mid involvement. There are a number of reasons why Syrian fathers may be showing more involvement in their child's learning than Jordanian fathers, including having greater motivation due to their circumstances, more time, or greater assistance from organizations and entities supporting refugees. Respondents who became parents at an older age were slightly more likely to fall in the lower involvement category than those who were younger when their first child was born. It was surprising to find that there was not a larger relationship between parents' highest educational attainment and their involvement level.

Child characteristics

The research team also examined the relationships between involvement levels and various characteristics of the focal child, including gender, disability status, and age. Parents of older focal children and parents of males were more likely to be higher involvement. Fathers of female focal children were more likely to fall in either high (10.7%) or low involvement (18.1%) categories compared to fathers of male focal children (virtually all of whom—91.6%—were mid involvement). There was very small correlation between parents of non-disabled focal children and involvement composite scores (α=-0.02, p<0.01): parents of children who were not disabled were slightly more likely to have higher involvement scores.

Family characteristics

The research team examined the relationships between involvement levels and various characteristics of the family, including urbanicity, region, size of household and SES. We found that a greater proportion of mothers in rural areas were in the low-involvement category (9.1%) compared to mothers in urban areas (5.6%). By contrast, fathers in urban areas were more likely to fall in the low involvement category (21.5%) than fathers in rural areas (14%). In addition, we found that more fathers and mothers in the South region (15.1% and 24.5%, respectively) fell in the high involvement category compared with fathers and mothers from the Central region (11.1% and 19.4%, respectively) and North region (3.6% and 2.8%, respectively). The research team found that the more children a family has under the age of 6, the lower the parents' involvement score, in general. However, the more children over the age of six, the higher the parents' involvement score. Average monthly income was not as strong a predictor of involvement (see below) as expected (α=0.07, p<0.001), possibly due to the impact that the COVID-19 pandemic, health restrictions and lockdowns have had on families' income. The most statistically significant measure of SES was a composite of household items. In general, proportionally more mothers from the upper-middle household wealth category (7-8 items) were in the high involvement category (20%) compared with those in the lowest (1-5 items, 11%), second quartile (6 items, 11.3%), and highest quartile (9 or more items, 15%). Fathers from the highest wealth category (9 or more items) had the highest proportion of high involvement fathers (12.3%) compared with those in the lowest category (1-5 items, 7.5%), second quartile (6 items, 11.2%), and third quartile (7-8 items, 4.5%). This may suggest that mothers who have *some* wealth (or income) also have the resources, peace of mind, time, or energy to be more highly involved in their child's lives, and for fathers, having a more comfortable lifestyle enables them to have the resources, peace of mind, time, or energy to be more highly involved.

Barrier analysis

Informed by the interview data, we used a barrier analysis tool to identify determinants of doer/non-doer status of respondents for five key learning activities: reading, talking, playing, singing, and counting. Doers are identified as such if they reported having engaged in the desired behavior with their child in the past three days. Only 6.3% of all parents in the survey sample reported reading to their child within the past three days and 0.3% reported **reading** to their child on a typical day. Only 14.1% of all parents surveyed reported **counting** with the focal child in the past three days. Due to the nature of the question, whereby a parent must recall what he or she did in the last three days, it is possible that the number of doers is undercounted.

The most salient barriers between doer and non-doer status appeared to be: beliefs about the age-appropriateness of activities, the help and hindrance of technology in engaging the child, parental stress/lack of peace of mind, and lack of time. In terms of reading behaviors specifically, key barriers, as reported by parents, included lack of access to books and their child's own "stubbornness" and lack of interest.

Drivers of desired behaviors included the belief that the activity (reading, in this case) would breed creativity in the child, strengthen parent/child relationships, and help them reach future goals for their child (success in school and good career). Parents also reported that they believed these behaviors were approved by approved by their spouse and/or mother, which may be a driver for some parents. Some parents believed that counting and talking activities could help build up children's self-confidence. More parents who reported singing to their child in the last three days said that they found it easy to do so because it helped calm their child down.

Positive deviants

In addition to generally identifying trends to explain the variation in involvement scores, the research team also attempted to describe "positive deviants" (Pascale, Sternin & Sternin, 2010). These positive deviants are individuals with mid- or high involvement composite scores that we would have expected to be low involvement given their socio-demographic characteristics. We found that some of the messages that might help low-involvement parents become higher involvement (either middle or high) could include that reading is a good way to spend quality time together with their child, that singing is a great way to calm their child down, that their spouse could support them in engaging children in educational activities, and messaging that links counting together with later math success for children.

What issues (e.g., information parents need to be aware of or behaviors that need to be changed or reinforced) should be targeted in parenting campaigns?

Using all the results described above, the research team developed several models to explain the variation in parents' involvement composite values so that they may be considered for targeted parenting campaigns. In other words, controlling for socio-demographic factors, the research team sought to answer: *What are the most influential determinants of greater involvement of mothers and fathers in their young children's readiness to learn skills?* The models listed below tell the story of various determinants, both fixed and malleable, of parental involvement and suggest avenues for impacting involvement levels in Phase 2 of this research project.

Socio-demographic factors

Socio-demographic factors include the gender of the parent, the age of the parent when their first child was born, nationality, total number of children, urbanicity, region (with the northern region as the reference category), average family monthly income (with no income or low income as the reference category), household item composite, sex of focal child (with male child as the reference category), and age of the focal child (with children aged 0-2 as the reference category). The research team found that these socio-demographic factors accounted for approximately 17% of the variation in involvement composite scores, but that few were statistically significant predictors of involvement when they are all included in the same model.

Only gender of the parent, region, SES (as measured by a household wealth composite), and being high income compared with low income were statistically significant predictors of parent's involvement composite scores.

Parents' hopes for their child's future

A potential driver of parent involvement behavior could be parents' hopes for their child's future. We examined associations between parent involvement scores and the three most commonly-named responses to the question, "There are many different things that parents want in life for their children. What are the key things you desire most in life for focal child": career success, a good education/be smart, be a good person or have a strong character (controlling for nine of socio-demographic factors from the previous model). Only parents reporting that they hope that their child will "be a good person or have a strong character" made a statistically significant contribution to the variation in involvement composite scores beyond the socio-demographic factors. In fact, parents reporting that they hope their child has a good career or does well in school/is smart had a *negative* association with involvement scores, meaning parents who hold this belief, on average, had a lower involvement score--but this association is not statistically significant. This evidence suggests that parents' hopes for their child's futures may only be a small factor in driving parents' early learning behavior.

Knowledge of methods to teach early learning skills and content

The research team examined the relationships between the composite indicator score of parental involvement and (1) parents of children aged two and older's knowledge of methods to teach the alphabet, (2) parents of children aged two and older's knowledge of methods to teach the math concepts, and (3) parents of children aged four and older's knowledge of methods to teach the socio-emotional skills, all controlling for socio-demographic factors. We found that parents' mentioning key methods of teaching the alphabet explained approximately 52% of the overall variation in the involvement composite scores, methods of teaching math concepts explained approximately 58% of the overall variation in the involvement composite scores, and methods of teaching socio-emotional skills explained approximately 43% of the overall variation in the involvement composite scores for parents of the appropriate age groups. Therefore, parents of children aged two and older with more knowledge of methods to teach the alphabet, math, and socio-emotional skills were more likely to engage in early learning behaviors (such as playing, talking with their child, reading, singing, or counting) with their children.

Barriers and drivers

Barrier analysis and predictive modeling based on the results of the barrier analysis suggested some of the key logistical pressures that drive or hinder behavior, as well as beliefs about the efficacy, consequences, and social norms, are important factors in overall parents' early learning behaviors and beliefs. Key themes included lack of time, lack of peace of mind, beliefs about age appropriateness ("My child is too young"), technology, and social approval.

Regression analysis using key factors mentioned by parents who reported doing the target behavior (reading, talking, singing, playing, or counting) suggested that the factors that drive reading behaviors are particularly important in explaining fathers' overall involvement. Specifically, knowing that reading together is a good way to spend time with the child, finding the time despite housework duties, and believing they have the approval of friends driving (or hindering, in the case of friends' approval) involvement behaviors and beliefs. Similarly, the most often cited drivers and barriers to counting/math behaviors for parents who reported counting or talking about math with their child within the past three days also seemed to be driving overall involvement behaviors. In particular, giving parents ideas about ways to learn through play and how to make time could be important in increasing parents' overall involvement beliefs and behaviors.

Conclusions

The data from this study make clear that parents in Jordan highly value education, and that virtually all parents could use more information about how to be more involved in their child's early learning. They could use information about how to invest their limited time (with work, housework, and duties of caring for other children) to best effect to promote readiness to learn, including through play and everyday moments. Parents could use more resources, including age-appropriate books and high-quality educational media, to use with their children. Our predictive modeling also suggests that the more parents know of strategies to learn letters, numeracy and math concepts, and socio-emotional skills, the more likely they may be to engage in behaviors that promote learning or hold beliefs associated with early learning. So, giving parents about concrete methods of teaching their young children specific early learning may have effects beyond those particular skills and spill over into greater overall involvement.

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Abbreviations

ECE: Early childhood education

EDI: Early Development Instrument

ESP: Education Strategic Plan

FGD: Focus Group Discussion

HIF: High involvement father

HIM: High involvement mother

JOD: Jordanian dinar

KG: Kindergarten

LIF: Low involvement father

LIM: Low involvement mother

MIF: Middle involvement father

MIM: Middle involvement mother

MoE: Ministry of Education

MSA: Modern Standard Arabic

QRF: Queen Rania Foundation

QRFED: Queen Rania Foundation for Education and Development

SEL: Social emotional learning

SES: Socio-economic status

WEI: World Education, Inc.

Introduction

World Education, Inc. (WEI) and its team of experts have prepared the following final report on its study for the Queen Rania Foundation and the Ministry of Education in Jordan: Parental Behaviors in the Early Years - Phase 1.

Through the Education Strategic Plan (ESP) for 2018-2022, the Ministry of Education (MoE) has set a pathway for changing parental behaviors to better support their children's learning, which falls under the strategic objective "to increase access to quality education for children (both male and female) in early childhood and to increase their readiness to learn for life." The ESP states that "innovative approaches will contribute to positive changes in the early childhood education system through encouraging parents to intensify their efforts to support education, health, nutrition, and social protection at home and school." Planned ESP activities, under the Mindset subcomponent, include the development and publication of a parental awareness guide and workshops on readiness to learn, including topics such as encouraging parents to read with their children.

The purpose of this research project was to establish a baseline for parental behavior and to gather insights that will inform the design of an effective program to support the development of behaviors of parents that build *readiness to learn* abilities of their preschool children. For the purposes of this study, "readiness to learn" is defined as how prepared a child is to be successful when they first enter formal school. A child is ready to learn when he or she has the physical, cognitive, socio-emotional, and behavioral competencies needed to learn at a developmentally appropriate level (Al-Hassan & Landsford, 2009). A child's *readiness to learn* is therefore developed through the interplay between their biology, their environment, and their relationships. In early childhood, the most important relationships are the relationships within the family, and especially between the parents and child (Pianta, 2002). For this study, the particular behaviors of parents related to readiness to learn primarily focused on singing, talking, reading, counting, and playing.

This final report comprises the data and results of Phase 1 of the project, with the specific goals of:

- Filling in the gaps in national data on the knowledge, attitudes and practices that parents exhibit related to their children's (aged below 6) readiness to learn before they enter primary school

- Determining the most critical supports and barriers affecting parents' adoption of practices that promote the development of their children's readiness to learn

- Identifying the components of a parenting campaign that will have a positive impact on parent's knowledge and behavior related to their children's readiness to learn

Phase 1 involved a literature review and desk research, qualitative interviews, a nationally representative survey, and focus group interviews. All of these data sources have been analyzed and reported on in this report, along with recommendations for Phase 2 of the project.

The aim of Phase 2 is to identify the language and messaging styles that resonate with parents of relevant needs and backgrounds across Jordan and that will have a positive impact on the knowledge, attitudes, and practices of parents of different backgrounds.

The contents of this report include the research questions that the research team--in consultation with Queen Rania Foundation and the Ministry of Education--developed to guide the study design and analysis. Next, we share the research methods for the study as a whole, including the data sources and general limitations of the study. The results are organized by research question, drawing on data from each of the data sources--qualitative interviews, nationally representative survey, and focus groups discussions. Finally, this report ends with key implications and conclusions based on the study and implications for Phase 2 of the project.

Research Questions

1. To what extent are parents in Jordan aware of best practices with regard to their role in ensuring their children are ready to learn?
2. How do parents in Jordan gain knowledge about best practices with regard to their role in ensuring their children are ready to learn (e.g., through what channels, such as personal, social, mass media...)?
3. What are the barriers of parenting behaviors linked to readiness to learn?
4. What are the drivers of parenting behaviors linked to readiness to learn?
5. How do the barriers to parenting behaviors vary across different types of parents (e.g. social, economic, demographic behavioral and other differences)?
6. How do the drivers of parenting behaviors vary across different types of parents (e.g. social, economic, demographic behavioral and other differences)?
7. What issues (e.g., information parents need to be aware of or behaviors that need to be changed or reinforced) should be targeted in campaigns aimed at parents?

Methods

The purpose of this study was to provide a knowledge base about Jordanian and Syrian parents in Jordan with children aged 0-5 (under age 6) to improve children's school readiness. To answer the research questions, this study used four data sources:

1. Desk research and literature review
2. Qualitative interviews
3. Nationally representative survey
4. Focus group discussion

This study culminated in a nationally representative quantitative survey that gives insight into each of the seven research questions. Prior to designing the survey, the research team identified three research goals: to ensure the survey asks the correct questions that were most likely to yield actionable and illustrative data, to anticipate the most likely answers to those questions (for closed-ended items) but also allow for unanticipated responses, and to ground the survey in existing research and the best available expert knowledge on the topic of parent involvement in school readiness. With these goals in mind, the research project began with a review of existing literature that focused on: school readiness skills and the activities that promote them, parental beliefs and behaviors, and surveys to understand parental school readiness behaviors in contexts with relevance to Jordan. Next, the research team presented the findings from the literature review and workshopped survey questions with key stakeholders from the Ministry of Education in December 2019. The next step was to pilot questions, generate response types for close-ended survey items, and explore avenues for deeper exploration that were not well-covered by the literature review (such as the division of responsibility between mothers and fathers in Jordan). The research team arranged in-depth qualitative interviews with 19 Jordanian and 11 Syrian parents, totaling 30 parents in all. The data from the interviews was analyzed and is reported on in this document. It was also used, along with the findings from the literature review, to design the larger-scale survey. Finally, during the analysis of the survey results, the research team arranged focus group discussions with different profiles of parents to follow up on and deepen investigation into various themes and scenarios that were raised by the survey data. Following the overall limitations to the study design below, the methods used for each data source are described.

Limitations of the study design

All efforts have been made to ensure that this research project uses the most rigorous methods to answer the research questions. However, as with all research, there are potential limitations. First, few studies have been conducted on topics related to parenting behaviors in Jordan. This study relied upon international research as well as research from the MENA region to inform its design and methods, and to provide hypotheses in response to the research questions.

In light of the challenge of limited prior research in Jordan, the goal of this research was to provide a baseline picture of parenting behavior and involvement in learning activities with their children under the age of six, the drivers and barriers of that involvement and behavior, and the variation across different groups of parents in Jordan. As such, this study used a nationally representative sample that aims to be representative of the population of Jordan across several characteristics.

The primary data collection used for this study was a survey administered face-to-face by an enumerator. This method of data collection is considered reliable, but it does have potential limitations. For example, the enumerator could make errors in recording responses from the research participants. In addition, participants may be hesitant to respond honestly to some sensitive questions about their income or questions that have socially desirable answers. In addition to these limitations, survey research about beliefs and behaviors are likely to be impacted by respondents' tendency to acquiesce (provide a positive response), since acquiescence bias is well-documented as a common phenomenon in social science research. A key strategy used in this study to minimize social desirability or acquiescence bias was to ask open-ended questions. These questions, while less likely to inflate certain positive responses, may have also resulted in lower than actual response rates due to other issues, such as recall (e.g., a parent may not recall that they were counting with their child within the past few days and therefore not mention it).

Further, each of the methods used in this study has its own advantages and disadvantages (which are discussed below), and the study, therefore, has some limitations. First, the research team was composed of cultural outsiders with expertise in early childhood education and education research. While three members of the research team have experience living and/or working in Jordan, parenting values are culturally specific and may include aspects that are taken for granted by cultural insiders and overlooked by outsiders, even those with professional experience in the cultural context. To mitigate this limitation, the research team relied on local partners, especially from Queen Rania Foundation but also the Ministry of Education, to review and provide feedback on all research instruments.

As with any work conducted between 2020 and 2021, this research project was heavily impacted by the COVID-19 pandemic. The initial study design included naturalistic in-home observations paired with the in-depth interviews to provide a more complete picture of parent-child interactions in a home environment. Due to the risks of the pandemic, home observations were not possible, and, in fact, the in-depth interviews had to be conducted via phone or video conferencing software during a national COVID-19 lockdown. Similarly, the survey was conducted at a distance of a few feet from respondents' doorsteps (rather than face-to-face inside the respondents' homes where they may have been more at ease). COVID-19-related curfews also made certain populations more difficult to reach, including employed fathers who arrive at home just prior to evening curfew and whose only other available time is over the weekends when curfews were in effect. The research project had to adapt to the needs of the interviewees and also conduct some surveys on the phone or virtual video conferencing.

Besides the logistical and methodological challenges of COVID-19, the pandemic also impacted parental behaviors in ways that affected the study results. School closures for older children meant that parental time and resources were stretched across both pre-school-aged children (the focus of this study) and school-aged children. Certain employment sectors were also disproportionately affected, and some families, such as those whose father worked in a service industry, may have changed their behaviors temporarily due to unemployment. As a result, conclusions that are drawn about families with unemployed fathers, for example, may not hold true in the future when those fathers are employed again post-pandemic, but may still be true for chronically (rather than situationally) unemployed fathers.

However, despite the limitations, the research team believes that this data accurately reflects, on the whole, the beliefs and behaviors of the parents in Jordan that were surveyed at this particular point in time. Any findings that the research team believes may not be reliable or which may be impacted by limitations in the study design, the conditions under which the study was conducted, or by the COVID-19 pandemic are noted in the results.

Literature review

This literature review (see Appendix B) has benefitted from the authors' collective decades of experience in the fields of early childhood development, emergent literacy and numeracy, readiness to learn, and comparative education. Articles were chosen for inclusion based on this expert knowledge of the topics of interest, as well as through a careful search of all available sources. Key search terms used to find sources included: readiness to learn, school readiness, readiness to learn in Jordan, emergent literacy, emergent numeracy, parental behaviors, and parental behaviors in Jordan. Specific behaviors of interest were not included as separate search terms as they are included in the early learning domains listed above. Seminal and oft-cited works were included, such as chapters from the *Handbook of Early Literacy Research,* and articles from high impact scholarly journals (e.g., *Child Development* (5.024)*, American Psychologist (*4.856)*,* and *Pediatrics* (5.417)). Articles from less well-known journals and scholars were included if they were on under researched topics or specific contexts, such as Jordan and Middle East, that would be particularly useful for this study.

Limitations

Much of the most cited research on readiness to learn is set in the United States, Europe, or East Asia and robust research on parental behaviors in Jordan is limited. Studies from the Arabic speaking region, where there are likely similarities in terms of practices and culture, were included in order to address this limitation. This literature review is not exhaustive, in terms of all of the components of readiness to learn, but focuses on those aspects that are most closely related to parental behaviors since that is the focal point of this study.

Qualitative interviews

Sample

Interviews were conducted with 30 mothers and fathers of children aged below six (in addition to four individuals who participated in the pilot of the interview instrument). The subsample included a predetermined set of "prototypical" households with a typical child development profile to help the research team gain insight into the variety of parenting behaviors in Jordan. The subsample included a mixture of Syrian and Jordanian households across six governorates. Two-thirds of the sample were mothers and approximately two-thirds were Jordanian with the remaining interviewees from Syria. Most parents were in their thirties (60%) and had two or three children (66.7%). All but one of the mothers were homemakers and fathers ranged from retired (1 interviewee), unemployed due to COVID-19 (4 interviewees), or employed (6 interviewees). One family included a child and parent with severe hearing loss and limited capacity for speech.

Table 1

Demographic characteristics of qualitative interview sample

	N	%
Gender		
Female	20	66.7
Male	10	33.3
Nationality		
Jordanian	19	63.3
Syrian	11	36.7
Governorate		
Amman	10	33.4
Irbid	5	16.7
Karak	5	16.7
Mafraq	5	16.7
Zarqa	5	16.7
Age		
20-29	8	26.7
30-30	18	60
40-49	2	6.7
50 or older	2	6.7
Highest educational level		
Primary (Grade 1-6)	1	3.3
Middle (Grade 7-10)	5	16.7
Secondary (Grade 11-12)	2	6.7
Tawjihi	12	40
Diploma/Community college	1	3.3
Bachelor's degree	9	30

Employment		
Employed	6	20
Homemaker	19	63.3
Temporarily unemployed due to COVID-19	4	13.3
Retired	1	3.3
Household Monthly Income		
None	6	20
100-199 JOD	6	20
200-299 JOD	5	16.7
300-399 JOD	4	13.3
400-499 JOD	3	10
500-599 JOD	3	10
More than 600 JOD	3	10
Number of Children		
1	2	6.7
2-3	20	66.7
4-5	6	20
6 or more	2	6.7

Data collection

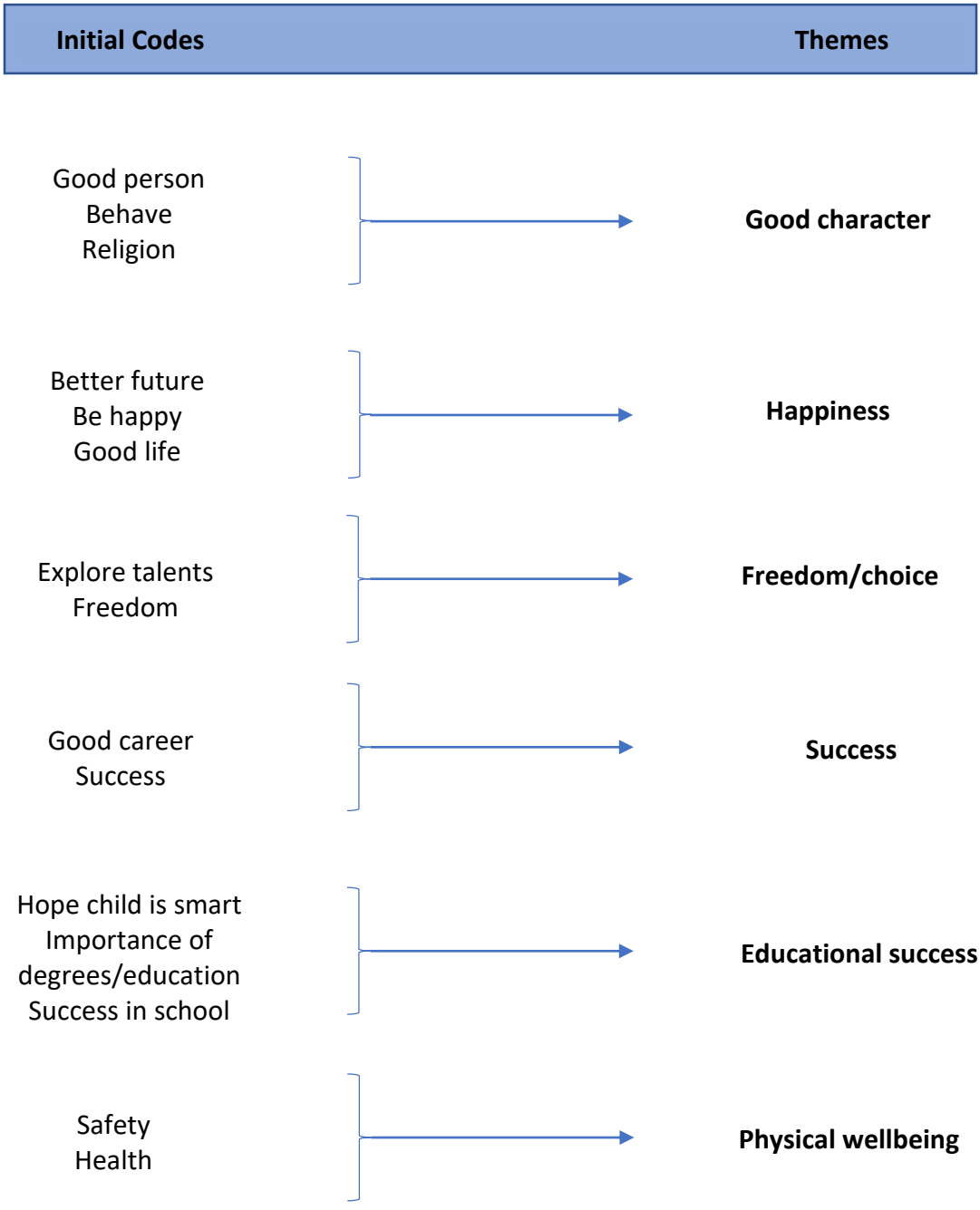
Interviews lasting approximately one hour took place via phone or teleconference due to health and safety concerns during the COVID-19 pandemic. Interviewers were given a structured interview guide with questions and indications for when and how to probe further. The interviews were recorded and the responses were transcribed then translated to English for analysis.

Data analysis

The English translations of the interview transcripts were analyzed using Dedoose, a qualitative research software. The data analysis involved first open coding of each question. Once each question had been coded, codes were combined into themes that cut across interviews and across questions. For example, interviewees were asked about the hopes for their child's future: "What is it that you hope for most for [child's name]?" The first round of open coding for this question yielded 15 codes which were then grouped into themes.

Figure 1

Example of qualitative interview coding strategy



Nationally representative quantitative survey

Pilot

In February 2021, prior to collecting data, the survey was piloted with 36 mothers and fathers. The aims of the pilot were to provide quality assurance of the enumerators and their training on the instrument, verify that the wording of the survey instrument was appropriate and easy to comprehend, and verify that the data collection and coding procedures were accurate and problem-free. This pilot helped to ensure the accuracy of the data collected in the full sample (described below). Survey questions were also piloted through the qualitative interviews.

Data collection

The data was collected in the first and second quarters of 2021 with the aid of Ipsos, a market research firm. Trained enumerators completed 1,641 interviews, the majority of which were conducted in-person. Many of the questions asked were open-ended and the interviewer selected the most appropriate response from a predetermined list of available responses with the option to select "other" and specify or explain the respondent's answer. Therefore, response options were *not* provided to interviewees except for questions that are answered on a scale (to a great extent, somewhat, not at all, for example) or yes/no questions (such as about the availability of household goods that are used as a measure of socio-economic status). This method of open-ended questioning can reduce response biases but can also result in under- or over-reporting due to the quality of the respondent's memory or other factors. For example, interviewees were asked about the activities they engaged in with their child over the past three days: "Please tell me everything you did with [FOCAL CHILD'S NAME] in the past 3 days, especially any activities that [FOCAL CHILD'S NAME] likes or you think are good for her/his learning." The parent may or may not recall all the activities that he or she participated in with his or her child. This can have implications not only on the analysis of this particular question, but for others as well: the responses to this question in a variety of ways help determine some of the barriers and drivers of key behaviors. As a result, doers may be underreported but the research team determined that underreporting, in this case, would be preferable to overreporting due to social desirability and other biases that are likely with direct questions and when responses are provided to participants.

Table 2

Quantitative survey administration details (unweighted)

	N	***%***
Full sample		
In-person field visits	1,364	83.1
Phone	238	14.5
Skype or Zoom	39	2.4
Camp residents only		
In-person field visits	98	90.7

Phone	5	4.6
Skype or Zoom	5	4.6
Respondents contacted but not in sample*	631	
Respondents contacted but refused	236	

***** *Moved, not at home, no children under six, or not in sample population for another reason (e.g., nationality)*

In-person field visits were the preferred interview method. The team tried several strategies to overcome the needs of the interviewees. Interviewees were sometimes visited multiple times before the interview could be completed. Some respondents preferred to be interviewed at their place of work, early in the morning, or late in the day, and the interview teams accommodated those requests. In rural areas, interviewees requested that the data collection team visit the local head of government to seek permission for the interviews. All of these requests were accommodated. When in-person visits were not possible, interviews took place over Skype, Zoom, or phone. In these interviews, the interviewee could pick the time, even if it was after midnight. Interviewees could stop the interview and reconnect at another time.

The team faced several barriers in recruiting interviewees and completing the interviews. For in-person interviews, the teams found it difficult to communicate with employed respondents because of the COVID-19 partial lockdown. Reasons given for refusing to be interviewed included: parents thought their children were too young, fathers felt that their wives should fill out the questionnaire, and some parents did not want to participate for other reasons. For the online interviews, some people didn't see the benefit in participating, while others lacked internet access or smart phones. Despite efforts to provide instruction and explanatory videos to them and communicate with them step-by-step to use the application, they found it difficult to deal with applications.

Due to the interest in involving Syrian parents in the study in particular, it was important to sample residents of refugee camps, many of whom fled the Syrian civil war. Sampling camp residents required special permissions.

Sample

1,641 people completed the Parental Behavior in the Early Years survey with slightly more mothers (53.5%) than fathers (46.5%) responding. Most of the respondents (83.5%) were under 45 years of age: 40.7% of the respondents were 25-34 years old and 42.8% were 35-44 years old. Most of the respondents (47.9%) were between the ages of 23 and 29 when their first child was born. Approximately one third (31.4%) of households were small (3-4 people), one third (37.8%) were medium-sized (5-6 people), and one third (31%) were large (7 or more people). Households were recruited from every governorate.

The sample was weighted to account for sampling errors in the project design with the goal of generating a weighted sample that is representative of the composition of the population of eligible households in Jordan. All figures are from the weighted sample unless otherwise noted.

For more information about the sampling strategy and weighting, please see Appendix D. In addition, we used replicate weights for bootstrapping predictive models.

Table 3

Demographic characteristics of survey sample

	Unweighted Sample	***Weighted sample***
	N	***%***
Gender		
Female	921	53.5
Male	720	46.5
Marital status		
Married	1,600	98.5
Separated	13	0.4
Divorced	14	0.9
Widowed	14	0.2
Nationality		
Jordanian	1,439	91.7
Syrian	202	8.3
Highest educational level		
Illiterate/uneducated[1]	52	2.1
Less than 10th grade (basic education)	341	17.2
Completed 10th grade (compulsory education)	198	10.1
Tawjihi	563	36.2
Diploma/Community college	123	8.6
Bachelor's degree	320	23.3
Master's degree	20	1.8
Higher diploma	21	0.7
Doctorate	3	0
Employment		
Employed	718	44.4
Homemaker	756	45.1
Temporarily unemployed	25	4.8
Voluntarily unemployed	72	1.8
Retired	69	3.9
Student	1	0
Household size		
Small (2-4 people)	489	31.4
Medium (5-6)	672	37.8
Large (7 or more people)	480	31

[1] Illiterate/uneducated individuals self-reported being unable to read or not having attended school. In some cases, they may have some ability to read.

Focal children were randomly selected from among the children in the family who were under six years of age using the next-birthday method. Slightly more than half of the children (52.5%) were males and 47.5% were females. Most children did not have a disability (94%) and approximately a fifth were enrolled in KG or nursery (12.6% in KG1 or KG2, 1.9% in nursery, and 3% in informal preschool).

Table 4

Demographic characteristics of focal children

	Unweighted Sample	***Weighted sample***
	N	***%***
Gender		
Female	773	47.5
Male	868	52.5
Age		
< 6 months	53	4.5
6 months - 1 year	154	9.6
13 months - 2 years	283	17.5
25 months - 3 years	295	17.2
37 months - 4 years	310	19.6
49 months - 5 years	277	16.1
61 months - 6 years	269	15.6
Disability status		
Disabled	71	6
Not disabled	1570	94
Pre-School enrollment		
Nursery	30	1.9
KG1	58	2.6
KG2	179	10
Informal preschool	39	3
None	1335	82.6

Data analysis

The survey data was analyzed using SPSS, a statistical software package by IBM. The data was analyzed to describe the population, find central tendency, examine the relationship between many of the variables, and propose some predictive models that could be used in Phase 2 of this project. For more information about the data analysis process, please see Appendix F.

Focus group discussions

FGDs provide a source of information that fill in gaps from the quantitative data and may provide insights different from those collected in interviews, observations, and other forms of

qualitative research. FGD insights can prove helpful in identifying existing positive beliefs and behaviors that can be built upon and negative beliefs and behaviors that should be addressed. FGD insights can also identify subgroups in relation to their existing beliefs and behaviors.

The research team conducted six FGDs following the quantitative data collection. As a result, the design and objectives of the FGDs were informed by preliminary analysis of the quantitative data. Findings from these six groups will be helpful in defining goals and strategies that can help motivate and support parents to move from low to medium involvement and from medium to high involvement. For high involvement parents, the findings will be helpful in defining strategies to further improve their support for their children's success in learning how to read and becoming successful in formal education.

Data collection

Due to health concerns and gathering restrictions as a result of the COVID-19 pandemic, focus group discussions took place virtually. An advantage to this meant that respondents from across Jordan were invited to participate without the inconvenience or costs associated with travel to Amman. A disadvantage to this was that it may have been more difficult for the facilitator to establish a rapport between the focus group members, and to determine levels of agreement with statement since it may be more challenging to capture non-verbal cues (such as head nodding, raised hands, etc.) in a virtual setting. Data collection was sometimes disrupted by problems with internet connectivity, but the data collection team was able to adapt to this challenge.

Sample

Focus groups were composed of single-sex groups of mothers and fathers of 7 to 9 individuals who took the quantitative survey and were identified as low, middle, or high performing according to a version of the composite indicator (see Appendix G). To ensure an adequate sample of mothers and fathers for the focus group discussion recruitment, the cutoff composite score for inclusion in the low, middle, and high involvement were slightly adjusted as follows:

Table 5

Cutoffs for focus group discussion participants by adjust involvement composite score

	Involvement Composite Score	
	Mothers	***Fathers***
Low Involvement	≤ 2	≤ 2
Medium Involvement	> 2 and < 9	> 2 and < 8
High Involvement	≥ 9	≥ 8

Note that variables within the composite indicator are dichotomous, meaning that parents can only score in whole numbers. Therefore, the adjustments are quite small but ensure that each group of high, middle, and low performing fathers and mothers constitute a sufficient sample (approximately 40 participant IDs) to pull from. These adjustments to the cutoffs were only made for the purpose of focus group discussion participant selection, but the original cutoffs were used in all quantitative analysis containing the composite involvement indicator.

Focus group participants were recruited from the quantitative sample based on accessibility, availability, and their consent to participate as indicated during the national survey. Parents were organized into homogenous groups in terms of their involvement levels since homogenous composition may have the benefit of participants feeling more comfortable with one another and result in participants being more willing to share their views.

Data analysis

The FGD transcripts were analyzed using an emic thematic process (subjective, culture specific, and organized around themes relevant to the research objective). Themes were distilled from the individual transcripts, noting the frequency with which themes were mentioned, and then themes were re-examined across transcripts. Since some participants might have been influenced by other participants, frequencies should be treated as indicative, not definitive. Data for some subgroups was missing for some questions. This analysis does not compensate for the missing information, since FGD studies are meant to provide helpful insights and do not describe behavior. Some questions were only asked of the high subgroup, and, therefore, are most useful for that group.

Results

Introduction

The results from interviews, focus groups, and the nationally representative survey data are included below. The results are organized according to the research question to which they most pertain. Whenever possible, we have noted the source of the results. All quantitative results from the survey are weighted estimates except where noted.

Research Question 1: To what extent are parents in Jordan aware of best practices with regard to their role in ensuring their children are ready to learn?

Attitudes about preparing for school entry

Most parents in the sample believed that mothers are most responsible for helping their child prepare for Grade 1 (81.1%). This was true for both fathers and mothers who responded to the survey. Only 7.1% of respondents believed the father bears the primary responsibility, and another 5.3% believed that the responsibility should be shared between the mother and father. This is not surprising given that mothers are also the person who spends the most time with the focal child (88.4%), followed by siblings (4.2%), and the father (2.9%). Rural parents (10.4%) were slightly more likely to believe that it is the father's responsibility to help the child be ready for grade 1 compared with urban parents (6.8%).

Table 6

Who do you think is most responsible for helping the child be ready for grade 1?

	%		
	Total sample	***Mothers only***	***Fathers only***
Mother	81.1	80	82.4
Father	7.1	6.5	7.7
Mother & father	5.3	5.6	4.9
Siblings	2.4	3.4	1.3
Grandparents	1.8	2.8	0.6
Extended family	1.3	0.1	2.6
Nursery/Kindergarten teachers	0.8	1.1	0.5
Female guardian	0.2	0.4	0

When asked what are the most important things that a parent can do to help their children aged below six years be ready to enter grade one socially and in terms of learning, very few parents abdicated responsibility for preparation for school entry to nature (0.3% responded "Children will be ready [for grade one] on their own") or to the schools themselves (1.6% combined responded "It's the school's job to prepare him/her to learn" or "It is the nursery/kindergarten's job to prepare him/her to learn"). More than half of parents mentioned that they feel it is their job to teach their child the alphabet before school. Many parents

(35.3%) also indicated that they should prepare their child socio-emotionally by promoting a positive disposition toward school, by improving their manners (28.3%), or by improving their character (32.6%). Only approximately a quarter of parents in the sample noted that it is their responsibility to teach math concepts (24.1%) or self-care tasks (such as eating or dressing independently) (24%). 5.8% of parents also answered "teaching him how to write and hold a pen" and 6.5% mentioned "reading and memorizing the Quran."

Table 7

Selected responses to "What are the most important things that a parent can do to help their children aged below six years to be ready to enter grade one socially and in terms of learning?"

	%		
	Total sample	***Mothers***	***Fathers***
Readiness to learn occurs "naturally"			
Nothing, it's the kindergarten/nursery's job to prepare him/her to learn.	1.3	1.3	1.4
Nothing, children will be ready on their own.	0.3	0.1	0.4
Nothing, it's the school job to prepare him/her to learn	0.3	0.1	0.4
Language and literacy			
Teaching him/her the alphabet.	55.7	59.8	42.7
Teaching him/her how to pronounce.	20.9	23.1	18.4
Reading to him/her.	11.4	10.4	12.6
Talking and singing with him/her.	7.9	9	6.7
Numeracy and math concepts			
Teaching him/her math concepts like numbers, size, quantity, shapes, colors.	24.1	28.6	19
Socio-emotional skills			
Strengthening their character and boosting their confidence	32.6	35.6	29.1
Teaching him/her morals and manners.	28.3	24.4	32.7
Teaching him/her how to play with other children.	18.5	21.3	15.3
Teaching him/her to express their emotions and feelings productively.	9	10.1	7.8
Approaches to learning			
Encouraging him/her and making him/her like the idea of school by talking about it	35.3	35.8	34.8
Taking him/her on trips and teaching him/her about the world around him/her.	4.5	3.7	5.5
Self-regulation and executive function			
Teaching him/her how to obey the rules.	17.7	15.3	20.4
Physical skills (motor and personal care)			

Teaching him/her how to be independent e.g., eating alone, getting dressed on their own.	24.0	29	18.3
Making sure that they are physically healthy.	5	6	3.8
Doing arts and crafts.	4.3	5.3	3.1

Participants in focus groups discussions were asked what skills children need to be ready for school and the age at which they should develop them. High involvement mothers mentioned: children should learn to take care of themselves, stand up for themselves, be able to hold a pencil, learn about money and its value, wash their hands, know how to use the toilet for self-reliance, not cry, and play with their classmates. Children should learn to do so by 4-5 years of age. High involvement fathers mentioned: learning the letters, how to deal with teachers, friends, and classmates, developing his or her personality, values, and education. Children should learn to do so by 3-4 years of age. At least one high involvement father also believed that getting ready for school should be the responsibility of KGs and schools, but they don't do enough. Middle involvement mothers mentioned: learning the letters, developing self-confidence, a strong personality, personal hygiene, gaining KG & preschool experience, and a positive disposition toward school. Some mothers believed these should be mastered by 3-4 years old and others by 4-5 years old. Middle involvement fathers did not mention specific competencies or skills needed to be ready for school, but did say they should be ready for school by 4-5 years old. Low involvement mothers also did not provide specific responses to this question, but low involvement fathers mentioned: learning the letters and some words in English, and developing self-confidence and a strong personality. Like middle involvement mothers, some fathers believed it should begin from 3-4 years old, while others believed it should begin at 4-5 years old.

Focus group data also revealed differences according to the gender of the parent. Fathers may need encouragement to go outside with their children and advice on how to use these trips as an opportunity to build oral vocabulary. A trip to the zoo, the store, a park, or a walk in the neighborhood pointing at things and naming them all help children develop oral vocabulary that they might not be exposed to in their home. Fathers might also be encouraged to talk to their children about school in a positive way and share their own positive experiences from childhood. Both mothers and fathers should be helped to be aware of the stages of their child's cognitive development so that they are engaging with their children in ways that are age appropriate.

Enrolling in KG/nursery

Enrollment in KG was a key variable of interest for this study. The survey aimed to provide insight into parents' rationale for enrolling/not enrolling their child in either formal KG or nursery (as age-appropriate) or informal preschool. According to the survey, 6.8% of 4-year-old

children were enrolled in KG1 and 56.6% of 5 year old children were enrolled in KG2.[1] The low levels of enrollment in KG may be surprising because prior studies (e.g. Jordan Ministry of Education, 2018) have estimated higher KG enrollment rates: 14% of children aged 3 to 4 years attending KG1 and 62% of children aged 5 to 6 years attending KG2 in the 2017-2018 school year. Despite MoE efforts to expand access to KG2, we find that enrollment rates at this level have remained stagnant or slightly decreased. This may be a sign of the impact of the COVID-19 pandemic: 56.8% of respondents mentioned that safety concerns due to the COVID-19 health crisis affected their decision (to a great extent) to not enroll in preschool, nursery, or KG. This finding suggested that the year that this data was collected may be an anomaly and may not fully reflect parents' decision making regarding preschool enrollment. Despite this limitation, there were still interesting findings regarding the decision to enroll children in preschool, here defined as KG, nursery, or informal preschool.

Besides fears of the health risks of COVID and the disinclination to enroll a child in online preschool, the most salient factors that were mentioned affecting parents' decision to enroll a child[2] in preschool appeared to be because the child is cared for by a family member, the age of the child (they believed the child was too young), or the cost of preschool. Distance did not appear to be a key factor in parents' decision-making regarding enrollment in nursery/KG. There was evidence that some parents did not see an educational value in sending their child to a pre-primary program outside the home: 41.8% believed, at least to a little extent, that children learn more in the home than at KG/nursery and 23.1% believed that what children learn at nursery or KG is not important. However, it may be the case that parents are reluctant to admit that children learn more in school/nursery because it would imply that parents are not fostering learning in the home.

Table 8

Reported reasons for not enrolling focal child in nursery, preschool, or Kindergarten

	%			
	To a great extent	***To some extent***	***To a little extent***	***Not at all***
I am afraid of the health risks relating to COVID-19 if I send my child to nurseries/kindergartens	62	5.9	7.6	24.5
The child is too young	57.9	10.3	9.7	22.2
Because I or another member of my family care for the child/children full-time	51.1	11	8.6	29.3
I did not want to enroll my child and pay the fees for online learning	38.9	6.7	6	48.5

[1] The survey included a household census to understand the composition of households. For all children of the appropriate age in the household, we inquired whether the child was enrolled in nursery, preschool, KG1, or KG2. However, here we reported on focal children only.

[2] This question was asked about any preschool-aged children in the family, not specifically about the focal child.

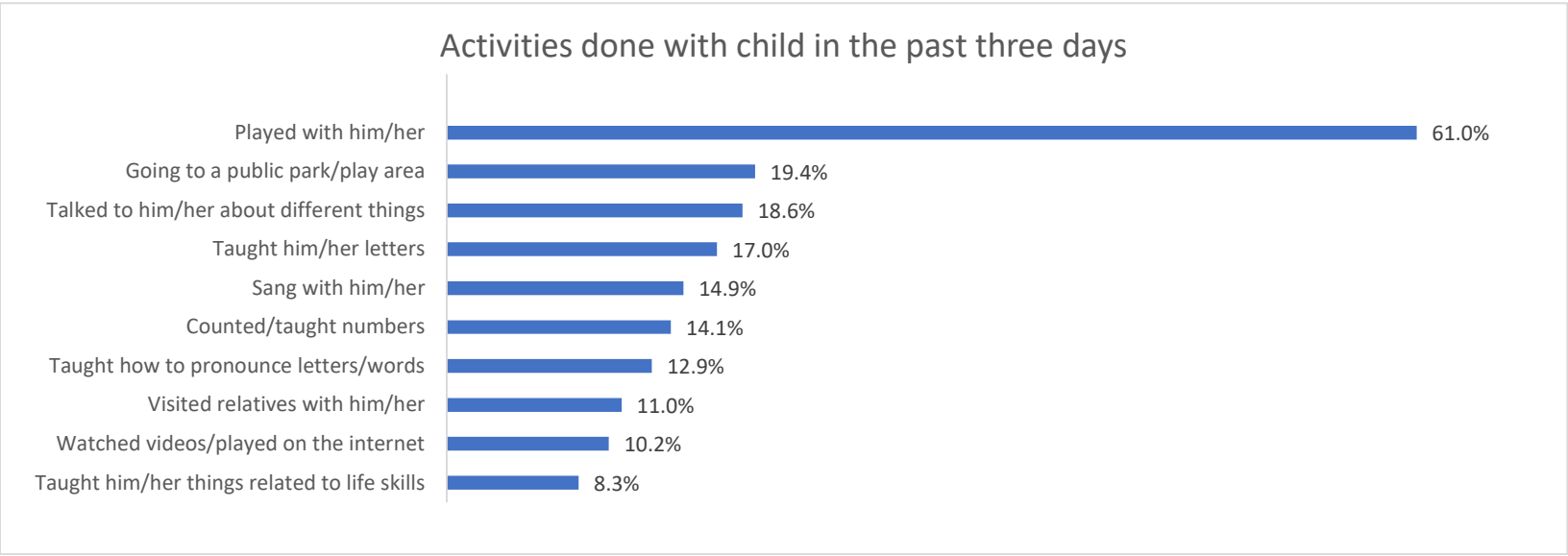
Because the nursery/kindergarten costs too much	37.6	13	9.1	40.3
Because nurseries/ kindergartens are not safe (other safety issues that are not related to COVID-19)	30.3	13	12.8	44
Because the nursery/kindergarten is far away	18.7	12.6	9.6	59.1
Because the child learns at home more than at the nursery or kindergarten	17.2	10.9	13.6	58.2
There wasn't an available space for my child in the nursery/ kindergarten I wanted	10.9	3.1	6.6	79.4
Because what children learn at nursery or KG is not important	6.4	8.3	8.5	76.9

Parents engaging in activities associated with learning

When asked to list which activities respondents did with their child in the past 3 days, 61% of respondents said they had played with their child within the past 3 days, while 2.5% reported not spending any time with children in the past three days, and 4.2% did not mention any activities. Among those activities most closely related to early learning, only 6% of respondents reported reading with their child, 17% taught their child letters, 14.1% counted with their child or taught them numbers, and a very small percentage (5.7%) reported telling stories orally.

Figure 2

Most commonly reported activities done with focal child in the past three days, as reported by parents



There were small statistically significant[3] differences in the rates at which parents engaged in these activities according to the sex of the focal child. Slightly more parents of female focal children reported playing, teaching letters, counting, teaching pronunciation, or visiting relatives within the past three days. More parents of male focal children reported talking (in general), singing, watching videos or playing on the internet, or teaching life skills within the past three days. More striking were the differences in the rates at which mothers and fathers were engaging in certain activities: more fathers reported taking their child to parks within the past three days compared to mothers. Then, many more mothers reported teaching letters, singing, counting, teaching pronunciation, watching videos, and teaching life skills in the past three days compared to fathers. Mother and fathers both reported playing, talking (in general), and visiting relatives at similar (although still statistically significantly different) rates within the past three days.

[3] There was no significant difference in the rates parents of male and female focal children reported going to parks or play areas.

Table 9

Percent of parents who reported engaging in most commonly reported activities within the last three days by gender of focal child and gender of parent

	Focal Child		Parent	
	Male	Female	Father	Mother
Played with him/her	59.3	62.9	62	60.1
Going to a public park/play area/ entertainment venue	19.3[3]	19.4[3]	25.6	13.9
Talked to him/her about different things	21.1	15.8	19.9	17.4
Taught him/her letters	16.9	17.2	10.1	23
Sang with him/her	16.5	13.1	9.9	19.3
Counted with him/her/ taught him/her numbers	13.9	14.3	8.6	18.8
Taught him/her how to pronounce specific letters or words	11.9	14.1	9.2	16.2
Visited relatives with him/her	10.7	11.3	10.8	11.2
Watched videos/played on the internet	11.3	9.0	7.9	12.3
Taught him/her things related to life skills	9.4	7.2	5.8	10.6

Unsurprisingly, the younger the child, the less likely that parents were to engage in these kinds of learning activities, despite research that suggests that learning about literacy and numeracy concepts (through reading, counting together, and having literacy materials in the home environment, for example) begins at birth. Parents can read, sing, and talk to their child from birth. More didactic activities (teaching letters through play, for example) can begin later.

Table 10

Specific activities related to early learning reported in the last three days by parent by age of focal child

	%	
	Birth to 3 years	***4 to 6 years***
Read with him/her/ Read to my child	4.1%	10.8%
Talked with him/her about different things	19.6%	16.2%
Counted with him/her/ taught him/her numbers	12.5%	17.4%
Sang with him/her	16.7%	11.1%
Played with him/her	64.8%	52.9%
Watched videos/played on the internet	8.5%	14%

Parents were also asked about additional specific practices related to early academic skill development or learning that parents may engage in according to the age of the child. Among parents with a focal child aged 0-2, a majority (81.1%) reported that they very often tend to follow their child's gaze or their child's pointing and respond to it, but far fewer mimic their child's noises or utterances (51.9%). This suggests that parents may be more aware of the importance of responding to what the focal child looks at compared with mimicking the child's noises, both of which are important indicators of parents' responsivity and are associated with children's later language skills (Rowe & Goldin-Meadow, 2009).

Table 11

Percent of parents of zero- to two-year-old children reporting engaging in activities promoting early learning

Some parents tend to follow their child's gaze or pointing and respond to it while other parents do not. How about you? How often do you follow what focal child looks at or points to and respond to it?			
	All	***Fathers***	***Mothers***
Very often	81.1	78.6	83.6
Sometimes	12	8.3	15.6
Rarely	2.4	4.3	0.6
Never	4.4	8.8	0.2
Some parents mimic their child's noises while other parents do not mimic their child's noises. How about you?			
	All	***Fathers***	***Mothers***
Very often	51.9	50.2	53.5
Sometimes	32.7	29.8	35.5
Rarely	8.0	8.1	7.9
Never	7.5	11.9	3.1

When asked to name some ways in which they could help their child learn letters, parents of older focal children (2-6 years old) most commonly identified playing a video that teaches letters (46.3%); memorizing letters by referring to them in a book or by copying them onto paper (44.2%); and talking about the sounds that familiar letters make (20.8%). Few respondents mentioned using books (8.4%) or demonstrating how the sounds are represented by letters (9.5%). This may indicate that parents need information about methods of teaching letters beyond memorization.

Table 12

Percent of parents reporting methods to teach letters to their focal children aged two to six years

	All	***Fathers***	***Mothers***
Playing a video that teaches letters	46.3	43	49.2
Memorizing letters by referring to them in a book or by copying them onto paper	44.2	41.2	46.9
Playing with toys that have letters on them (fridge magnets, puzzles with letters)	17	10.1	23.1
Pointing out familiar letters or words (Focus on meaningful print such as a child's name, words on a cereal packet or a book title.)	14.9	14.1	15.5

Talking to children about the letters that represent the sounds they hear at the beginning of their own names and other familiar words.	11.1	10.7	11.5
Playing a TV show episode that teaches letters (e.g. Ahlan Simsim)	10.5	9.8	11.1
This is the responsibility of my spouse/ other parent.	9.9	19.1	1.8
Demonstrate how the sounds are represented by letters (graphemes)	9.5	3.1	15
Looking at books with child	8.4	8.7	8.2
Demonstrate how to segment the sounds (phonemes) in simple words	7.3	3.7	10.4
Support children in recognizing and writing their own names or simple words they know.	7.2	8.4	6.1
Repetition and pronunciation of letters orally	7.2	9.4	5.3
Read stories that children already know, pausing at intervals to encourage him/her/them to 'read' the next word.	4.8	2.7	6.7
I don't know/Not sure	2.8	1.8	3.6

Similarly, when asked to name some ways in which they could help their child learn numbers, quantities, and shapes, parents of focal children aged 2-6 most commonly identified playing (37.9%), with mothers (44.5%) answering this at higher rates than fathers (30.3%). Parents also identified watching a video that teaches numbers/shapes/quantities (27.7%); and making reference to numbers/shapes/quantities in daily conversations (24.8%), with many more mothers (31.9%) than fathers (16.8%) and answering this. These findings are encouraging since they indicate that parents, especially mothers, see the educational value in play and the opportunity for learning in everyday interactions.

Table 13

Percent of parents reporting methods to teach numbers, sizes, quantities, and shapes to their focal children aged two to six years

	All	***Fathers***	***Mothers***
Through playing	37.9	30.3	44.5
Watch a video that teaches numbers/ shapes/ sizes/ quantities	27.7	29.8	25.9
Making reference to quantities, shapes, sizes or numbers in daily speech (e.g., we have more oranges than apples in the fridge)	24.8	16.8	31.9
Model and encourage counting on fingers	23.5	19.3	27.1
Memorizing numbers by looking at them in a book or copying them on paper	20.1	19.5	20.6
Use words such as ‘one', 'two', 'three', 'big', 'small', 'lots', 'fewer', 'hundreds', 'how many?' and 'count' in a variety of situations.	16.8	13.4	19.8
Use pictures and objects to illustrate counting songs, rhymes, and number stories.	15.6	10.7	19.8
Identify numbers, shapes, sizes, or quantities in the environment (e.g., numbers on the keypad or on license plates)	15.3	9.7	20.3
Model counting of objects and abstraction by counting things that are not objects, such as hops, jumps, clicks or claps	10.6	9.7	11.5
Demonstrate the language for shape, position and measures in discussions, e.g., 'sphere', 'shape', 'box', 'in', 'on', 'inside', 'under', long, longer', 'longest', 'short', shorter', 'shortest', 'heavy', 'light', 'full' and 'empty'.	9.5	5.9	12.7
Using toys (e.g., snakes and ladders, cards, dice) or figures (e.g., cubes)	9.5	10.7	8.5
This is the responsibility of my spouse/other parent.	7.1	13.8	1.2

Talk about the methods children use to answer a problem they have posed, e.g., 'Get one more, and then we will both have two.'	2.7	1	4.1
I don't know/Not sure	0.4	0.5	0.3

When asked to name some ways in which they could help their child manage his/her feelings, parents of focal children aged 4-6 most commonly identified talking to the child about their feelings (62.5%), involving the child in finding solutions to problems (23.2%), and asking the child questions about their feelings (22.8%). These actions are all considered best practices in supporting socio-emotional development.

Table 14

Percent of parents reporting methods to promote socio-emotional learning (how to manage feelings) with their focal children aged four to six years

	All	***Fathers***	***Mothers***
Talk to child about his/her feelings	62.5	59.8	64.6
Model and involve children in finding solutions to problems and conflicts.	23.2	23.7	22.8
Ask him/her questions about how they feel	22.8	13.3	30.1
If my child is stubborn, I empower him or her by giving him/her choices.	13	13.3	12.7
Model how you label and manage your own feelings (e.g., 'I'm feeling a bit angry and I need to calm down, so I'm going to…')	11	7.9	13.4
Name and talk about a wide range of feelings and make it clear that all feelings are understandable and acceptable, including feeling angry, but that not all behaviors are.	10.5	5.5	14.3
Ask children for their ideas on what might make people feel better when they are sad or cross. Show your own concern and respect for others, living things and the environment.	10.2	8.8	11.4
Teach the child they can't get everything they want	9.6	5.1	13

Coaching the child and trying to please him, strengthen him, take him outside the house, give him something he loves, etc.	8.2	9.2	7.4
Giving the child a feeling of love and affection through (words, hugging, ...)	6.6	2.8	9.5
Prepare children for changes that may occur in the routine.	4.3	1.3	6.6
Establish routines with predictable sequences and events.	3.1	2.5	3.6
Tell the child to take a deep breath	3	3.8	2.4
This is the responsibility of my spouse/ other parent.	1.2	2.8	0.1
I don't know/not sure	3.4	5.4	2

Research Question 2: How do parents in Jordan gain knowledge about best practices with regard to their role in ensuring their children are ready to learn (e.g., through what channels, such as personal, social, mass media...)?

Interview data suggests that most parents learn what it means to be a parent from their own parents. Some parents reported being conscious of things they appreciated about their parents while at the same time being aware of the parenting practices they knew they did *not* want to replicate with their own children. Other parents described learning about the parenting role through experience, and some also described watching older siblings or other members of their community become parents first and following their examples. Evidence from the survey included questions about who the respondents consulted when they had a question or concern about their child's learning, development, or behavior. The most popular sources of information for all parents ranged from family members and peers, to "experts" including doctors, specialists, and parenting experts, and media, especially informal media like social media, websites, and internet sources (compared with more formal media like books, newspapers, or radio). Many parents turned to their spouse at least sometimes when they had questions about their child (87.4%), and more fathers (75.5%) reported asking their spouse "very often" compared with mothers (55.6%). This is not surprising given that most parents in the sample felt that it was the mother's responsibility to prepare the child for school and that the mother is the person with whom most children spent the most time. Around two-thirds of fathers and mothers reported that they relied upon religious teachings to inform their parenting (63% of fathers reported consulting religious texts or teaching at least "sometimes" compared with mothers (61.7%). However, many more mothers reported at least sometimes using the internet (searches: 79.3%; social media: 65.2%; or websites: 58.6%) to answer their parenting questions compared with fathers (searches: 68.9%; social media: 59.7%; or websites: 54.9%) and this finding was echoed in the interview data as well.

Besides individuals in their community, most parents in interviews reported that when they had a question about the child's development or had a specific parenting issue that they wanted advice on, they did an internet search to find resources that were relevant. Most did not report subscribing or following specific parenting blogs, Facebook groups, or other specific resources. A few parents mentioned Kenzi Taught Me (a Facebook page for parenting advice and discussions), Rula Qatami (publishes how-to videos for parents on newborn children and infants, such as how to bathe, sleep train, soothe, etc.), Karameesh (a YouTube channel with songs and videos for kids), Dr. Soha, and Fun Education. It is not entirely clear the extent to which these are child-centric resources (e.g., the audience for Karameesh is children) or parent-centric (e.g. Rula Qatami's resources have parents as the intended audience). There is a clear digital divide, with a few parents noting that they have no internet in the home so this kind of internet search would be difficult. In Phase 2 of this study, we may wish to name some of the sources that other parents find most helpful, or we may suggest a collaboration that might be good for the providers and the consumers.

Table 15

Selected responses to "How often do you turn to the following people or sources of information when you have a problem or question related to focal child's learning, development or behavior?" (excluding "Not Applicable" responses), including by gender, and urbanicity

	%				
	Total sample	***Fathers***	***Mothers***	***Rural***	***Urban***
Your spouse					
Very often	64.9	75.5	55.6	63.1	65.1
Sometimes	22.5	18.8	25.8	23.6	22.5
Rarely	7.3	3.6	10.7	8.5	7.2
Never	4.8	1.6	7.7	4.3	4.8
Your own mother or father					
Very often	23.8	20.4	26.7	22.5	23.9
Sometimes	28.6	30.1	27.2	24.9	28.9
Rarely	13.9	11.2	16.2	14.2	13.9
Never	22.3	22.3	22.3	24.7	22.1

Your in-laws					
Very often	16.8	11.7	21.3	11.4	17.2
Sometimes	18	20.5	15.8	17.1	18.1
Rarely	18.3	17.3	19.1	19.2	18.2
Never	36.9	43.5	31	39.2	36.7
Your siblings					
Very often	18.6	15.3	21.5	25	18.2
Sometimes	31.6	30.3	32.8	28.2	31.9
Rarely	21	21.6	20.4	14.3	21.5
Never	27.2	31.5	23.4	30.1	26.9
Friends or other adults who have babies or young children of their own					
Very often	15.6	10.3	20.2	19	15.4
Sometimes	32.3	33.2	31.6	30.2	32.5
Rarely	18.7	16.5	20.5	17.1	18.8
Never	32.3	38.3	27	32.5	32.2
Pediatricians, doctors, or specialists					
Very often	20.1	21.1	19.3	17.3	20.3
Sometimes	27.8	28.7	27	24.6	28
Rarely	17.4	19.4	15.7	20.6	17.2
Never	34.7	30.8	38	37.5	34.5
A religious text or teaching					
Very often	30.2	32.6	28.1	30.8	30.1
Sometimes	32.1	30.4	33.6	28.1	32.4
Rarely	13.1	13.1	13.1	14	13
Never	24.6	23.8	25.3	27.1	24.4

A parenting expert					
Very often	13.6	11.6	15.4	12.6	13.7
Sometimes	21.7	25	18.8	16.3	22.1
Rarely	21.3	23.4	19.5	17.6	21.6
Never	43.3	39.9	46.3	53.5	42.6
Searching on the internet					
Very often	40.8	28.0	54.2	35.9	41.1
Sometimes	31.5	40.9	25.1	29.6	31.7
Rarely	9	9.5	9.1	10.2	8.9
Never	15.8	21.6	11.7	20.1	15.5
Social media (e.g., Facebook, YouTube, or Instagram)					
Very often	28.9	23.3	33.8	27.3	29
Sometimes	33.7	36.4	31.4	32.9	33.8
Rarely	11.4	14.6	8.5	10.7	11.4
Never	26	25.7	26.3	29.1	25.8
Websites that discuss parenting					
Very often	23.6	15.8	30.4	22.9	23.7
Sometimes	33.3	39.1	28.2	25.5	33.9
Rarely	12.2	13.7	10.9	12.7	12.2
Never	30.9	31.3	30.4	38.9	30.3

Table 16

Selected responses to "How often do you turn to the following people or sources of information when you have a problem or question related to focal child's learning, development or behavior?" (excluding "Not Applicable" responses), including by parent age

	%						
	Total sample	***Age***					
		16-24	***25-34***	***35-44***	***45-54***	***55-64***	***65+***
Your spouse							
Very often	64.9	67.3	65.6	65.9	53.7	91.8	87.7
Sometimes	22.5	20.9	21	23.3	31.5	4.7	0^
Rarely	7.3	3.7	8.7	7	5.8	2.5	12.3
Never	4.8	8.1	4.7	3.8	9	1	0^
Your own mother or father							
Very often	23.8	43.3	32.7	17.5	25.9	16.3	0^
Sometimes	28.6	34.6	36.9	29.2	19.2	9.7	0^
Rarely	13.9	10.2	13.9	19	14.2	0^	0^
Never	22.3	11.9	16.6	34.3	40.7	74.1	100
Your in-laws							
Very often	16.8	28.8	25.5	12.1	6	0^	0^
Sometimes	18	24.1	19.9	20.6	13.4	11.2	0^

Rarely	18.3	27	20.5	19	16.8	40.3	0^
Never	36.9	20.1	34	48.2	63.8	48.5	100
Your siblings							
Very often	18.6	22	23	16.5	9.7	1.4	40.7
Sometimes	31.6	39.9	33.7	30.1	27.7	45.6	0.6
Rarely	21	25	16.9	26.5	14.7	1.3	43.9
Never	27.2	13.1	26.5	26.9	47.9	51.7	14.8
Friends or other adults who have babies or young children of their own							
Very often	15.6	13.8	21.3	12.9	6.5	3.3	0^
Sometimes	32.3	31.4	37.5	27.6	38.2	19.7	40.7
Rarely	18.7	27.1	18.4	17.9	17.3	29.8	43.9
Never	32.3	27.6	22.8	41.6	38	47.2	15.4
Pediatricians, doctors, or specialists							
Very often	20.1	6	22	22.6	12.2	16.4	0^
Sometimes	27.8	27.5	31	24.2	31.6	12.8	43.9
Rarely	17.4	17	17.9	17.8	11.2	41.9	0^
Never	34.7	49.5	29.1	35.4	45	28.9	56.1
A religious text or teaching							

Very often	30.2	24.5	28.1	35.5	17.6	14	91.5
Sometimes	32.1	17.6	33	32.6	35	70.6	0^
Rarely	13.1	31.5	9.7	12.9	15	9.5	0^
Never	24.6	26.4	29.2	19	32.4	5.9	8.5
A parenting expert							
Very often	13.6	4	18.3	13	4.2	0.7	0^
Sometimes	21.7	20.3	17.2	26.6	20.6	18	0^
Rarely	21.3	21.3	24.3	19	16.7	41.6	0^
Never	43.3	54.4	40.2	41.3	58.5	39.7	100
Searching on the internet							
Very often	40.8	52.5	43.3	43	20.5	48	0^
Sometimes	31.5	24.2	28.1	35.7	48.6	7.3	0^
Rarely	9	8.5	12.4	5.6	13.2	2.6	51.1
Never	15.8	14.7	16.2	15.7	17.6	42.1	48.9
Social media (e.g., Facebook, YouTube, or Instagram)							
Very often	28.9	17.6	27.4	35.3	11.9	46.2	0^
Sometimes	33.7	24.6	31.9	36.2	42.3	5.8	6.9
Rarely	11.4	24	12.9	8.2	8.6	16.4	0^

Never	26	33.8	27.9	20.3	37.2	31.6	93.1
Websites that discuss parenting							
Very often	23.6	18.4	22.2	28.1	11.9	31.6	0^
Sometimes	33.3	33.3	28.9	36.5	41.4	18.5	0^
Rarely	12.2	13.2	17.3	7.6	10	10.8	0^
Never	30.9	35.1	31.6	27.8	36.6	39.1	100

The differences in sources of information did not differ in substantial ways between rural and urban parents, but did according to the household items composite (a proxy for socio-economic status).[4] Mothers seemed to draw on more sources of information than fathers, three quarters of whom reported asking their wife when they had questions about their child's behavior, learning, or development. These differences were even more striking when we investigated whether parents of different involvement levels[5] reported utilizing sources of information at different rates. In general, low involvement fathers reported turning to their spouse or own parents most often, and turned to other sources much less frequently. Low involvement mothers relied on a more varied array of sources compared with low involvement fathers, including friends with children, their siblings, doctors/specialists, and the internet and social media (in addition to their spouse and parents).

Table 17

Selected responses to "How often do you turn to the following people or sources of information when you have a problem or question related to focal child's learning, development or behavior?" (excluding "Not Applicable" responses) by gender and involvement level

	%					
	Low involvement		***Mid involvement***		***High involvement***	
	Fathers	***Mothers***	***Fathers***	***Mothers***	***Fathers***	***Mothers***
Your spouse						
Very often	81.1	70.3	73.3	53.9	84.1	59.4
Sometimes	15.1	11.8	29.7	29.1	14.3	14.3
Rarely	2.8	8.1	5.1	10.7	1.6	11.8
Never	1.1	9.8	2.0	6.2	0	14.5

[4] We used a composite indicator based on the availability of various household goods as a proxy for household wealth. See Appendix H for more information about the development of this indicator.

[5] See next section of report and Appendix G for more information about parents' involvement levels and how they were determined.

Your own mother or father						
Very often	13.2	44.5	27.2	27.2	23.5	31.8
Sometimes	47	21.3	33.4	29.9	33.2	31
Rarely	2	11.3	16.6	18.5	10.1	14.7
Never	37.8	22.8	22.9	24.5	33.2	22.5
Your in-laws						
Very often	5.5	12.6	15.5	26.3	6.8	19.7
Sometimes	23.7	26.5	18.6	18.8	44.9	11.5
Rarely	18.1	15.4	20	20.5	9.2	31.6
Never	52.7	45.5	45.9	34.4	39.1	37.1
Your siblings						
Very often	7.6	41	19	20.4	6.4	22.8
Sometimes	36.5	26.9	28.1	35	37.4	27.5
Rarely	28	10.8	20.3	23	20	13.1
Never	27.9	21.4	32.5	21.6	36.2	26.6
Friends or other adults who have babies or young children of their own						
Very often	11.2	32.3	10.7	17.4	7	31.7
Sometimes	36	22.9	33	32.4	34	32.1
Rarely	8.8	12.6	19.3	23	15.9	11.5
Never	44	32.1	36.9	27.2	43.1	24.7
Pediatricians, doctors, or specialists						
Very often	19.7	16	19.9	17.5	34.4	30.1
Sometimes	30.6	26.8	29.4	26.8	18.1	27.8
Rarely	17.1	22.8	21	16.4	12.4	9.3
Never	32.7	34.4	29.7	39.3	35.1	32.9
A religious text or teaching						
Very often	35.4	33.6	30.8	27.7	39.8	27.8
Sometimes	35.8	36	29.3	32.2	27.1	40.3
Rarely	9.2	5.3	12.9	14.2	24.7	10.2
Never	19.6	25.1	27	25.9	8.4	21.8
A parenting expert						
Very often	7.5	17.6	12.9	13.2	10.9	26.2
Sometimes	32.3	15.8	21.5	17.4	35.8	27.2
Rarely	23.6	10.9	23.5	22.3	22.7	7.8
Never	36.5	55.7	42.1	47	30.6	38.8
Searching on the internet						
Very often	15	63.1	32.4	52.1	24.2	62.2
Sometimes	38.5	8	40.6	27.3	48.8	19.7
Rarely	9.9	15.9	9.7	8.1	6.9	11.6
Never	36.6	12.9	17.4	12.5	20.1	6.5
Social media (e.g., Facebook, YouTube, or Instagram)						
Very often	22.7	41.1	24.3	32.9	17.1	35.8

Sometimes	28.3	14.7	36.5	31.9	54.1	35.4
Rarely	15.3	16.2	15.6	7.1	5.1	13
Never	33.7	28.1	23.5	28.1	23.7	15.8
Websites that discuss parenting						
Very often	22.7	25.7	13.5	29.1	18.8	39.3
Sometimes	21.7	25.3	42.9	28.5	51	27.9
Rarely	11.5	2.8	14.7	10.2	10.9	17.8
Never	44.1	46.2	29	32.2	19.3	15

When asked which sources of information are *most valuable* to them, close to 20% of parents answered information from websites, Facebook, other social media, or other online sources. These findings were corroborated by the focus groups, where parents of all involvement levels mentioned conducting internet searches. Parents who fell in the middle involvement category in the focus groups mentioned consulting with friends or colleagues with kids and one father said he distrusted the TV or media to share parenting information. By contrast, most low involvement mothers in a focus group mentioned that they had watched TV shows related to child development or parenting and one low involvement father said he wished there was an MoE-approved list of media and resources that he could rely upon.

Table 18

Selected responses the sources of information about parenting and child development that respondents found most valuable by involvement level and gender

	%						
		Low		*Mid*		*High*	
	All	*Fathers*	*Mothers*	*Fathers*	*Mothers*	*Fathers*	*Mothers*
Your spouse	49	77.6	28.4	63.5	33.9	78	28.2
Your own mother or father	10.1	2.8	7.8	6.8	14.2	2.9	16.1
Social media (e.g., Facebook, YouTube, or Instagram)	7.8	0.5	27	4.1	10.9	10.8	6.9
Searching on the internet	7.5	3.4	1	7.9	8	1.5	13.7
Friends or other adults who have babies or young children of their own	5.2	0.4	5.3	1.5	8.2	1.8	11.9
Your siblings	4.3	0	6.4	2.2	7.1	0.5	4.8
Websites that discuss parenting	4	9.2	3.9	3.6	4	1.4	1
Your in-laws	2.9	0.4	1.5	1.3	4.7	0	4.2
Pediatricians	2.9	1.2	10.4	2.4	2.9	0	5.8
A parenting expert	2.3	0.3	0	1.6	2.9	1.5	5.6
A religious figure	2.2	2.8	0.4	2.4	0.7	0	0

A religious text or teaching	1.1	0.1	2.5	1.6	1	1.6	0.1
Movies or television	2.1	1.4	5.4	0.3	1.4	0	1.4

However, even though parents did not list engagement with social media, online searches, and parenting websites as the most useful resources available to them, the data above shows that parents did report turning to these resources for support frequently (72.3% report conducting internet searches, 62.6% report consulting social media, and 56.9% report referring to websites "sometimes" or "often"). However, very few parents reported relying on formal mass media: radio, television, movies, or print resources such as newspapers, magazine articles, or books.

These findings suggest that parents find the advice they receive from their immediate families and communities to be the most useful, but they also rely on the Internet, specifically internet searches, social media, and parenting websites, to supplement the information they receive from friends and family. Additionally, in-person reinforcement activities may help parents place higher value on the information they are receiving and may make them more likely to share this information with others in their networks.

When parents were asked about who in their social networks supports their decision to read and play with their children, or would hypothetically support it, the most common responses were the parent's spouse, mother (e.g., the child's grandmother), the parent's siblings, and the focal child's siblings. This may also indicate that there are opportunities to engage families in educational play, reading and learning activities across generations and households. Those who were least mentioned as supporting reading to the focal child included the parent's father-in-law, neighbors, friends, and religious figures (not mentioned at all). Friends seem to be slightly more important to fathers who had reported reading to their child in the past three days (7.5% mentioned that their friends would support them reading to their child each day).

Research Questions 3-6: What are the barriers & drivers of parenting behaviors linked to readiness to learn and how do they vary across different types of parents?

The evidence shared above showed that parents in Jordan value education, and yet many parents did not report to be engaging in many behaviors that promote early learning and school readiness: according to the survey data, parents reported engaging in or holding, on average, less than five out of 32 school readiness behaviors and beliefs. This next section identifies the results that suggest the drivers and barriers of behaviors linked to readiness to learn and how they differ across parents from different socio-demographic backgrounds, parents who hold different kinds of beliefs, and other variables investigated through this study.

Parent motivation

According to data from interviews, many parents appear to choose their actions--at least to some extent--based on how it would help shape their child's character and future, not just simply based on convenience or necessity. During interviews when asked about their hopes for their children's futures, many mentioned success in school or a university degree. On the

survey when asked "There are many different things that parents want in life for their children. What are the key things you desire most in life for focal child," 81.7% of parents mentioned they desire most for their focal child to get a good education/for them to be smart. When asked during interviews specifically why they engaged in certain behaviors, many mentioned how their actions would improve their child's character or behavior. For example, one Syrian father said: "I want her to be a people's person. When I have guests, I make her come in and say hello. I want her to be more social." 10% of parents on the survey responded that being a "good person" was one of the key things they desired most in life for their child. In some cases, parents interviewed reported engaging in particular behaviors because they believed it would help them to be ready for school: one Jordanian mother said, "I teach him, so that when he goes to school next year, he will know things and have an idea." Similarly, at least one high involvement father in a focus group reported he wanted his children to get a degree because without it life was more challenging.

Table 19

Percent of parents' responses when asked "There are many different things that parents want in life for their children. What are the key things you desire most in life for focal child?"

		Jordanian		***Syrian***	
	All	***Fathers***	***Mothers***	***Fathers***	***Mothers***
Good education / be smart	81.7	79.2	82.6	89.9	88.6
Good health and/or safety	48	45.4	49.4	42.5	62.6
All the material things they want/need (clothes, toys, home, etc.) and are well-provided for	30	30.5	30.5	19.6	29.8
Career success	28.3	32.7	25.8	25.2	15.7
Happiness	24.5	23.6	24	27.4	35.8
Religious piety	10.1	10	11	0.6	8.2
Be a good person or have a strong character	10	12.6	8.7	1.4	9.6
Wealth	5.2	4.1	5.2	20.4	2.5
Obedience	2.7	0.9	4.7	0.2	1
Marriage/starting a family	2.3	2	2.4	7.6	0

The research team also examined parents' hopes for their child's future according to the sex of the focal child. There were statistically significant differences in the rates at which parents answered this question, however the differences were very small in most cases. The only notable differences were that parents of male focal children were slightly more likely to answer that they hoped their son displayed religious piety (M_{boys}=0.321, M_{girls}=0.283, p<0.0001) and parents were slightly more likely to say that they hoped their daughters would be obedient (M_{boys}=0.091, M_{girls}=0.205, p<0.0001).

Parental involvement

According to both interview and survey data, children spent the most time with their mothers (with a few exceptions). 88.4% of survey respondents reported that focal children spent most of the day with their mothers. This was true even for most (75.3%) working mothers. According to interviews, most fathers primarily believe their most important parenting task is to provide for the family, but many also report that they play with their child "frequently." However, we noted that social norms seem to be evolving, especially among urban families, and so fathers might be comfortable getting more involved in ECD at home and their daughters' education seems to be a priority. These two trends could be reinforced with social marketing.

The interview data suggest that among mothers, there were high involvement, middle involvement, and low involvement mothers, whereas fathers seemed to fall into either high involvement or low involvement. High involvement parents were spending time with their children teaching them words, numbers, letters, and colors, but many didn't demonstrate an understanding of the sequence of ECD activities (such as learning the letters names, then their sounds, then how combinations of letter sounds form words), and didn't have access to many learning materials. Medium involvement mothers were engaged in rote learning activities or other more passive learning activities with their children, such as using videos and apps to expose their children to language and learning concepts. Low involvement mothers did not report engaging in any specific learning activities but did report playing with their child.

In general, parents were often likely to use rote memorization rather than play-based strategies to teach their children. For example, one 33-year-old Jordanian father of two children living in East Amman who was interviewed said that to teach the focal child numbers, "I make him memorize them somehow, yes, and let him repeat after me."

The behaviors that parents were most likely to report engaging in included: talking to their children from at least 6 months of age, singing with their child, helping their child to memorize letters, numbers, and colors (more information specifically about reading behaviors are below). Syrian parents differed from Jordanian parents in a few ways: they were more likely to list safety among their goals for their children, and they also tended to have fewer resources (including access to internet in the home).

Gender of respondent (mothers vs. fathers)

There was small correlation[6] between respondent gender and involvement scores (α=0.2, *p*<0.01). Mothers tended to score higher than fathers overall, and there were nearly twice as many mothers (proportionally) in the high involvement category than fathers. This echoes the findings from the qualitative interviews where fathers tended to be low/no involvement, whereas mothers varied more from low, middle, to high.

Table 20

Percent of mothers and fathers falling into each involvement category

	%	
	Fathers	***Mothers***
Low involvement	21	5.8
Mid involvement	70.2	79.3
High involvement	8.8	14.8

Employment status and sector

The research team found a weak negative correlation between employment status and involvement composite score (α=-0.08, *p*<0.01), suggesting that parents who were employed tended to have lower involvement scores than parents who were homemakers or not employed for another reason. 87.9% of all high involvement fathers from the survey were employed, whereas 11.3% of high involvement mothers were employed. In fact, most high involvement mothers (87.2%) are homemakers. This evidence, along with the weak correlation between employment and involvement scores, suggests that employment status is not an important factor in parents' involvement levels.

Table 21

Percent of parents falling into each involvement category by gender and employment status

	%		
	Low involvement	***Mid involvement***	***High involvement***
Employed			
Mothers	8.1	16.2	11.3
Fathers	73.9	21.9	12.1
Unemployed			
Mothers	91.9	83.8	88.7
Fathers	26.1	78.1	87.9

Note: Employed includes part-time, full-time, and self-employed; unemployed includes homemakers and those who are voluntarily or involuntarily unemployed.

[6] All differences described in this report are statistically significant at the 95% confidence level or higher unless otherwise noted.

Mothers' employment status did not appear to be as salient a determinant of their involvement status. However, most mothers across all involvement scores (81%) were homemakers so it is possible that the small sample size for employment categories impacted the significance of the results. Approximately 80% of all mothers were mid involvement. Very few mothers were unemployed and essentially none were retired.[7]

The research team investigated whether there were trends in the sector in which parents are employed and their involvement status. Fathers in white collar jobs such as management/business or the legal sector were more likely to be low involvement, and fathers in civil service, including education, military, or government, along with healthcare and agriculture were more likely to be mid involvement. Fathers in the finance and tourism sectors were more likely to fall in the high involvement category. Mothers in the health and education sectors were more likely to fall in the high involvement category, likely because they have more awareness about the importance of the parents' role in early learning.

Nationality

Uncovering differences in behaviors and beliefs between Syrian parents and Jordanian parents is a particular goal of this study. Syrian parents accounted for 12% of the unweighted sample for this study (8.3% of the weighted sample); comparisons between the two groups may therefore be difficult to achieve satisfactorily. Unsurprisingly given the stressful conditions under which many Syrian parents are living (a significant portion of whom were refugees and some of whom were living in camps), Syrian parents' mean composite score (4.57) was slightly lower than that of Jordanian parents (4.89) and there was a weak negative correlation between the nationality of parents and involvement scores (α=-0.03, p<0.01). A slightly larger proportion of Syrian fathers are in the high involvement category compared to Jordanian fathers.

Table 22

Percent of parents falling into each involvement category by gender and nationality

	%		
	Low involvement	***Mid involvement***	***High involvement***
Jordanian			
Mothers	5.7	79.3	15
Fathers	20.3	71.1	8.7
Syrian			
Mothers	7.1	80.3	12.6
Fathers	27.8	61.4	10.9

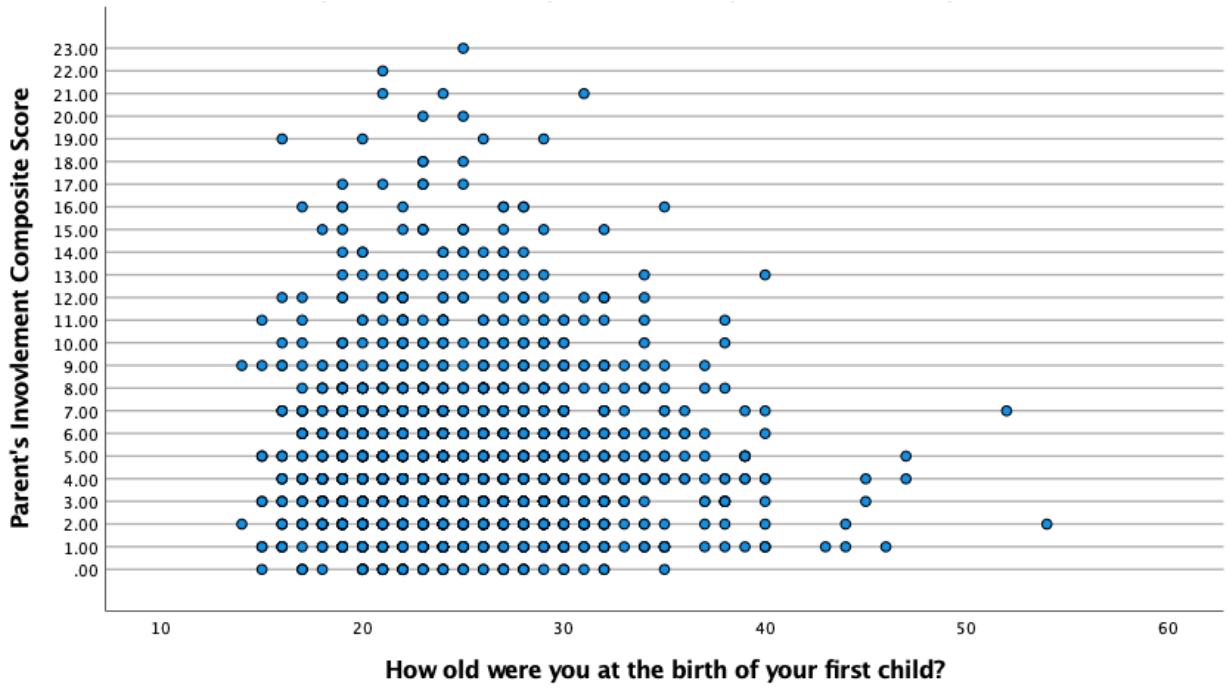
[7] The weighted sample did include retired mothers, but the figure is so small (0.29%) that it was insignificant.

Age of parent

There is a weak negative correlation between the age at which the respondent first became a parent and involvement value (α=-0.09, p<0.001), suggesting that parents who were older when they first became parents are less involved compared with parents who were younger when their first child was born. There is also a weak negative correlation (α=-0.04, p<0.01) between respondent's age at the time of the survey and involvement value. While these findings are statistically significant, the correlations between age and involvement are very small and therefore suggest that parental age is not a major factor in parental involvement.

Figure 3

Relationship between respondents' involvement scores and their age at the birth of their first child



The research team also found that the age at which the respondent first became a parent is not a significant predictor of parents' involvement scores, including when controlling for the gender of the parent and the parent's employment status. In addition, parents' employment status was not a significant predictor of involvement scores when controlling for age at birth of first child and gender. These results suggest that parents' age and employment status are not important factors in parents' involvement levels.

Table 23

Models of the relationship between involvement composite scores and the age of the respondent at the birth of their first child, controlling for gender (Models 2 and 3) and employment (Model 3)

	Model 1				Model 2				Model 3			
Effect	*B*	*SE*	*F*	*p*	*B*	*SE*	*t*	*p*	*B*	*SE*	*F*	*p*
Intercept	6.28	0.95	2.09	.00	1.29	1.28	181.96	.01	3.35	1.21	6.26	.01
Age at birth of first child	-0.06	0.04	2.09	.16	0.04	0.04	28.33	.66	0.02	0.05	0.13	.72
Parent gender (Female)					0.39	0.39	205.10	.00	1.73	0.40	18.99	.00
Employment status									0.43	0.31	1.95	.17
Adjusted R^2	0.01				0.04				0.04			

Characteristics of the focal child[8]

The age (α=0.04, *p*<0.001) and sex (α=-0.06, *p*<0.001) of the focal child is weakly correlated with involvement composite scores, where parents of older focal children and parents of males were more likely to be higher involvement. In addition, there is a very weak correlation between parents of non-disabled focal children and involvement composite scores (α=-0.02, *p*<0.001): parents of children who are not disabled were slightly more likely to have higher involvement scores. Fathers of female focal children were more likely to fall in either high (10.7%) or low involvement (18.1%) compared with fathers of male focal children (virtually all of whom—91.6%—were mid involvement).

Table 24

Percent of parents falling into each involvement category by gender and sex of focal child

	%		
	Low involvement	**Mid involvement**	**High involvement**
Female focal child			
Mothers	6.4	84.4	9.2
Fathers	20.8	69.3	9.8
Male focal child			
Mothers	5.3	75.1	19.5
Fathers	21.1	71.1	7.8

[8] Focal children were randomly selected from among the children in the family who were under six years of age using the next-birthday method.

Region and urbanicity

The research team hypothesized that rural parents' involvement may be lower than urban parents' involvement due to the demands of rural life (such as agricultural duties), the presence of more extended family which may lead to involvement behaviors being distributed over more people than simply the focal child's parents, as well as traditional beliefs about the types of learning that occur in the home. There is a small positive correlation between living in an urban area and the involvement composite (α=0.01, p<0.001). We found a greater proportion of mothers in rural areas are low involvement (9.61%) compared with mothers in urban areas (5.6%). By contrast, fathers in urban areas are more likely to be low involvement (21.5%) than fathers in rural areas (14%). There is moderate correlation between region and involvement scores (α=0.30, p<0.001). In addition, we found that more mothers and fathers in the South region (24.4% and 15.1%, respectively) are high involvement compared with fathers and mothers from the Central (19.4% and 11.1%, respectively) and North (2.8% and 3.6%, respectively) regions.

Table 25

Percent of parents falling into each involvement category by gender, region, and urbanicity

		%					
		Low involvement		*Mid involvement*		*High involvement*	
		Mothers	Fathers	Mothers	Fathers	Mothers	Fathers
Region	**North**	11.4	34.3	85.8	62	2.8	3.6
	Central	3.1	15.1	77.5	73.8	19.4	11.1
	South	6	5	69.6	79.9	24.4	15.1
Type	**Urban**	5.6	21.5	79.2	69.6	15.2	8.9
	Rural	9.1	14	80.7	78.4	10.1	7.6

.

Number of children and size of the household

Another hypothesis the research team made prior to beginning empirical research on this project was that involvement levels would differ by family size. Logic suggests that family resources, including parental attention and engagement, may be spread more thinly in larger families, and that this phenomenon may have been exacerbated by the COVID-19 pandemic since many children who would normally be attending school were at home and in need of parental support with online learning. However, we found there is a weak correlation between total number of children and the involvement composite (α=0.05, p<0.001). We also investigated whether there is a correlation between involvement and the number of school-aged children (age 6-18; α=0.06, p<0.001) and the number of pre-school children in the household (under the age of 6; α=-0.02, p<0.001); more young children is negatively correlated with involvement.

An alternative hypothesis could be that a larger household size (which would include both children and additional adults such as extended family [e.g., grandparents], nannies, and other household staff) may have a positive effect on parents' involvement levels since other adults in the household are sharing household responsibilities. This hypothesis may be supported by the results of this survey: there is a weak correlation between the size of the household and the responding parent's score on the involvement composite (α=0.03, p<0.001).

Education

There is a weak positive correlation between the respondent's education level and the involvement composite (α=0.10, p<0.001) and a weaker correlation between the respondent's *spouse's* education and involvement (α=0.01, p<0.001). We had hypothesized, given that maternal education is a commonly used proxy for socio-economic status (SES) in education research, that parental education would be more highly correlated with involvement. Further investigation suggested that there is not a linear relationship between parents' highest educational attainment and their involvement level. Among all high involvement fathers, most had received the Tawjihi certificate (48.3%) or had a bachelor's degree (20.6%). Similarly, among high involvement mothers, many had a Tawjihi certificate (47.9%) or undergraduate degree (21.9%).

Table 26

Percent of parents falling into each involvement category by gender and highest education level

	%		
	Low involvement	***Mid involvement***	***High involvement***
Illiterate/Uneducated			
Mothers	6.1	57.3	36.6
Fathers	13.5	53.2	33.3
Basic education (Below 10th grade)			
Mothers	13.3	78.1	8.6
Fathers	16.8	79.7	3.5
Compulsory education (10th grade)			
Mothers	6.8	87.3	5.8
Fathers	15.6	78	6.4
General secondary certificate (Tawjihi)			
Mothers	4.8	75.3	19.8
Fathers	21.2	67.2	11.6
Diploma/Community college			
Mothers	1.9	86.6	11.4
Fathers	40.2	55.6	4.2
Undergraduate degree (Bachelor's)			

Mothers	4.7	83	12.3
Fathers	16.6	74.2	9.2
Higher diploma			
Mothers	0^	10.6	89.4
Fathers	0^	28	72
Postgraduate degree (Master's)			
Mothers	0^	98.4	1.6
Fathers	55	37.7	7.3

Note: ^ indicates that there were no respondents in these categories.

Income

An additional measure of SES is average net monthly income, broken down into brackets shown below. The table below shows that the vast majority of parents reported earning under 660 JOD, and nearly one third earn under 260 JOD per month (the minimum wage in Jordan). Just over 10% of respondents earn more than 661 JOD per month. Average monthly income is not as strong a predictor of involvement (see below) as expected (α=0.07, p<0.001), possibly due to the impact that the COVID-19 pandemic and health restrictions and lockdowns have had on families' income. A predictive model found that income only explains 2% of the variation in involvement scores. This may be due to the COVID-19 pandemic's effect on monthly income: temporary unemployment may have affected monthly income at the time the survey was administered and therefore may not accurately reflect the family's typical economic status.

Table 27

Family's average net monthly income (after tax and social security deductions)

	%
No income	1.6
260 JOD or less	32.9
261-460 JOD	43.5
461-660 JOD	11.2
661-860 JOD	3.2
861-1060 JOD	3.2
1061 JOD or more	1.1
Refused to answer	3.2

There are no clear trends in the overall relationship between gender, income, and involvement. However, we found that mothers in the highest income category are disproportionately high involvement, and this was also true of fathers, but to a lesser extent.

Table 28

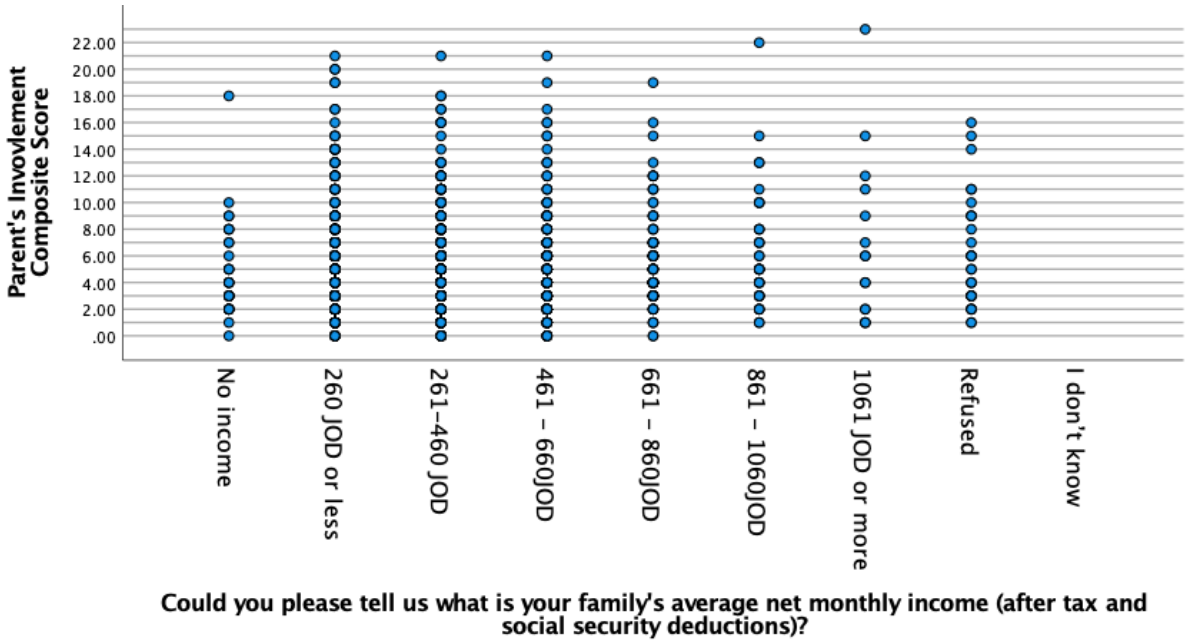
Percent of parents falling into each involvement category by gender and net average monthly income

	%		
	Low involvement	***Mid involvement***	***High involvement***
No income			
Mothers	0^	54.2	45.8
Fathers	0.8	98.9	0.3
Less than 260 JOD			
Mothers	7	74.2	18.8
Fathers	24.5	66.9	8.6
261-460 JOD			
Mothers	4.8	84.3	10.9
Fathers	20.3	71.8	7.9
461-660 JOD			
Mothers	9	82.1	8.9
Fathers	16	74.4	9.6
661-860 JOD			
Mothers	5.8	77.2	17
Fathers	2.3	89.3	8.4
861-1060 JOD			
Mothers	0^	81.1	18.9
Fathers	9.8	73.5	16.7
1061 JOD or more			
Mothers	27.3	9.4	63.2
Fathers	0^	55.8	44.2
Refused to answer			
Mothers	0^	77.6	22.4
Fathers	57.7	36.8	5.5

Note: ^ indicates that there were no respondents in these categories.

Figure 4

Relationship between income categories and involvement composite scores



Household items composite indicator

The most statistically significant measure of SES was a composite of household items. The research team examined associations between (1) maternal education[9], (2) average net monthly income (common proxy indicators for SES) and (3) the involvement composite, and the results were mixed (see above). Maternal education, a very commonly used proxy for SES especially for education-related studies, was also not a consistent predictor of involvement level for parents, perhaps due to specific cultural norms in Jordan (such as the high value placed on education, in general) that lead to less variation in behaviors in supporting early learning.

While not all the household goods are of the same worth, one can assume that a wealthier family would own more of the items compared with a less wealthy family. Therefore, we created categories of parents by number of household items (by quartiles) (see Appendix H). In general, fathers with 9 or more household items were more likely to fall in the high involvement category, and mothers with 7-8 household items were more likely to fall in the high involvement category. This may suggest that mothers who have *some* wealth (or income) have the resources, peace of mind, time, or energy to be more highly involved in their child's lives, and fathers with a more comfortable lifestyle enables them to have the resources, peace of mind, time, or energy to be more highly involved.

[9] Maternal education is commonly used as a proxy for socio-economic status. Other analyses examined the education level of the parent as a predictor of involvement (but not as a proxy for SES).

Table 29

Percent of parents falling into each involvement category by gender and number of household items

	%		
	Low involvement	***Mid involvement***	***High involvement***
1-5 household items			
Mothers	11.3	77.7	11
Fathers	23.8	68.7	7.5
6 items			
Mothers	4.6	84.1	11.3
Fathers	14.9	73.9	11.2
7-8 items			
Mothers	4.9	76.1	19
Fathers	24.2	71.3	4.5
9 or more items			
Mothers	4	80.9	15
Fathers	18.5	69.1	12.3

Profiles of parents by involvement level

The research team developed profiles of prototypical parents by involvement level to better understand the characteristics and determinants of parents who do and do not support their child's readiness to learn. Due to the manner in which the categories were constructed, most parents (approximately 75%) fall into the middle involvement category, with the average parent answering that they believe or engage in approximately 4 of the beliefs or behaviors associated with readiness to learn. Parents whose composite score was more than one standard deviation below the mean are designated as "low involvement" and those whose score was one standard deviation above the mean are designated as "high involvement." It is important to note that the "middle involvement" category is designated according to the distribution of parents across the composite (between 1 standard deviation above and below the mean), and not because they are engaging in the mean number of activities (which would be close to 15 out of 32). In fact, "middle involvement" could still be considered rather low in terms of the number of activities parents are engaging in (around 4 out of 32).

Table 30

Distribution of parents across involvement levels and mean number of activities by involvement level

	All		***Jordanian***				***Syrian***			
			Fathers		***Mothers***		***Fathers***		***Mothers***	
	M	***%***	***M***	***%***	***M***	***%***	***M***	***%***	***M***	***%***
Low involvement	1.2	12.9	1.13	20.3	0.80	5.7	2.04	27.8	1.55	7.1
Middle involvement	4.41	75.1	4.28	71.1	4.48	79.3	5.35	61.4	4.16	80.3
High involvement	11.62	12	10.04	8.6	12.02	15	11.5	10.9	16	12.6

Since the middle involvement group was so large, it is quite diverse and harder to define. Therefore, it is particularly interesting to examine the outliers to see what may result in a respondent being a low-involvement parent and what may result in a respondent being a high-involvement parent. In addition, in some cases there are not enough observations to definitively identify trends (e.g., those with very high monthly salaries or individuals who work in a specific sector, like marketing). Therefore, the research team focused on examining how respondents in each of the categories might differ according to variables with sufficient observations to yield statistically significant results. These fictional individuals reflect trends in the data and are a sample of parents from the data:

Rima, a Jordanian from an urban area in the central region

High involvement mother[10]

- Is a housewife.
- Has a bachelor's degree.
- To prepare her child for school, she believes it is important that the parent reads to her child and teaches her child the alphabet, how to play with other children and morals and manners. Also believed it is important that the parent strengthens her child's character and boosts his or her confidence.
- She desires most in life for her focal child to have a good education and be smart.

[10] Icon taken from Shutterstock.com

Farah, a Jordanian from an urban area in the northern region

Middle involvement mother

- Is a housewife.
- Has a secondary school certificate.
- To prepare her child for school, she believes it is important that the parent teaches her child the alphabet and math concepts like numbers, size, quantity, shapes, and colors.
- She desires most in life for her focal child to have a good education and be smart.
- In her opinion, the most important things that a parent can do to help their children aged below 6 years to be ready to enter grade one socially and in terms of learning is to teach him/her the alphabet and to teach him/her math concepts like numbers, size, quantity, shapes, and colors.

Samah, a Jordanian from a rural area in the northern region

Low involvement mother

- Is employed.
- Received a basic education (below 10th grade).
- To prepare her child for school, she believes it is important that the parent teaches her child the alphabet.
- She desires most in life for her focal child to have a good education and be smart.

Nour, a Syrian from an urban area in the central region

Middle involvement mother

- Is a housewife.
- Received a basic education (below 10th grade).
- To prepare her child for school, she believes it is important that the parent teaches her child the alphabet and math concepts like numbers, size, quantity, shapes, and colors.
- In the past 3 days, she talked to her focal child about different things.
- In her opinion, the most important things that a parent can do to help their children aged below 6 years to be ready to enter grade one socially and in terms of learning is to teach him/her the alphabet and encourage him/her and make him/her like the idea of school by talking about it.

Suleiman, a Jordanian from an urban area in the central region

High involvement father

- Has a bachelor's degree.
- Is employed and works in the finance or tourism sector.
- Makes between 260-460 JOD per month or 1061 JOD + (highest income bracket).
- Likely the father of a male focal child (since fathers were more likely to be more involved with their sons).
- To prepare his child for school, he believes it is important that the parent reads to his child, talks, and sings to his child, and teaches his child the alphabet, how to play with other children, and morals and manners. Also, he believes it is important that the parent strengthens his child's character and boosts his confidence.
- He desires most in life for his son to have a good education and be smart.
- In the past 3 days, he played with his son.

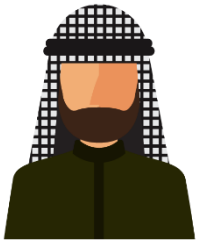
Ahmad, a Jordanian from a rural area in the southern region

Middle involvement father

- Has a general secondary certificate (tawjihi)
- Makes 261-460 JOD per month.
- Temporarily unemployed. When he was employed, he worked in the agriculture sector.
- To prepare his child for school, he believes it is important that the parent teaches his child the alphabet and math concepts like numbers, size, quantity, shapes, and colors.
- He desires most in life for his focal child to have good health and be safe and to have a good education and be smart.

Hasan, a Jordanian from an urban area in the northern region

Low involvement father



- Is employed and works in management/business or the legal sector
- Has a bachelor's degree.
- Makes between 261-660 JOD per month
- More likely to be the father of a female focal child.
- To prepare his child for school, he believes it is important that the parent teaches his child the alphabet and also believes it is important that the parent encourages his child and makes him or her like the idea of school by talking about it.
- He desires most for his focal child to have all the material things they want/need (clothes, toys, home, etc.) and to be well-provided for. He also desires for his focal child to have a good education and be smart.
- In the past 3 days, he went to a public park, play area or entertainment venue with the focal child.
- In his opinion, the most important things that a parent can do to help their children aged below 6 years to be ready to enter grade one socially and in terms of learning is to encourage him/her and make him/her like the idea of school by talking about it.

Abdelrahman, a Syrian from an urban area in the central region

High involvement father[11]

- Is temporarily unemployed.
- Has a diploma or attended community college.
- He desires most for his focal child to be happy and to have a good education and be smart.
- In his opinion, the most important thing that a parent can do to help their children aged below 6 years to be ready to enter grade one socially and in terms of learning is to teach him/her the alphabet.

Yousef, a Syrian from an urban area in the northern region

Low involvement father[12]

- Is employed.
- Receive a basic education (below 10th grade).
- He desires most for his focal child to be happy, to have career success, and to have good education and be smart.
- In the past 3 days, he played with his focal child.
- In his opinion, the most important things that a parent can do to help their children aged below 6 years to be ready to enter grade one socially and in terms of learning is to teach him/her how to obey the rules and to encourage him/her and make him/her to like the idea of school by talking about it.

[11] Icon taken from Shutterstock.com

[12] Icon taken taken from Shutterstock.com

Barrier analysis

Three general methods were used to identify the barriers and drivers of behavior using the survey data. First, during in-depth interviews, we asked parents directly what prevented them from engaging in learning activities with their child. Second, we created a composite of 32 behaviors linked with readiness to learn and assigned respondents to low, medium, or high involvement categories based on their score on the composite. Third, we used questions that are commonly used in Barrier Analysis studies to identify determinants of doer/non-doer status of respondents for five key learning activities: reading, talking, playing, singing, and counting. Part of the third step included comparing the responses among parents who reported doing the behavior within the last 3 days of completing the survey ("doers") with parents who reported not doing the behavior within the last 3 days ("non-doers"). Finally, the research team identified the behavioral determinants that seem to be the most important by including those with the greatest proportional differences in responses (at least 15%) between doers and non-doers.

According to interviews, the key barriers to greater parental involvement in learning behaviors were lack of time, lack of peace of mind, demands of older children's needs (especially online learning), focal child's age (too young), and focal child's "stubbornness." Mothers reported needing adequate time to clean and welcome visitors as barriers to engaging in more playful learning behaviors. Given COVID and online schooling for older children, many parents reported that they could not focus on their younger child as much as they would like now that all children are home all day. Another interesting barrier is lack of "peace of mind" (sometimes described in other words). This was particularly true for fathers, who were feeling stress in providing for their families, especially given COVID, unemployment, and other uncertainty.

Informed by the interview data, we used a barrier analysis tool to identify determinants of doer/non-doer status of respondents for five key learning activities: reading, talking, playing, singing, and counting. Due to the nature of the question -i.e., open-ended, whereby a parent had to recall what he or she did in the last three days, it is possible that the number of doers is undercounted.

The barrier analysis tool was based on research and evidence and identified the determinants of behavior change that are the most critical for the priority group (Kittle, 2013; Petit, 2019). We adapted an existing tool (see Appendix I) to tabulate and analyze responses, and tailored specific questions on the survey to common influences of behavior change related to perceived self-efficacy (what makes it easier and more difficult for parents to engage in the activity), perceived positive and negative consequences of engaging in the behavior, perceived social norms around the behavior and who approved and disapproved it (reading and playing), and access to the materials or resources needed to practice the behavior (reading and playing). All figures included below are statistically significant at the 95% confidence level or higher ($p \leq 0.05$).

Themes across multiple activities

A few barriers or drivers of behaviors appear to influence behavior across all key learning activities: talking, singing, counting, reading, and playing. These cross-cutting themes are especially important since they may be addressed all at once in order to influence multiple behaviors.

(Mis)Conceptions about age appropriateness

Results from the barrier analysis on five key learning activities (reading, talking, playing, counting, and singing) suggest that parents, both those who engage in school readiness-related behaviors (doers) and those who do not (non-doers), may hold misconceptions about the age-appropriateness of learning activities that research suggests are appropriate at any age.

Parents who did not report reading to their child in the past three days (non-doers) were 1.3 times more likely to believe that it would be easier to read to their child if they were older and 1.9 times more likely to believe that it is hard to read to their child because their child is too young compared with parents who *have* read to their child in the last three days (doers). Non-doers were also twice as likely as doers to believe that it is difficult to read to their child because the child would feel bored. While beliefs about the age-appropriateness of reading was a stronger factor for non-doers, both doers and non-doers seemed to hold this belief. Early childhood experts agree that parents should read to their child from infancy, and not only when the child is verbal or is old enough to read themselves (Parlakian & McLaughlin, 2021).

The research team examined socio-demographic factors that might be associated with the belief that their child is too young to be read to. Jordanians (20.7%) and Syrians (19.6%), and fathers (18.5%) and mothers (22.4%) seemed to hold this belief at similar rates. Unsurprisingly, parents of younger children were more likely to hold this belief than parents of older children: 87.1% of all parents who hold this belief had focal children under the age of 4 (68.4% of the full sample), compared with 12.8% parents of focal children aged 4-5 (31.7% of the full sample), the earliest age when many children might begin reading themselves.

Similarly, parents who reported talking to their child in the past three days were 1.3 times more likely to say that they are able to do so because their child was old enough compared with non-doers. Parents who reported singing with their child in the past three days were 2.2 times more likely to say that they are able to do so because their child was old enough compared with non-doers. Jordanians (23.8%) and Syrians (23%) seemed to hold this belief at similar rates, and non-doer mothers (28.9%) were more likely to hold this belief than non-doer fathers (18.5%). Non-doer parents of focal children over the age of two months were all approximately equally likely (1 out of 5) to hold this belief, suggesting that the age of the focal child was not necessarily an important factor in whether a parent believed that it was hard to talk to their child because they are too young. 72.2% of parents aged one day to two months held this belief.

Technology

In terms of how parents use technology with their children, 73.3% of parents stated that their children engage with their mobile or tablets. YouTube (61.3%) and games (44%) make up 75.1% of this engagement, but children are also using educational applications (26.1%). Informing parents about educational YouTube channels, applications, and games may be one way to support early childhood development in the home, but it is important to note that more active, interactive activities are highly encouraged and should be prioritized before use of online games or video sharing websites like YouTube. Also, per the American Academy of Pediatrics, children under 2 years old need "hands-on exploration and social interaction with trusted caregivers to develop their cognitive, language, motor, and social-emotional skills" (2016). Therefore, it is important that caregivers interact with their child during media use and create meaningful opportunities instead of having the child engage with it alone. For example, starting around 15 months, caregivers should watch commercial media with their child and reteach the content to enhance learning.

Technology use among parents and young children during the COVID-19 pandemic has likely increased due older siblings participating in online learning, lockdowns preventing face-to-face socialization, and other pressures. We followed up on questions of technology use among parents of children under age six and found that parents were using it in a variety of ways. One middle involvement mother described how she uses technology with her child: "*We started watching children's plays on the phone, and the last thing we evaluate or give an opinion, make her give her opinion, because her personality is sweet and knows how to talk, so we encourage her to do so."* In this case, she is using technology to foster communication and oral language development in her child.

Creativity

Across the board, doers were more likely to cite improving the child's creativity as a positive consequence of a given activity. Specifically, doers were 2 times more likely to cite this response when describing reading, 1.7 times more likely to give this response when describing talking, 1.5 times more likely to give this response when describing singing, and 1.2 times more likely to give this response when describing playing than non-doers.

Strengthening parent-child relationship

During each of the five key learning activity questions, parents were asked what the positive consequences of a given activity were. Doers were 2.4 times more likely to cite an improved relationship with their child as a positive consequence of reading, 1.6 times more likely to state this as a positive consequence of singing and 1.1 times more likely to cite this as a positive consequence of playing than non-doers.

Social Norms: Who approves?

Parents were asked about social norms for questions related to reading and playing. Doers were 1.8 times more likely to state that their spouses approved of reading and 2.2 times more likely to state that their spouses approved of playing than non-doers. In addition, doers were 1.4 times more likely to state that their mothers approved of reading and 1.8 times more likely to state their mothers approved of playing than non-doers.

The research team examined socio-demographic factors that might be associated with social norms around playing and reading. 78.7% of Jordanians and 94.8% of Syrians who reported reading to their child in the past three days believe that their spouse approved of them doing so. Slightly more fathers (86%) who reported reading to their child in the past three days felt that their spouse approved compared with mothers (74.7%). 80.4% of Jordanians and 72.3% of Syrians who reported playing with their child in the past three days believe that their spouse approved of them doing so. Slightly more fathers (81.7%) who reported playing with their child in the past three days felt that their spouse approved compared with mothers (78%).

Reading

Only 6.3% of all parents in the survey sample reported reading to their child within the past three days and 0.3% reported reading to their child on a typical day. Due to the very low rates of reading, the study team investigated how parents perceive “reading with their child” in focus groups. Some middle involvement mothers in a focus group said they told stories orally, or used older siblings’ books (which we understood to be schoolbooks) either during the day or at bedtime. A middle involvement father said that the only thing he read with his child was the Quran.

Access to books

According to interview data, overall, it appears that many parents in Jordan do not have ready access to children’s books. While some parents reported that they could purchase or download books, most have not. In focus group discussions, some mothers mentioned that they cannot access books for financial reasons, while other mothers mentioned that their neighborhood doesn’t have a local bookshop or library. Parents of all involvement levels in the focus groups agreed that JOD 1-2 was the appropriate price for a high-quality children’s book.

In interviews, most parents indicated that they know that downloading books is an option available to them, while others did not know that this was possible or said that they do not have internet in the home. The interviewer frequently probed specifically about whether parents could download books for their child. This particular probe seemed to almost always elicit a “yes”, but we were unsure whether downloading books is really a valid option for most families. Also, the research on the efficacy of e-books for early learning is not clear, so we would suggest finding ways to promote greater access to physical books that are of high quality and which are age appropriate, simple Arabic language (few words per page), if possible. Even

among those who said that they know that books are available for download, they didn't seem to regularly avail themselves of this option. In addition, one of the middle involvement mothers in a focus group said *"I think that the benefit of a book is that the book is available in front of you, and usually the children goes and brings the book to read to him. But from the Internet, the mother usually avoids it and does not read it, but if the child brings the book, you feel compelled to read to him. I think if the book is in the hands of the child, it becomes firmly established in his mind and he has more commitment and love."*

During the barrier analysis section of the quantitative survey, a key question was also the extent to which parents perceive access to books as a key barrier to shared book reading. Parents who did not read to their child in the past 3 days (non-doers) were 2.1 times more likely than doers to find it very difficult to get a sufficient number of books that were relevant to the focal child's age to read to him/her each day. In addition, parents who have reported reading to their child in the past three days (doers) were more likely than non-doers to value access to books in colloquial Arabic (2.4 times more likely), and inexpensive books (1.2 times more likely).

Lack of high quality, age-appropriate children's books

Based on interview data, the research team wondered about the quality of the children's books that families have access to and whether the books that parents were reading to their children (or envisioning reading to children) were age-appropriate, engaging, and of high quality (see reading behaviors for more about this issue). Some parents said that they read the Quran to the focal child and several parents also indicated that they have their child memorize passages from the Quran.

The research team hypothesized that the books that *are* available to families, either from bookstores, libraries, or (even more so) to download, may not be of high quality. We define "high quality" as being age-appropriate (of appropriate length and language for the child's age, on an appropriate topic) and with engaging narratives and illustrations. These hypotheses were generated from inferences made from findings from interview data: when parents described the books they read or had available, they mentioned older siblings' schoolbooks, the Quran, and other books not specifically written for very young children.

We also hypothesized that there may be a challenge to children's interest in reading related to the differences between formal and colloquial Arabic. Although some children may find formal Arabic ("fusha" or Modern Standard Arabic (MSA)) more challenging, it's important for them to have access to books in MSA since academic material in school will be in MSA. At least one parent during the qualitative interviews mentioned that the dialect used in the books available to them was not appropriate for their child.

Child "stubbornness"

Many interview participants mentioned that their child was "stubborn" - sometimes related to reading behaviors, and sometimes other behaviors. The same two equivalent words were used in Arabic (تنح and عنيد) in most of these instances.

During the behavior change campaign, it may be helpful to consider how to market reading and learning behaviors specifically to parents who see their child as "too stubborn" to read or learn at home. It is important for parents to consider what they define as reading. Reading to children ages 18 months or younger does not require the parent to read the book from start to finish since many young children may lose interest. Rather, reading can involve pointing to colors and shapes, explaining the meaning of pictures, and changing his or her intonation, all of which make the activity more attractive to the child.

Technology

It is interesting to note that technology is seen as a *help* in some cases, and as a hindrance in others: 6% parents who do not typically read to their children report that they would be more likely to read to their children if they had access to a mobile phone or audiobooks, and 12% of parents who do not typically sing songs with their child would do so if they had access to electronic devices.

Stress and energy

Qualitative interviews preceding the national survey uncovered the important role stress and "peace of mind" play in parents' perception of their ability to engage in learning activities with their child. This finding was echoed in the barrier analysis where many parents who do read to/with their child reported that it is often difficult to do so because of their lack of peace of mind, lack of energy, or stress. Parents who read were 3.6 times more likely to cite stress/peace of mind as a barrier to reading compared with non-doers and doers were 1.3 times more likely to cite having adequate energy as a barrier to reading compared with non-doers. These findings are particularly interesting because parents were citing the difficulties of lack of peace of mind and energy, while still reporting that they had done the behavior. During interviews with high involvement mothers, some mothers indicated that reading with their child helps relieve their stress and forget their problems by letting them experience the excitement of childhood again.

We probed deeper into the sources of parents' stress in focus groups discussions, which were mentioned at similar levels across all levels of involvement, although the sources of stress differed for parents of different involvement levels. High involvement mothers mentioned the stresses of: balancing work with raising children, balancing master's degree studies with raising children, and financial worries about buying toys the child asks for. High involvement fathers mentioned the stress of work hours and the working environment. Middle involvement mothers mentioned the stresses of: work pressure, coronavirus, studying with older children who are not in school/preparing child for Tawjihi, no activities because of coronavirus, no

extended family nearby, husbands living away, finances/money, and focal child doesn't like to learn at home. Low involvement mothers mentioned the stresses of: husbands living away, work pressure, time, number of children, and mental fatigue. Low involvement fathers mentioned the stresses of: studying with older children who are not in school, preparing older children for Tawjihi, work pressure, finances/money, time, number of children, mental fatigue, life, and energy.

Time

Non-doers who did not report having read to their child in the past three days were 2.3 times more likely to say that reading to their child is difficult because it takes time away from their other duties compared with doers. In contrast, parents who had read to their child in the past three days (doers) were 2.1 times more likely compared with non-doers to report that reading to their child was easy because they have time in the day to do so and they were three times more likely to say that the time they spend reading together is quality time. Homemakers and employed parents who did not report reading to their child in the past three days were approximately equally likely to report that they do not have time to do so as a barrier to them reading: 34.1% of all non-doers who had a job reported not having time to read to their child; 31.5% of all non-doers who were homemakers reported not having time to read to their child.

Table 31

Percent of parents mentioning variables associated with having time as barriers or drivers to reading behaviors by doer/non-doer status and household size

		Number of individuals in the household						
		3	***4***	***5***	***6***	***7***	***8***	***9***
Doers	***What helps you read?***							
	I have some time in the day to read to my child	59.1	64.2	59.3	6.5	40.2	17.4	41.9
	What makes reading difficult?							
	My other children tend to interrupt or want attention	0	15	1.2	1.5	23.2	0	78.6
	Finding time to read with my child	34.6	69.3	83.3	58	31.3	33.4	57.8
	Being preoccupied with other housework	1.7	23.2	56.7	71.1	72.7	15.9	76.9
Non-doers	***What would help you to read?***							
	If I had more time to read with my child	44.1	34.3	30.7	33.9	22.4	28.0	23.8
	What would make reading difficult?							
	My other children would interrupt or want attention	0	3.2	6.7	7.4	12.8	5.5	35.8
	Finding time to read with my child	22.5	31.1	29.5	32.2	35	35.8	29.8

	Being preoccupied with other housework	6.5	13.8	25.8	15.5	9.6	18.4	5.8

Calming the child

During the reading questions, parents were asked what makes it easier to engage in the activity. Parents that fell in the doer status were 2 times more likely than non-doers to indicate that reading calms their child down.

Value of education and educational opportunities

Evidence from this study and prior studies shows that parents in Jordan value education. When asked what parents hope for most for the child's future, 81.7% of parents mentioned that they wish for their child to be smart and/or get a good education. Results from the barrier analysis support this and further suggest that a belief in the educational value of certain behaviors is a motivator, at least for parents who already engage in learning activities with their children. For example, parents who reported having read to their child in the past three days are 2.8 times more likely to note that they find reading to their child easy because they know that reading will benefit their child in the future.

Counting

Only 14.1% of all parents surveyed reported counting with the focal child in the past three days. In a focus group discussion, one middle involvement mother described how she counted with her child: "*I like to count with her and try to count from one to ten or more. When I'm in the kitchen, she comes and starts counting the vegetables, and I like her to count with me how many are these, or what is this.*"

Connections between counting and later achievement

The factor that makes counting or doing math-related activities with the focal child easier for doers, stated at the highest rate compared with non-doers, is knowing that it will help the focal child become good at math (in the future). The second factor with the highest rate of being mentioned by doers compared with non-doers is having experiences from their older children when they were young helps them count with the focal child. This indicates that not only do parents know that using counting or math activities will help, but for some parents with older children, they may have seen the impact of their behavior on the child's later achievement.

Talking

18.6% of all parents surveyed reported talking with their focal child in the past three days and 21.2% of parents reported that talking with their child was part of a typical day.

Time

Parents who reported talking to their child were also 1.4 times more likely to cite having sufficient time to do so as a driver of their behavior compared with parents who did not report talking to their child. When 'sufficient time' was analyzed by the gender of the parent, there were no major differences in their reports on this.

Boosting child's self-confidence

Some parents listed 'boosting a child's self-confidence' as a positive consequence of talking. Doers were 1.7 times more likely than non-doers to state this as a positive consequence.

Value of education and educational opportunities

As mentioned above, evidence from this study and prior studies shows that parents in Jordan value education and results from the barrier analysis support this and further suggest that a belief in the educational value of certain behaviors is a motivator. Parents who mentioned "talking to their child about different things" were 1.1 to 1.7 times more likely to see positive consequences from talking with their child compared with parents who did not report talking to their child over the past three days. These positive consequences included the child learning new words and the child becoming more creative, happier, and self-confident.

During the behavior change campaign, it should be reiterated to parents that talking can lead to happiness for not only the child, but also the parent who witnesses his or her child feel joy.

Stress and energy

Parents who talked to their child in the past three days were 1.3 times more likely to cite peace of mind/lack of stress as an enabler of their behavior compared with parents who did not report talking to their child in the past three days.

Further research would be useful to find out how parents overcome these difficulties and why they seem more salient for parents who are doers. During the behavior change campaign, it will also be important to make it easier for parents to engage with their children, finding ways to reduce their stress and improve their peace of mind. In relation to anxiety about their child's success in school, providing parents with specific age-appropriate advice on how to prepare children for success might relieve some of their anxiety. However, parents should be cautioned that these benchmarks are averages and meeting the benchmarks a little earlier or later is not important.

Singing

14.9% of parents on the survey reported singing with their focal child within the past three days, and no parents reported singing as part of a typical day.

Calming the child

Parents were asked what makes it easier to sing to their children. Doers were also 5.1 times more likely than non-doers to mention that singing calms their child down (39% of doers mentioned this response compared to only 6% of non-doers).

Time

Parents who reported singing with their child were also 2.1 times more likely to cite having sufficient time to do so as a driver of their behavior compared with parents who did not report singing with their child. At the same time though, parents who fell in the doer category were 2 times more likely than non-doers to state that they have to support their other children in their studies, leaving little time for singing.

Boosting child's self-confidence

Some parents who did not report engaging in the activity in the last three days listed 'boosting a child's self-confidence' as a positive consequence of singing. Non-doers were 1.3 more likely to cite this response as a positive consequence.

Playing

By far, the learning activity that was most frequently mentioned by parents was playing with their child. 61% of parents surveyed reported playing with their child within the past three days and 51.1% said that playing together was part of a typical day.

Technology

Insights from the qualitative interviews suggest that some parents reported that they are unable to engage their child in learning activities like play because they can't "keep them away from the use of social media and the internet," something that was more common among children ages 2 and older. Other insights indicate that some parents find it difficult to pry their children away from the internet and social media, making it clear that the internet and social media can serve as a barrier for children engaging in activities such as reading or interactive play. At the same time, however, other parents reported using technology like YouTube videos and tablet/mobile games as learning tools. It is clear that technology can be perceived as both an asset and a barrier to parental involvement, depending on the child, the parent, and the circumstances.

Boosting child's self-confidence

Some parents who did not report engaging in the activity in the last three days listed 'boosting a child's self-confidence' as a positive consequence of playing. Non-doers were 1.2 times more likely to give this response as a positive consequence than doers.

Positive deviants

In addition to generally identifying trends to explain the variation in involvement scores, the research team also attempted to describe "positive deviants" (Pascale, Sternin & Sternin, 2010). These positive deviants are individuals with mid- or high involvement composite scores that we would have expected to be low involvement given their socio-demographic characteristics.

To identify positive deviant fathers, we selected men who identified with the following characteristics: male, aged 33-44, residing in urban areas in either the North or Central regions, and either had completed their secondary certificate (Tawjihi) or lower in school or had a household item composite score in the lowest two quartiles (six items or fewer). These characteristics are associated with lower involvement fathers and we call them "low-expected fathers." Fathers that meet the above criteria comprised 14.9% of the total sample. 21.3% of the low-expected fathers were low involvement and 9.1% were high involvement (69.6% were mid involvement but were not used for the positive deviant analysis).

To identify positive deviant mothers, we selected women who identified with the following characteristics: residing in the Northern region, and either residing in a rural area or not employed.[13] All of these characteristics are associated with lower involvement mothers and we call them "low-expected mothers." Mothers that meet the above criteria represented 14.4% of the total sample. 12.5% of the low-expected mothers were low involvement, 84.2% were mid involvement, and 3.2% were high involvement.

We then looked at mothers and fathers with the socio-demographic characteristics associated with being low involvement parents and looked for mid or high involvement parents. Within those, high involvement parents with socio-demographic characteristics associated with low involvement were explored to see if any of the key determinants of behavior suggested by the barrier analysis might explain the higher-than-expected involvement.

[13] Because almost all mothers were not employed, most low involvement mothers were unemployed. While employed mothers were proportionally more likely to be lower involvement, we chose low involvement mothers here to increase the sample of "low expected" mothers so that we could find positive deviants.

Positive deviant mothers

Among low-expected mothers who were doers for the following behaviors and were actually *mid* or *high* involvement:

- Low-expected middle involvement singing doers: 50.8% reported believing that singing calms their child down.
- Low-expected high involvement playing doers: 100% reported believing that their spouse approves of them playing with their child. In addition, 86.4% of middle involvement playing doers reported believing that their spouse approves of them playing with their child.
- Low-expected high involvement counting doers: 92.7% reported believing that counting will help their child become good at math. In addition, 100% of low-expected high involvement counting doers reported believing that a positive consequence of counting with their child is that it will help their child's math skills improve.

This evidence suggests that some of the messages that might help mothers who might be low involvement become higher involvement (either middle or high) could include that singing is a great way to calm their child down, that their spouse could support them in engaging children in educational activities, and messaging that links counting together with later math success for children.

Positive deviant fathers

Among low-expected fathers who were doers for the following behaviors and were actually *high* involvement the results were very similar as they were for mothers:

- Low-expected high involvement reading doers: 100% reported believing that reading was a good way to spend time with their child.
- Low-expected high involvement singing doers: 71.8% reported believing that singing helps their child release energy.
- Low-expected high involvement playing doers: 83.8% reported believing that their spouse approves of them playing with their child.
- Low-expected high involvement counting doers: 79.7% reported believing that a benefit of counting is that it will help their child's math skills improve.

This evidence suggests that similar messages may help low-involvement fathers as well as mothers become higher involvement (either mid or high). These messages could include that reading is a good way to spend quality time together with their child, that singing is a great way to release energy, that their spouse will like it that if they play with their child (or the message could be targeting spouses, such as "Make sure to tell your husband that you appreciate it when he plays with your children."), and messaging that links counting together with later math success for children.

Research Question 7: What issues (e.g., information parents need to be aware of or behaviors that need to be changed or reinforced) should be targeted in parenting campaigns?

Beyond descriptive analyses of how parents differ according to both socio-demographic and behavioral/attitudinal characteristics through the involvement composite, the research team developed several models combining both types of determinants to explain the variation in parents' involvement composite values so that they may be considered for targeted parenting campaigns. In other words, controlling for socio-demographic factors, the research team sought to answer: *What are the most influential determinants of greater involvement of mothers and fathers in their young children's readiness to learn skills?* The models listed below tell the story of various determinants, both fixed and malleable, of parental involvement and suggest avenues for impacting involvement levels in Phase 2 of this research project.[14]

Socio-demographic factors

First, we examined the amount of the variation in involvement composite scores that was attributable to socio-demographic characteristics (see table below) which would not be affected by a behavior change campaign. We found that these socio-demographic factors accounted for approximately 17% of the variation in involvement composite scores. It is interesting to note that, controlling for all of these other socio-demographic factors, the only significant demographic predictors are gender of the parent, region, family wealth (measured with the household income composite), and being high income (compared with low income).

Table 32

Association between involvement composite score and socio-demographic factors

Effect	*β*	*SE*	*F*
Intercept	0.83	1.54	17.49
Mother/female respondent	1.19*	0.35	11.28
Parent age at birth of first child	0.01	0.04	0.10
Total number of children	0.10	0.13	0.63
Nationality	0.28	0.56	0.25
Urban	0.02	0.43	0.002
Central region	1.88*	0.51	13.71
Southern region	2.91*	1.01	8.37

[14] Prior to running any of the models below, we confirmed that there was no collinearity between the variables included (VIF<4).

Household item composite	0.19*	0.08	5.64
Middle income bracket	-0.45	0.38	1.46
High income bracket	1.81*	0.90	4.06
Female focal child	-0.40	0.36	1.21
Focal child age (3 & 4 years old)	0.30	0.42	0.52
Focal child age (5 & up)	0.51	0.34	2.21
Adjusted R^2	0.17		

** $p < 0.05$*

The associations between these socio-demographic factors and involvement varied according to the gender of the parent. In general, the characteristics accounted for more of the variation in involvement composite scores for mothers (17%) than for fathers (11%).

Parents' hopes for their child's future

A potential driver of parent involvement behavior could be parents' hopes for their child's future. The research team examined associations between parent involvement scores and three of the most commonly-named responses to the question, "There are many different things that parents want in life for their children. What are the key things you desire most in life for focal child?": career success, a good education/be smart, be a good person or have a strong character (controlling for nine of socio-demographic factors from the previous model[15]). Only parents' reporting that they hope that their child will "be a good person or have a strong character" makes a meaningful statistically significant contribution to the variation in involvement composite scores beyond the socio-demographic factors. In fact, parents reporting that they hope their child has a good career or does well in school/is smart has a *negative* association with involvement scores, meaning parents who hold this belief, on average, have a lower involvement score. This evidence suggests that parents' hopes for their child's futures may only be a small factor in driving parents' early learning behavior.

[15] Urbanicity was excluded since it was not a significant predictor in any of these models.

Table 33

Association between involvement composite score and hopes for focal child's future

	Model 1 Career success			***Model 2 School success***			***Model 3 Good person***		
Effect	***B***	***SE***	***F***	***B***	***SE***	***F***	***B***	***SE***	***F***
Intercept	0.94	1.47	19.06	1.09	1.51	17.40	0.79	1.49	20.37
Mother/female respondent	1.16*	0.33	12.46	1.20*	0.36	11.13	1.18*	0.36	10.62
Parent age at birth of first child	0.01	0.04	0.08	0.01	0.05	0.08	0.01	0.04	0.10
Total number of children	0.09	0.13	0.56	0.11	0.13	0.67	0.10	0.13	0.58
Nationality	0.26	0.58	0.21	0.34	0.56	0.36	0.33	0.54	0.38
Central region	1.90*	0.50	14.41	1.89*	0.52	13.24	1.83*	0.49	14.23
Southern region	2.96*	1.01	8.49	2.94*	1.01	8.43	2.88*	0.97	8.78
Household item composite	0.20*	0.08	6.07	0.20*	0.08	5.80	0.19*	0.08	6.07
Middle income bracket	-0.46	0.37	1.59	-0.42	0.37	1.31	-0.47	0.38	1.57
High income bracket	1.77*	0.89	4.01	1.84*	0.87	4.44	1.75	0.93	3.56
Girl focal child	-0.40	0.36	1.24	-0.39	0.36	1.16	-0.40	0.36	1.26
Focal child age (3 & 4 years old)	0.32	0.40	0.64	0.32	0.44	0.54	0.28	0.44	0.41
Focal child age (5 & up)	0.53	0.33	2.64	0.55	0.33	2.70	0.45	0.38	1.43
Career success	-0.22	0.30	0.52						
Do well in school				-0.40	0.37	1.18			
Be a good person							1.00*	0.50	3.99
Adjusted R^2	0.17			0.17			0.18		

** p < 0.05*

We also examined whether these results differed substantially for mothers versus fathers. We found that these hopes for the future were more influential on involvement composite scores for mothers than for fathers.

Parents' knowledge of methods to teach the alphabet

The research team examined the relationship between the composite indicator score of parental involvement and parents of children aged two and older's knowledge of methods to teach the alphabet. We selected seven methods of teaching the alphabet (see table below). These seven variables are responses given to the question "Can you name some ways in which you can help focal child learn letters?" The model controlled for nine[16] socio-demographic characteristics using linear regression (see table below). Overall, the model suggested that (controlling for all other variables):

- Age at first birth and gender of the parents, total number of children, nationality, urbanicity, income, and gender of the focal child are not statistically significant predictors of involvement scores, controlling for the other variables.
- Living in the Southern regions (but not the Central) is associated with a higher involvement score compared with living in the North.
- The more household goods, the higher the involvement score.

Controlling for these socio-demographic variables, several of the methods of teaching the alphabet are significant predictors of involvement composite scores: memorization, talking about familiar words, talking about letters, demonstrating phonemes, and demonstrating graphemes. It is interesting to note that mentioned strategies of teaching the alphabet with books and by reading stories are not statistically significant predictors of parents' overall involvement scores. This model explains approximately 52% of the overall variation in the involvement composite scores, meaning that, controlling for immutable socio-demographic factors, giving parents knowledge about how to teach letters could influence parents' involvement.

[16] Age of the focal child was excluded from the models about teaching children the alphabet, math concepts, and SEL skills since these models only apply to parents of children aged 2 and older.

Table 34

Associations between involvement composite score and seven methods of teaching the alphabet controlling for nine socio-demographic characteristics

Effect	*B*	*SE*	*F*
Intercept	3.40	2.04	24.74
Mother/female respondent	-0.05	0.66	0.01
Parent age at birth of first child	-0.08	0.05	2.88
Total number of children	-0.12	0.12	1.06
Nationality	0.37	0.50	0.54
Urbanicity	0.28	0.43	0.43
Central region	0.80	0.60	1.77
Southern region	2.38*	0.91	6.87
Household item composite	0.28*	0.08	12.73
Middle income bracket	-0.75	0.48	2.44
High income bracket	-0.24	1.12	0.05
Female focal child	-0.66	0.40	2.72
Memorization	1.56*	0.44	12.75
With books	1.40	0.85	2.70
Familiar words	1.78*	0.45	15.73
Read stories	2.11	1.11	3.66
Talk about letters	2.63*	0.70	14.15
Demonstrating phonemes	2.52*	1.05	5.80
Demonstrating graphemes	2.56*	0.66	15.11
Adjusted R^2	**0.52**		

** p<0.05*

In addition, this model predicts slightly more fathers' involvement scores (59%) compared with mothers' (54%).

Parents' knowledge of methods to teach early math concepts

The research team examined the relationship between the composite indicator score of parental involvement and parents of children aged two and older's knowledge of methods to teach the math concepts. We selected five methods of teaching math concepts (see table below). These five variables are responses given to the question "Can you name some ways in which you can help focal child learn about numbers, sizes, quantities, and shapes?" The model controlled for nine[17] socio-demographic characteristics using linear regression (see table below). Overall, the model suggested that (controlling for all other variables):

- Age at first birth and gender of the parents, total number of children, nationality, urbanicity, region, income, and gender of the focal child are not statistically significant predictors of involvement scores, controlling for the other variables.
- The more household goods, the higher the involvement score.

Controlling for these socio-demographic variables, each of the methods of teaching math concepts are significant predictors of involvement composite scores, with all of the methods having similar influence on composite scores, except for talking about math problems which was the most influential. Furthermore, this model explains approximately 58% of the overall variation in the involvement composite scores, meaning that, controlling for immutable socio-demographic factors, giving parents knowledge about how to teach math concepts could influence parents' involvement.

Table 35

Associations between involvement composite score and five methods of teaching math controlling for nine socio-demographic characteristics

Effect	***β***	***SE***	***F***
Intercept	3.10	1.99	40.22
Mother/female respondent	0.23	0.51	0.20
Parent age at birth of first child	-0.07	0.04	2.60
Total number of children	-0.11	0.17	0.42
Nationality	0.50	0.78	0.41

[17] Age of the focal child was excluded from the models about teaching children the alphabet, math concepts, and SEL skills since these models only apply to parents of children aged 2 and older.

Urbanicity	-0.02	0.56	0.002
Central region	1.09	1.00	1.19
Southern region	1.43	0.94	2.29
Household item composite	0.24*	0.09	6.71
Middle income bracket	-0.58	0.56	1.10
High income bracket	-0.77	1.26	0.37
Female focal child	-0.24	0.44	0.30
Making references to math	2.07*	0.75	7.73
Using math terms	1.78*	0.64	7.66
Modeling counting	2.60*	0.75	11.97
Talking about problem solving	5.37*	1.80	8.94
Through playing	1.83*	0.43	18.64
Adjusted R^2	**0.58**		

** p<0.05*

In addition, this model predicts about the same amount of involvement scores for fathers (63%) compared with mothers' (61%).

Parents' knowledge of methods to teach socio-emotional skills

The research team examined the relationship between the composite indicator score of parental involvement and parents of children aged four and older's knowledge of methods to teach socio-emotional skills. We selected six methods of teaching socio-emotional skills (see table below). These six variables are responses given to the question "Can you name some ways in which you can help focal child manage his/her feelings?" The model controlled for nine[18] socio-demographic characteristics using linear regression with bootstrapping (see table below). Overall, the model suggested that (controlling for all other variables):

[18] Age of the focal child was excluded from the models about teaching children the alphabet, math concepts, and SEL skills since these models only apply parents of children aged 4 and older.

- Age at first birth and gender of the parents, total number of children, nationality, urbanicity, household wealth, income, and gender of the focal child are not statistically significant predictors of involvement scores, controlling for the other variables.
- Living in the Southern region (but not Central) is associated with a higher involvement score compared with living in the North.

Controlling for these socio-demographic variables, asking questions, naming feelings, empowering with choices, and asking for ideas are methods of teaching socio-emotional skills that are significant predictors of involvement composite scores. Empowering the child with choices and asking for ideas about how to help manage others emotional states are the most influential variables on involvement scores. Furthermore, this model explains approximately 43% of the overall variation in the involvement composite scores, meaning that, controlling for immutable socio-demographic factors, giving parents knowledge about how to teach socio-emotional skills could influence parents' involvement. This finding about the importance parents place on building character and developing socially adept children echoes findings from the interviews and focus groups discussion. In addition, other analyses of the survey data also suggest that building character and social skills may be more closely associated with involvement behaviors and beliefs than some other factors.

Table 36

Associations between involvement composite score and five methods of teaching socio-emotional skills controlling for nine socio-demographic characteristics

Effect	*B*	*SE*	*F*
Intercept	4.35	2.22	14.15
Mother/female respondent	0.42	0.65	0.43
Parent age at birth of first child	-0.07	0.05	1.73
Total number of children	-0.05	0.12	0.21
Nationality	0.88	0.69	1.65
Urbanicity	-0.03	0.47	0.004
Central region	0.85	0.81	1.11
Southern region	2.55*	1.06	5.76
Household item composite	0.11	0.12	0.96
Middle income bracket	-0.92	0.68	1.85

High income bracket	0.07	1.00	0.01
Female focal child	-0.03	0.54	0.003
Asking questions	1.64*	0.60	7.52
Naming feelings	2.05*	0.70	8.52
Empowering with choices	2.76*	1.06	6.84
Modeling	1.12	0.90	1.55
Asking for ideas	2.68*	0.99	7.34
Taking a deep breath	1.49	1.08	1.91
Adjusted R^2	**0.43**		

** p<0.05*

This model predicts slightly more of mothers' involvement scores (49%) compared with fathers' (42%). This suggests that messaging with methods to teach socio-emotional skills to parents, especially mothers, may help increase their overall involvement.

Drivers of reading behaviors

The above models explain variation in involvement scores for older children (ages 2-6 or 4-6). The following models include all focal child age groups (including parents of children aged birth to two) who *do* report engaging in certain early learning behaviors: reading, talking, singing, playing, or counting/talking about math with their child within the past three days.

This first model tests associations between a selection of the factors that parents who reported reading to their child within the past few days (doers) mentioned at much higher rates than those who did not report reading to their child (non-doers) (see table for the variables). The significant variables in this model, controlling for ten sociodemographic factors (see table), appeared to be the belief that reading is a great opportunity to spend time with the child, the belief that reading is difficult because the parent is preoccupied with other housework, and the belief that their friends would approve of them reading to their child. Interestingly, some of the factors listed as barriers to reading behavior were associated with higher involvement scores, including the feeling that reading to the child was difficult (because the parent is preoccupied with other housework and a potential negative consequence of reading could be that the child become too imaginative), however these factors are not statistically significant predictors of parents' involvement scores. In addition, believing that the parent's friends would approve of them reading to their child is influential and statistically significant, this belief is associated with *lower* involvement scores. These paradoxical results suggest that the drivers of reading

behavior are complex, but finding time (including time away from other housework, and knowing that reading together is a great way to spend time with the child), are likely to be important drivers of involvement behaviors.

Table 37

Associations between involvement composite score and a selection of seven drivers and barriers of reading behaviors, controlling for ten socio-demographic characteristics

Effect	*B*	*SE*	*F*
Intercept	6.08	3.79	36.69
Mother/female respondent	0.21	1.24	0.03
Parent age at birth of first child	0.02	0.12	0.03
Total number of children	-0.40	0.36	1.19
Nationality	2.35	2.09	1.26
Urbanicity	-0.88	1.62	0.29
Central region	1.39	1.62	0.74
Southern region	5.21*	1.82	8.22
Household item composite	0.05	0.36	0.02
Middle income bracket	-1.13	1.28	0.79
High income bracket	4.33	2.95	2.14
Female focal child	-1.45	0.87	2.77
Focal child aged 4-6	-0.34	1.32	0.07
Spending time with my child helps	3.53*	1.50	5.51
Child requesting to read helps	0.05	4.33	0.00
Housework makes it difficult	3.19*	1.43	5.00
Having the energy makes it difficult	3.36	2.56	1.72
My child becoming too introverted is a risk	2.08	1.85	1.27
My child becoming too imaginative is a risk	2.90	1.48	3.85
My friends approve	-9.05*	2.99	9.15

Adjusted R^2	**0.61**		

**p<0.05*

When we looked at this model separately for mothers and fathers, it was especially striking to find that this model explained 99% of the variation in involvement scores for fathers, compared with 59% of the variation for mothers. This may be due to the very low number of reading doer fathers, as well as the large number of variables included in the model. However, there is evidence that home literacy activities are highly correlated with other parent involvement activities (e.g., Alston-Abel & Beringer, 2018). The findings for mothers only were very similar to those for both mothers and fathers, possibly because two-third of all reading doers were mothers.

Drivers of talking behaviors

Talking to young children is one of the easiest but also important early learning behaviors. Children learn to talk by hearing lots of rich language, mainly from their parents and other family members. We examined the impact of the sole factor that parents who reported talking to their child within the past three days mentioned as helping them to do so at high rates (twice as often) as parents who did not report talking to their child in the past three days: Going out of the house together helps the parent to talk to the child. The model including this factor, when controlling for socio-demographic factors, explained 47% of the variation in involvement scores. Paradoxically, however, mentioning that this factor was associated with a slightly *lower* overall involvement score and it was not statistically significant. This finding is difficult to interpret, and may or may not suggest that messaging to parents that going out of their house presents a useful opportunity to talk to their child can contribute to increasing parents' levels of involvement.

Table 38

Associations between involvement composite score and one driver of talking behavior, controlling for ten socio-demographic characteristics

Effect	***B***	***SE***	***F***
Intercept	-3.22	3.15	12.32
Mother/female respondent	1.82*	0.78	5.40
Parent age at birth of first child	0.05	0.07	0.55
Total number of children	0.46	0.26	3.23
Nationality	0.38	1.37	0.08

Urbanicity	0.12	0.75	0.03
Central region	2.38*	0.79	9.16
Southern region	4.92*	1.85	7.11
Household item composite	0.59*	0.29	4.07
Middle income bracket	-0.96	1.46	0.43
High income bracket	2.69	2.44	1.21
Female focal child	0.48	0.75	0.41
Focal child aged 4-6	-0.64	0.48	1.74
Going out of the house helps us talk	-1.34	1.01	1.77
Adjusted R^2	0.47		

**p<0.05*

This model explained 55% of fathers' and 45% of mothers' involvement scores.

Drivers of singing behaviors

In addition to talking to their young child, parents may have mentioned that they sang with their young child within the past three days. As with the models above, we selected any factors that parents who reported singing with their child (doers) mentioned at rates at least three times as often as parents who did not report singing with their child (non-doers) (see table for the four factors that met that criteria). Controlling for socio-demographic factors, while this model explained only 28% of the variation in involvement scores which suggests that these factors are likely not driving overall involvement behaviors and attitudes. Furthermore, none of the drivers of singing behaviors were statistically significant predictors of involvement scores, when controlling for the socio-demographic factors. For fathers, specifically, this model explained more of the variation in involvement: 65%; indicating that these factors could play a big role in fathers' behaviors and beliefs.

Table 39

Associations between involvement composite score and a selection of four drivers and barriers of singing behaviors, controlling for ten socio-demographic characteristics

Effect	*β*	*SE*	*F*
Intercept	5.33*	2.01	13.07
Mother/female respondent	0.18	0.74	0.06
Parent age at birth of first child	-0.05	0.05	1.01
Total number of children	0.20	0.23	0.79
Nationality	-0.29	1.05	0.08
Urbanicity	-0.30	0.99	0.09
Central region	1.91*	0.88	4.70
Southern region	2.83*	1.19	5.61
Household item composite	0.04	0.20	0.05
Middle income bracket	-0.87	0.63	1.87
High income bracket	0.19	2.79	0.01
Female focal child	-1.17*	0.41	8.09
Focal child aged 4-6	1.34	0.86	2.43
It calms my child down	0.27	0.69	0.15
The songs are in another language	6.36	4.52	1.99
My child releases energy	2.09	1.11	3.55
I'm not sure of the negative consequences	-0.75	0.94	0.63
Adjusted R^2	**0.28**		

**p<0.05*

Drivers of playing behaviors

We examined the impact of the factors that parents who reported playing with their child within the past three days mentioned as helping (or hindering) them doing so at high rates (twice as often) as parents who did not report playing with their child in the past three days (see table below for the predictors). Only the last predictor, "I have difficulty finding ideas" is a significant predictor of parents' involvement scores, when controlling for socio-demographic factors. Furthermore, this model, when controlling for socio-demographic factors, explained 25% of the variation in involvement scores and overall, few of the individual factors are statistically significant influencers of involvement scores.

Table 40

Associations between involvement composite score and a selection of three drivers and barriers of playing behaviors, controlling for ten socio-demographic characteristics

Effect	*B*	*SE*	*F*
Intercept	-1.51	2.95	34.56
Mother/female respondent	1.68*	0.60	7.73
Parent age at birth of first child	0.02	0.07	0.08
Total number of children	0.18	0.17	1.09
Nationality	0.27	0.61	0.19
Urbanicity	-0.09	0.49	0.03
Central region	2.14*	0.60	12.90
Southern region	3.20*	1.05	9.36
Household item composite	0.27*	0.08	12.10
Middle income bracket	1.10	0.72	2.35
High income bracket	2.39*	1.01	5.64
Female focal child	-0.73	0.56	1.71
Focal child aged 4-6	0.87*	0.37	5.45
My spouse approves of my playing	0.32	0.61	0.28
I have difficulty finding playthings	-0.13	0.39	0.11

I have difficulty finding ideas	0.73*	0.28	6.71
Adjusted R^2	*0.25*		

**p<0.05*

This model explained somewhat more of the variation in involvement for mothers (29%) compared with for fathers (19%).

Drivers of math and counting behaviors

Only 14.1% of all parents reported having counted or taught their child numbers in the past three days (doers). The final models we ran examined the impacts of the factors that counting doers reported much more often compared with non-doers. There were ten factors that doers mentioned at higher rates than non-doers that were included in this model, including factors that help them to count/do math and positive consequences of counting/doing math (see table below for the ten factors). This model, when controlling for socio-demographic factors, explained 72% of the variation in involvement scores. The most influential factors on involvement scores of doers are having the time to count/talk about math with the child (β = 0.30) and knowing ways to learn math through play (β = 0.31).

Table 41

Associations between involvement composite score and a selection of eleven drivers and barriers of math and counting behaviors, controlling for ten socio-demographic characteristics

Effect	***β***	***SE***	***F***
Intercept	2.58	2.58	109.76
Mother/female respondent	0.64	0.72	0.79
Parent age at birth of first child	-0.10	0.09	1.20
Total number of children	0.11	0.15	0.57
Nationality	2.06*	0.84	6.00
Urbanicity	-0.14	0.59	0.06
Central region	0.10	0.81	0.02
Southern region	-0.39	0.77	0.26
Household item composite	0.32	0.19	2.68
Middle income bracket	-1.73*	0.55	9.76

High income bracket	-0.52	1.31	0.16
Female focal child	0.85*	0.43	4.00
Focal child aged 4-6	0.15	0.72	0.04
Child can count	2.34*	0.85	7.56
Having time	2.60*	0.80	10.45
Having older children	2.89*	1.08	7.11
Knowing how to teach math	0.67	1.02	0.44
Knowing it will help my child	-1.01*	0.48	4.42
Peace of mind	0.10	0.80	0.02
Having resources	1.50*	0.49	9.27
Knowing ways to learn through play	2.69*	0.51	28.33
Developing self-confidence	2.10*	0.85	6.17
Preparing child for school	1.86*	0.58	10.13
Math skills improve	0.32	0.83	0.15
Adjusted R^2	**0.72**		

*p<*0.05*

We examined this model for mothers and fathers separately. These drivers of parents' counting or talking about math with their child, controlling for socio-demographic factors, explained 87% of fathers' variation in involvement scores and 78% of mothers.'

Conclusions & Implications for Phase 2

The purpose of this research project was to establish a baseline for parental behavior and to gather insights that will inform the design of an effective program to support the development of parental behaviors that build readiness to learn abilities of their preschool-aged children.

The data from this study make clear that parents in Jordan highly value education and that for many parents their goals for their children include educational success and the benefits that come along with it, including a good career and financial stability. Almost all parents (81.1%) felt that it was the mother's responsibility to prepare the child for school entry, and more than four out of five children under the age of six in Jordan spend most of their time with their mother (88.4%). Therefore, a key implication of this study is to consider the ways to encourage mothers, who spend the most time with their children, to engage in behaviors that support readiness to learn. At the same time, fathers are also an important demographic to target since fathers are, on average, engaging in behaviors that support learning at lower rates than mothers (although there is substantial room for improvement for both mothers and fathers).

Despite valuing education, this study found that only 6.8% of 4-year-old children were enrolled in KG1 and 56.6% of 5-year-old children were enrolled in KG2. Parents of older children (aged two to six) were also asked to name some methods they could use to teach their child letters, math concepts (number, shapes, quantity, etc.), and socio-emotional skills. Parents' often cited memorizing and watching a video that teaches content as methods to teach. Fewer parents mentioned referencing numbers/shapes/quantities etc. in daily conversation (24.8%) a method of promoting early math skills that has been shown to be among the most effective (Harris & Petersen, 2017). Parents may benefit from ideas about how to incorporate math and other kinds of enriching talk into their daily interactions with their child.

Evidence from the survey and corroborated by interview data suggested that parents rely on a variety of sources of information about their child's development and other parenting-related topics. The most popular sources of information for all parents ranged from non-experts (family members and peers) to experts (doctors, specialists, and parenting experts), and informal media like social media, websites, and internet sources. While some parents mentioned specific media figures, the fact that parents typically rely on their family members (especially their spouse) or internet searches (which only 7.5% of parents found to be the most valuable source of information, may suggest that there is a need for a more trusted expert source of parenting and child development information. One recommendation from this study is to create an online platform of resources for parents vetted by a reliable source seen by parents as authoritative, such as the Ministry of Education or the Childhood Directorate.

Beyond who informed parenting behaviors and beliefs, this study sought to understand the drivers and barriers to parents' involvement, and how those drivers and barriers differed for different types of parents. The evidence suggests that most parents hope that their child will receive a good education or be smart (81.7%) and that Jordanian mothers and Syrian parents are more likely to cite education as a hope for their child's future compared with Jordanian

fathers. However, predictive modeling suggests that holding this particular belief was not necessarily a strong driver of overall involvement behaviors and beliefs.

Instead, more powerful drivers of overall involvement behaviors tended to be parents' knowledge of the methods to teach early learning material and skills to young children. Mentioning methods of teaching the alphabet including memorization; using books, familiar words, and stories; and talking about letters in everyday situations, among others, was associated with higher involvement scores and explained about 59% of fathers' and 54% of mothers' involvement scores, controlling for socio-demographic factors. Similarly, parents' mentioning of methods of teaching math concepts including making references to math in daily life, using math terms, and modeling counting, among others, was also associated with higher overall involvement beliefs and behaviors. Knowledge of methods to teach socio-emotional skills explained less of the variation in involvement scores (43%) compared with knowledge of methods to teach letters or math concepts, but could still be a useful avenue for improving involvement scores since raising a child of good character and good social skills appeared to be an important goal of parents. Furthermore, children with fewer behavioral problems tend to do better in school (Kremer, Flower, Huang, & Vaughn, 2016). Thus, parents could benefit from greater knowledge of methods to teach early learning skills, and this knowledge could drive overall involvement beliefs and behaviors.

Predictive modeling based on the results of the barrier analysis suggests some of the key logistical pressures that drive or hinder behavior and beliefs are important factors in overall parents' early learning behaviors and beliefs. Key themes include lack of time, lack of peace of mind, beliefs about age appropriateness ("My child is too young"), technology, and social approval. Regression analysis using key factors mentioned by those parents who reported doing the target behavior (reading, talking, singing, playing, or counting) suggested that the factors that drive reading behaviors are particularly important in explaining fathers' overall involvement. Specifically, knowing that reading together is a good way to spend time with the child and finding the time given housework duties are driving involvement behaviors and beliefs. Similarly, the most often cited drivers and barriers to counting/math behaviors for parents who reported counting or talking about math with their child within the past three days also seem to be driving overall involvement behaviors. In particular, giving parents more ideas about ways to learn through play and how to make time could be important in increasing overall involvement beliefs and behaviors.

Beyond knowledge of methods of teaching early learning concepts and barriers and drivers cited by parents, socio-demographic factors play a role in determining overall involvement beliefs and behaviors. In general, mothers, parents in the South and Central regions, with more household wealth, and with the highest income have higher involvement composite scores.

Implications for Phase 2

In Phase 2 of this project, the aim is to identify the language and messaging styles that resonate with parents of relevant needs and backgrounds across Jordan and that will have a positive impact on the knowledge, attitudes, and practices of parents of different backgrounds. Specific implications of this Phase 1 research are below.

Key groups to target:

- Mothers (all)
- Fathers (all)
- Jordanian mothers & fathers
- Northern mothers & fathers
- Rural mothers
- Urban fathers
- Mothers and fathers with lower average monthly income

Specific messaging for mothers:

- Reading is a good way to spend quality time together with their child.
- Singing is a great way to calm their child down.
- Their spouse could support them in engaging children in educational activities.
- Messaging that links counting together with later math success for children.

Specific messaging for fathers:

- Fathers could be encouraged to dedicate some of their free time to engage in more learning activities with their children.
- Without controlling for other variables, younger fathers tend to be the ones who were more highly involved, while older fathers tend to be the ones who are not involved. Target older fathers.
- Fathers see this effort as the responsibility of mothers. Initial interventions should make the case for father's role both as a duty and as an enjoyable way to spend time with their children.

Messaging for all parents:

- Parents should read to their children starting from the day they are born.
- Talking and singing together are great ways to develop a strong parent-child relationship, in addition to developing language skills.
- Parents lack (or want) peace of mind, so promoting reading books or singing to children as a way of calming them down and 'having peace' at home could be a powerful argument.

- Acknowledge the difficulty of freeing up time to involve young children in ECD experiences and suggest ways that the little time they may have could be used more effectively: reading a story to put a child to sleep, activities children can do with their older siblings, and activities that a parent can start a child doing but that the child can then do on their own.
- Provide specific benefits of their involvement for their children and their future.
- Provide specific ideas of how to teach letters, math concepts, and socio-emotional skills, especially through talk, everyday moments, and play.
- Highlight the personal enjoyment parents and children will feel from helping their children prepare to be successful in school and achieve life goals.
- Make explicit connections between early learning activities and better educational and overall outcomes for children.
- All groups have a wide set of sources of information. Initial interventions might use multiple channels for communication.
- Initial interventions might suggest a minimum dosage (30 minutes, three times a week, for example), convenient times to engage in these activities, and how to combine learning with activities that parents must complete, such as cooking or cleaning.
- The causes of stress are universal. Initial interventions might focus on helping parents learn to put this stress aside during the time they are helping their children prepare for school and suggesting that spending time helping their children might be a way to escape that stress, at least for the time they are engaged with their children.
- High, middle, and low involvement mothers and fathers are all more likely to report teaching letters and numbers and are coloring with their children. They are also playing with their children. Initial interventions for mothers and fathers might start with increasing the time spent in these activities and suggesting ways to make them more effective at helping their children become ready to succeed in school. Low and middle involvement fathers are both involved with engaging in phone and internet programs with their children. Initial interventions for fathers might start by using phone/internet-based platforms to spark interactions between fathers and children.
- According to focus group discussions, all parents believe that academic success is due to a combination of innate abilities and support of parents, but parents did not mention the role that parents play in developing a child's love of learning and willingness to spend time learning. There was no mention of children developing a love of and commitment to effort. Initial interventions might reinforce the role of parents in helping children achieve their full potential but also help parents support the development of their children's feelings of self-efficacy and their understanding that effort is a key component of learning. It may also be helpful to introduce the concept of growth mindset to parents so that they can learn that their children's level of effort and hard work is key to their success.
- Promoting beliefs related to the importance of parents reading, teaching the alphabet, strengthening character and boosting confidence, teaching morals and manners, and teaching math concepts prior to their child beginning formal schooling could have a meaningful impact on parents' involvement levels.

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Appendices

Appendix A: Scope of work

Scope of Work: Parental Behavior in the Early Years
Prepared by **World Education, Inc.**
February 27, 2020

Research Questions

- **RQ 1**: To what extent are parents in Jordan aware of best practices with regard to their role in ensuring their children are ready to learn?
- **RQ 2**: How do parents in Jordan gain knowledge about best practices with regard to their role in ensuring their children are ready to learn (e.g., through what channels, such as personal, social, mass media...)?
- **RQ 3**: What are the barriers of parenting behaviors linked to readiness to learn?
- **RQ 4**: What are the drivers of parenting behaviors linked to readiness to learn?
- **RQ 5**: How do the barriers to parenting behaviors vary across different types of parents (e.g. social, economic, demographic behavioral and other differences)?
- **RQ 6**: How do the drivers of parenting behaviors vary across different types of parents (e.g. social, economic, demographic behavioral and other differences)?
- **RQ 7**: What issues (e.g., information parents need to be aware of or behaviors that need to be changed or reinforced) should be targeted in campaigns aimed at parents?

Hypotheses

Prior international research and information from in-context stakeholders suggest that parents' behaviors will be impacted by the size of the family, the perception of the relative importance of schooling and learning in later childhood compared to early childhood, the important role of extended family and peers, and traditional beliefs about the roles of children, fathers, mothers, and other members of the family.

Larger families, where parent attention is spread more thinly across children and where older siblings may be responsible for much of the care of younger siblings, may be less likely to engage in behaviors that promote early learning. Evidence suggests that parents in Jordan care deeply about their children's educational success, but that they may believe that supporting children's learning in secondary school is more important than supporting learning in the early years. In addition, extended family - grandparents in particular, who play an important role in childcare and who may be less likely to be aware of the importance of early childhood learning - along with peer parents (fellow mothers especially) may prove to be important agents in modeling, promoting, or hindering certain types of parenting behaviors. Traditional beliefs and expectations, including about the role of fathers as breadwinners, mothers as hostesses, and

rules governing children's behavior may affect parents' willingness to promote and engage in play-based activities with their children.

Methods

Desk Research

The first step in answering the research questions is to conduct desk research to build a common understanding among the members of the research team and its partners regarding (1) international research on parental beliefs, the relationship between parental beliefs and parental behaviors/activities, and best practices for promoting readiness to learn; (2) existing Jordanian research on parental beliefs and behaviors related to readiness to learn, including the results from the National ECD Survey and other instruments, reports, and research-based literature.

Limitations

All efforts have been made to ensure that this research project uses the most rigorous methods to answer the research questions. However, as with all research, there are potential limitations. First, few studies have been conducted on topics related to parenting behaviors in Jordan. This study has relied upon international research as well as research from the MENA region to inform its design and methods, and to provide hypotheses in response to the research questions.

In light of the challenge of limited prior research in Jordan, the goal of this research is to provide a thorough picture of parenting behavior, its drivers and barriers, and the variation across different groups of parents in Jordan. As such, this study will use a national sample that aims to be representative of the population of Jordan across several characteristics. However, a truly representative sample across all characteristics is not possible, and more than one study will be necessary to fill in the missing pieces and provide a complete picture of parenting behaviors in Jordan.

The primary data collection used for this study will be a survey administered face-to-face by an enumerator in addition to a self-reported section direct from the respondent. This method of data collection is considered very reliable, but there are still potential limitations. It is possible that the enumerator may make errors in recording responses from the research participants. In addition, participants may be hesitant to respond honestly to some sensitive questions about their income or questions that may have perceived social desirability for certain response types particularly around the topic of discipline (hitting his or her child). In addition to these limitations, survey research about beliefs and behaviors are likely impacted by respondents' tendency to acquiesce since acquiescence bias is well-documented as a common phenomenon

in social science research. Below, the research team elaborates on the necessary measures it will take to manage the mentioned limitations.

Research and questionnaire design

The overall design of this study and observation, interview and survey tool development have taken the limitations into account. First, the research team has been careful to word questions in such a way that will yield the most accurate, useful responses and will avoid any type of measurement error or bias. Next, the team will maintain alignment across all data collection tools and will utilize appropriate scales to increase accuracy and reduce social desirability and acquiescence bias. In addition, the team will also use forgiving wording in interview and survey items.

Interviews

Following the desk review of literature and in order to inform the survey, interviews will be conducted with a subsample of parents in Jordan. In the interest of time and to use limited resources most effectively, the subsample will include only a predetermined set of 30 "prototypical" households that will help the research team gain insight into the variety of parenting behaviors in Jordan. Since the research team will not be able to conduct these interviews personally, the interviews will be structured and feature a combination of semi open-ended and closed-ended questions (for some initial sample questions, please see Appendix A).

Sample

- Total of 30 interviews lasting approximately 50 minutes
- 5-6 households in each governorate (mother or father in each household)
- 5-6 governorates in total
- The profile of each of the interview participants will be chosen in consultation with the QRF staff. For example, one rural Jordanian mother from Ma'an; one Syrian father from Amman.

Note that this sample does not have to be nationally representative since the purpose is to learn more about the household context, test appropriate question items for the survey, and elicit information that can help the research team create more targeted questions or issues for the survey questionnaire design.

Data collection

Interviews will take place in the subject's home.[19] Enumerators will be given a structured interview guide and will handwrite or type the subject's responses, and the interviews will also be recorded. The responses will then be translated to English.

Data analysis

The English translations of the interview responses will be analyzed using thematic analysis as well as coded to identify common features among participants. For example, answers to "who cares for your children during the day?" and "how do you spend your time at home with your child?" will be coded to assess the range of daytime caregivers for children in Jordan, as well as the frequency of each type of caregiver in the sample. The results of this analysis will be used to inform the development of the survey instrument.

Observations[20]

On the same day as the interview, ideally before the interview takes place, the enumerator will observe the home environment. In addition, to better understand how parental beliefs and parents' self-reporting relate to parenting behaviors, the observation will target parents' naturalistic interactions with the target child in the home over a period of one hours.

Sample

- Total of 30 observations lasting approximately 60 minutes
- Using the same sample as for the interviews
- One target child within the 0-5 age range will be selected for particular focus

Note that this sample does not have to be nationally representative since the purpose is to learn more about the household context, test appropriate question items for the survey, and elicit information that can help the research team create more targeted questions or issues for the survey questionnaire design.

Data collection

Data collectors will note how and in what context parents interact with their child, including speaking to the child, listening to the child speak, engaging in play-based activities, engaging in other kinds of learning activities, and engaging in non-learning focused activities (such as cooking, cleaning, or other household chores). The enumerator will also note the presence or absence of learning materials in the home, including toys and books.

[19] Due to COVID-19 lockdowns and safety measures, interviews were later conducted virtually.
[20] Due to COVID-19 lockdowns and safety measures, the observations were later cancelled.

The observation instrument will be adapted from existing validated instruments, such as the Home Observation for Measurement of the Environment (HOME) Short Form instrument, a widely used tool (including in several MENA countries) for determining if the home environment is suitable for the child's developmental stage. The enumerator will collect notes by hand or by tablet, which will then be translated to English for analysis.

Data analysis

Like the interview responses, the English translations of the observation notes will be analyzed using thematic analysis as well as coded for common features among participants. The results of this analysis will be used to inform the development of the survey instrument.

Survey

The primary data collection method for answering this study's research questions will be a survey of a nationally representative sample of parents in Jordan. The survey will include items that allow parents to rate the importance of various best practices of parents and caregivers engaged in their children's learning, as well as various demographic questions including: region, nationality, socio-economic status, education level, family composition, participation in existing parenting programs, and more.

Sample

See Appendix D: Sampling Frame

Data collection

The surveys will be administered by enumerators on tablets or by hand. Digital data collection is preferred in order to avoid data entry errors.

Data analysis

There will be several stages of data analysis after data validation and after the coding scheme is specified.

Stage 1: There will be complete and thorough descriptive data analysis (averages, frequencies, distributions, etc.) to understand how parents answer each of the questions in the survey. These results will give preliminary findings for us to compare with our hypotheses and establish benchmarks at the national level. The results will also inform the next analysis steps including composite indicators development.

Stage 2: By examining the preliminary results, we will determine if multiple composite indicators should be developed against those pre-determined domains in the survey questionnaire. If the relevant variables show reasonable distributions (normal distribution for

continuous variables or balanced frequencies for categorical variables), we may conduct a domain-specific reliability test for building composite indicators of those domains. Successful ones will be kept for further analysis and interpretation on key findings of the current status of parental behaviors in Jordan.

Stage 3: We will conduct bi-variate analysis to examine regional differences, gender differences, differences by types of households (such as SES), number of children, age cohorts of children, nationality, etc. in parental behavior measures. This type of analysis should let us understand in depth how parental behavior differs across "non-actionable" variables. Although these variables cannot be changed, they may also help us target specific regions, genders or types of parents for interventions in the future. If necessary, we may also build another round of explanatory models (higher order analysis) based on these findings.

Stage 4: By this stage, we should be able to design and run key explanatory models to explain why variations in knowledge, attitudes and behavior when interacting with children differ. For example, do they differ because of education levels, living standards, certain learning or training source, and so on. Not only do we need to find out which factors may explain the variation in the predetermined domains but also we will find how much or what magnitude the explanatory models could help explain. This potentially may help determine a design of further research and more advanced inquiries.

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Appendix B: Literature review

Introduction

The early childhood period is particularly important for brain development, setting patterns for healthy behaviors that contribute to physical, emotional, and cognitive growth and for preparing children for school. Parents and other adult caregivers play a vital role in ensuring that young children, from the day they are born, reach their potential. QRF's 2015 National ECD Survey found that 80% of mothers believed that the role of formal pre-school is more important than the role of education at home, and 50% believed that parental care at home has a limited impact on a child's learning outcomes. Furthermore, the survey found that parents were not aware of the positive impact of reading to children, having children's books in the home, or playing for learning.

This literature review is focused on the impact of parental behaviors on their children's *readiness to learn.* The review drew on international research on what is known about the importance of parental behaviors, how these behaviors are related to parental beliefs, and the knowledge and best practices that support readiness to learn. The review will also summarize what is currently known about parental behaviors and readiness to learn in Jordan and identify some of the institutions that are working in this field in Jordan.

What is readiness to learn?

Readiness to learn is a term that defines how prepared a child is to be successful when they first enter formal school. A child is ready to learn when he or she has the physical, cognitive, socio-emotional, and behavioral competencies needed to learn at a developmentally appropriate level (Al-Hassan & Landsford, 2009). A child's *readiness to learn* is therefore developed through the interplay between their biology, their environment, and their relationships. In early childhood, the most important relationships are the relationships within the family, and especially between the parents and child (Pianta, 2002). To be ready to learn, children must have experienced safety, adequate nutrition and healthcare, a loving environment, and enriching interactions with their parents and other caregivers from their earliest years of life. This literature focuses on those aspects of readiness to learn that involve cognitive development and stimulation from parents and other caregivers. Enriching play-based interactions with parents and other caregivers have the power to prepare children to succeed in school and later in adulthood. When parents engage in play-based activities and behaviors that promote emergent literacy and language skills (Snow, Burns, & Griffin, 1998), help build socio-emotional skills (Lane, Stanton-Chapman, Jamison, & Phillips, 2007), and develop executive function skills (Fuhs, Nesbitt, & Farran, 2014), they help their children adapt to the classroom environment and succeed at all learning activities.

Children are ready to learn when they have had ample opportunities for play and developed strong socio-emotional skills, executive function and critical thinking skills, emergent literacy

and numeracy skills, and effective approaches to learning. While all of these skills and attitudes are important for school readiness, research suggests that some skills have a larger impact on later learning than others.

A meta-analysis of six studies on school readiness found that math skills at school entry, followed by reading skills and then attention skills (a component of executive function) are the strongest predictors of later achievement. Socio-emotional skills were found to be insignificant predictors of school success later in life (Duncan et al., 2007). This research from the United States suggests that promoting emergent numeracy, literacy, and executive function skills should be the priority to ensure readiness to learn. In the following sections, this review will discuss the research on the importance of these aspects of readiness to learn. Although *readiness to learn* is important, it cannot ensure children's academic success if *schools* are not ready to meet their student's needs (Emig, 1990). The readiness of schools to deliver effective instruction is outside the scope of this research review.

Emergent literacy

Emergent literacy comprises five skill areas: print awareness, phonological awareness, knowledge of the alphabet, book sense, and oral language development. By the time children are three to four years old, most will have acquired the fundamental elements of their mother tongue (Berko Gleason, 2005). When children engage in activities that develop emergent literacy skills from infancy, they begin formal schooling with the building blocks of a strong foundation for future language and literacy learning in that mother tongue.

Research supports an association between the development of early language skills and later academic success (Fernald & Weisleder, 2011; Snow & Van Hemel, 2008), as well as the role of caregivers in promoting language and literacy development, especially through play (Hart & Risley, 2003; Hoff, 2003; NICHD Early Child Care Research Network (ECCRN), 2003). From infancy, children engage in behaviors with communicative intents: long before children say their first word, they communicate by making eye contact, vocalizing/crying, and pointing (Sachs, 2005). Efforts to promote readiness to learn should include many opportunities for children to develop their emergent literacy skills, including through engaging in shared book reading, being exposed to large quantities and a broad variety of words, and being given opportunities to be active conversational partners with their peers and with adult caregivers.

Emergent numeracy & mathematics

Emergent numeracy is concerned with the earliest phases of development of mathematical and spatial concepts, including number concepts and logo-mathematical (the symbols employed in mathematics) concepts (Van Tuijl, Leseman, & Rispens, 2001) and comprises six skills areas: (1) number sense, (2) knowledge of shapes, (3) sorting and classification, (4) patterns and seriation, (5) concepts of time, and (6) problem solving. As noted above, early math skills are the strongest predictor of later academic success. A challenge with promoting the development of emergent numeracy is the entrenched belief that math skills are best learned through formal

schooling, rather than in everyday life and starting from birth. However, emergent numeracy should be viewed as part of a process that begins in infancy, rather than a period of acquisition of particular skills (Sarama & Clements, 2009). Parents can promote the development of emergent numeracy skills by, for example, pointing out shapes in the environment, counting and discussing quantities with their child, and using mathematical terms in everyday situations (e.g., fewer/more; full/empty; half/whole).

Executive function

Executive function (EF) skills include higher order cognitive processes -- such as working memory (immediate short-term memory), inhibitory control (ability to focus on learning), and attention flexibility (ability to quickly move attention from one task to another) -- that are important for early academic skills development. These skills are important because they aid children in adapting to a classroom environment and prepare them to focus on and retain information long enough to be able to learn. Parents play a key role in both modeling EF skills and providing opportunities for young children to practice and develop their own EF skills. Parents model EF when they establish routines, model social behavior, and create and maintain supportive, reliable relationships (Center on the Developing Child, 2019).

Approaches to learning

Children who are ready to begin schooling hold particular approaches to learning -- they are curious, persistent, and enthusiastic about learning (Emig, 1990; UNICEF, 2012). Recent research highlights the importance of holding a growth mindset, the belief that abilities and intelligence are not innate but are developed through hard work, persistence, and encouragement. A growth mindset is also referred to as an incremental theory of intelligence. The concept of growth mindset has gained prominence for its impact on the academic success of learners (Dweck, 1986), particularly students who are at-risk of failure (Claro, Paunesku, & Dweck, 2016; O'Brien, Fielding-Wells, Makar, & Hillman, 2015; Saunders, 2013; Yeager et al., 2016). For example, Claro, Paunesku, and Dweck (2016) found that Chilean students' mindset accounted for approximately 12% of the variance in their math and language achievement. Parents and teachers, therefore, have an important role to play in developing children's growth mindset and should be aware of how they communicate feedback on children's skills or abilities during developmental tasks or activities, including encouraging effort, encouraging taking on new challenges, congratulating for effort regardless of the final result, avoiding criticisms that suggest an inability to progress, etc. Students who believe that their intelligence is malleable are more likely to embrace challenging learning situations than students who believe that their intelligence is innate (O'Brien, Makar, Fielding-Wells, & Hillman, 2015), suggesting that children be praised for their effort by teachers and parents rather than innate intelligence.

Socio-emotional skills

Children who are ready to learn also have begun developing strong socio-emotional skills, including the ability to initiate and continue positive social relations with others through communication, self-direction, and empathy, which are all skills that can be developed through

supportive child-adult exchanges and interactive play. Children who have strong socio-emotional skills are more empathetic, are less likely to exhibit problem behaviors, and are more likely to succeed in school (Christopher, Saunders, Jacobvitz, Burton, & Hazen, 2013). For example, Durlak et al. (2011) found that children with improved empathy, stress management, and other social-emotional skills had fewer conduct problems, reduced emotional distress, and improved academic performance (including higher grades and test scores). In addition, research indicates that children from low-income backgrounds profit at least as much and often more from socio-emotional learning and growth programs than others (O'Conner, De Feyter, Carr, Luo, & Romm, 2017). In sum, children with strong socio-emotional skills are able to participate in the classroom environment respectfully and constructively and parents and other caregivers can support the development of these skills by promoting and modeling empathy, giving children opportunities to develop healthy peer relationships, and by discussing and modeling emotional regulation.

Play

While play is not a readiness to learn skill, all efforts to promote readiness to learn should incorporate play. Play-based learning activities have been shown to be more effective at building readiness skills than more didactic drill-and-practice activities (Duncan et al., 2007). All efforts to support parents' behaviors related to readiness to learn should emphasize the learning opportunities involved in playful interactions with their children.

Parental beliefs and behaviors

Bornstein theorizes that parenting beliefs affect parenting practices, which in turn affect child outcomes (Bornstein & Cheah, 2006). Furthermore, Holden (2010) suggests that "the single most important mediator of parenting [behaviors] are beliefs" (p. 129). According to McGillicuddy, De Lisi and Subramanian (1996), parental beliefs about children and child development are developed through three means: (1) beliefs come directly (and unquestioned) through the culture; (2) beliefs are formed through the holder's own childhood, family, and parenting experiences; and (3) beliefs are influenced by the exchange of ideas and assumptions of people from different cultures. The literature provides no consensus about which beliefs matter, how to measure them, and the exact relationship between beliefs and behaviors (Sigel, 1992). In addition, some studies have questioned the correlation between parental knowledge and beliefs and actions (e.g., Holden & Edwards, 1989) and have doubted whether parental beliefs are a stable construct (Bloomstra, van Dijk, Jorna, & van Geert, 2013). Yet other research has demonstrated the ways in which parental beliefs can impact their behaviors as well as child outcomes (Bornstein & Cheah, 2006; Grusec, Rudy, & Martini, 1997; Rowe & Casillas, 2010). Yet, there is also evidence that certain beliefs affect child outcomes, but they are likely mediated through parental behaviors (see below).

Beliefs about the parents' role in early learning

Parents who see their role as including encouragement of their child's academic success and being an educator for their child (the concept of "parent as teacher") tend to raise children who do better in school (Durand, 2011; Sime & Sheridan, 2014). Similarly, parents who hold high academic expectations for their children's abilities (determined by how far they believe their child will go in school and what kinds of grades they expect their child to get in school) tend to be more involved in their children's education (Loughlin-Presnal, & Bierman 2017a), and their children tend to have higher early literacy skills (Loughlin-Presnal, & Bierman 2017b). Another study found that parents who held positive beliefs about math (including the importance of math, their own enjoyment of math, and their feelings of competence with math skills) were more likely to engage in math activities in the home and their preschool-aged children were more likely to also hold positive beliefs about math (Missall, Hojnoski, Caskie, & Repasky, 2015). This is important, because parents' math practices (such as engaging in math activities in the home) are related to children's math outcomes. For example, parents who talk with their children more about numbers and quantities have children with better early numeracy skills (Levine et al., 2010).

Beliefs about child-directed speech and oral language development

Numerous studies examine the role that cultural beliefs play in parents' child-directed speech. For example, one study comparing Chinese and Western (Canadian or European) families found that beliefs about learning and instruction affected parents' child-directed speech and their treatment of their child as an equal conversational partner. Specifically, Chinese parents in the sample were more likely to believe that children learn best through direct instruction compared with Western mothers, and as a result the Chinese parents were less likely to treat their child like an equal conversational partner (by requesting personal narratives from their child, discussing their day, or allowing the child to speak with non-family adults) (Johnston & Wong, 2002).

Another study, conducted among Latino families, found that mothers' beliefs about learning, language learning (specifically), and children's dual language learning affected the choices they made about their child's home language use. For example, mothers who seemed to believe that learning occurred through dependence (such as when children quietly observe adults or are given direct instructions) versus independence (when children mimic adults or get a chance to try something before they are given help, for example) or exploration (when children experiment or play, for example) were more likely to promote Spanish in the home (Mancilla-Martinez & Lesaux, 2014). Studies like these suggest that cultural values and beliefs about how children learn and the process through which they learn language, specifically, can affect their practices and child outcomes.

Beliefs about intelligence

New research has shown that parents' understanding of the malleability of intelligence can play a significant role in children's cognitive development. When parents believe that children aren't simply born "smart" or "dumb" but that their experiences (especially interactions with adult caregivers) can help develop intelligence, their parenting practices tend to promote positive social and academic outcomes among their children, including increased resiliency and perseverance on academic tasks (Gunderson, Gripshover, Romero, Dweck, Goldin-Meadow, & Levine, 2013; Kim, Fung, Wu, Fang, & Lau, 2017). Conversely, the more parents believe abilities are fixed, the less they engage in math and literacy activities with their young children compared with parents who hold incremental theories of intelligence (Muenks, Miele, Ramani, Stapleton, & Rowe, 2016). One study of Chinese families found that children's perceptions of their mother's parenting style was more closely related to children's own incremental theory of knowledge compared with mothers' self-report of their parenting style (Kim, Fung, Wu, Fang, & Lau, 2017).

Knowledge of child development

In addition to beliefs, knowledge of child development is believed to impact parenting practices and child outcomes (Bornstein & Cote, 2004). Parents who know more about child development will more accurately report abnormal development and behavior to their child's pediatrician, thereby impacting their child's medical care and developmental outcomes (Bornstein & Cote, 2004). Benasich and Brooks-Gunn (1996) found that mothers who could correctly identify the age at which children, on average, meet developmental milestones and who tend to hold perspectivism attitudes about their child's development (meaning that they believe that children's behavior is the result of multiple factors, including genetic, environmental, and other determinants) tend to offer richer home environments. In addition, their children tend to have fewer behavioral problems and slightly higher IQs than the children of parents who know less about developmental milestones and who hold categorical attitudes about child development (meaning they believe child characteristics are intrinsic and unidimensional). Similarly, Rowe (2008) found that knowledge of child development mediated the effect of socioeconomic status on child-directed speech, which is associated with children's oral language development. Finally, another study found that parents who knew more about child development when their child was nine months old had children with more pre-literacy skills when they were preschool-aged, and that this association was more pronounced among Latino families (Rowe, Denmark, Jones Harden, & Stapleton, 2016).

However, there is also evidence that increasing knowledge alone is not sufficient for altering behaviors (Rowe, 2008) and that certain types of knowledge are more likely to impact behaviors than others. For example, parents' knowledge of developmental *processes*, rather than information about normative development, may have a larger impact on parenting practices: "Knowledge of normative development contributed less to predicted parenting skill in general than did the parents' awareness of the potency of play materials, of the value of parental teaching, of the importance of monitoring infant health, and their awareness of

interactional strategies which promote language development" (Stevens, 1984, p. 241). Regardless of the type of knowledge, researchers have documented correlations between levels of knowledge and practices, but increased knowledge alone is insufficient to impact parental behaviors. Instead, efforts to change behaviors should involve multiple approaches, including building parents' knowledge base.

Parental input & stimulation

Children whose parents and caregivers speak to them frequently and use a variety of words develop larger vocabularies at earlier ages, on average, compared with children whose caregivers use fewer words (Weizman & Snow, 2001). Parents and caregivers who engage young children in more back-and-forth conversations have children with greater language skills and enhanced brain processing for language (Romeo et al., 2018). Parents should engage in providing *verbal input* (speaking to their children in a variety of ways including labeling, singing, narration, and conversation), *verbal scaffolding* (matching their child's verbal ability), and *verbal responsivity* (responding to their children's vocalizations and questions and engaging in back-and-forth conversations) (Mendelsohn, Dreyer, Brockmeyer, Berkule-Silberman, & Mandel Morrow, 2011).

Readiness to learn in Jordan

Many children in Jordan are not ready to learn by the time they enter school, and it is worth noting that this is likely even more exacerbated as a result of COVID. The results of the 2018 Early Development Instrument (EDI) showed that almost 29% of Jordanian children were not ready to learn compared to 39% of Palestinian and 35% of Syrian children (Ababneh, Ababneh, Tweissi, & Abu Lebdeh, 2018). Children were designated "not ready" if they were not on track *in one or more* of the dimensions included on the EDI: physical health and wellbeing, social competencies, emotional maturity, linguistic and cognitive development, and communication skills and general knowledge. Furthermore, mother's education, child's gender, and enrollment in Kindergarten were the most important variables in predicting children's readiness to learn according to the EDI domains. This finding echoes previous findings from Al-Hassan and Lansford (2009), who administered the Early Years Evaluation tool that assesses children's performance in five domains: Social Skills and Behavior; Awareness of Self and Environment; Cognitive Skills; Language and Early Years Communication; and Physical Development. They found that, while 94% of children in the sample (N=3,666) were classified as being either mostly ready or fully ready for school by first grade, children from families with lower socio-economic status (SES), with parents of lower educational levels, and from rural areas were less likely to be ready for school than their wealthier, more educated, and urban counterparts. In addition, the study found that children from families with fewer children were more likely to be ready for school than children from families with more children.

Evidence from international research shows that parents' child rearing practices change when there are demographic shifts to smaller family sizes (Rogoff, 2003), but more still needs to be learned about what practices change and how they change. When asked which readiness skills

were most important for children to have gained prior to entry in Kindergarten, Jordanian KG teachers reported that they expected children to have higher levels of physical, self-help, and language skills to succeed in kindergarten compared with lower expectations for skills in social emotional, cognitive, reading, and writing domains (Abu Taleb, 2013). This is interesting, in light of the recently revised (but not yet approved) curriculum framework for Kindergarten,[21] which includes the following indicators of high-quality programs: playing, skills, nutrition, evaluation, modernity, diverse activities, self-learning, differentiated learning, conceptual-based learning, inclusive growth, integration, and flexibility and freedom.

Expansion of Kindergarten and ECCE

Because there is evidence that many children in Jordan are not ready to learn at entry to first grade, there have been recent efforts to expand access to early childhood care and education (ECCE). According to the most recent Population and Family Health Survey (2017-18), only 13% of children ages 36-59 months are currently attending an early childhood education program (DOS & ICF, 2019). The 2018-2022 Education Strategic Plan (MoE, 2018) includes the following priority strategic objective: "To increase access to quality education for children (both male and female) in early childhood and to increase their readiness to learn for life" (p. 25), and the Ministry expects to expand enrollment in Kindergarten (public and private) from approximately 115,000 students in 2015 to 228,000 in 2022.

Provision of parenting programs

In addition to expanding Kindergarten, there have been several efforts to provide parenting programs in Jordan with the aim of supporting early learning including through media, social media, and traditional training interventions. The Jordan River Foundation's parenting programs are targeted at women only and are primarily focused on child protection and safety (JRF, 2019). In addition, UNICEF provides three programs to parents in Jordan: *Beytana Al-Saeed* (Our Happy Home), formerly the Better Parenting Programme, Zero to Three, and the Parent and Child Programme, which collectively reached 32,336 parents, primarily mothers (Personal communication with UNICEF representative, 2019). As for the Ministry of Education, it has a program to raise children's readiness for learning, which targets children who have not enrolled in kindergarten and their parents. The Ministry also has the Parent Involvement Program for parents' participation in kindergarten and the first three grades, and a community participation program.

In addition to traditional workshop and home visit programs for parents, messaging efforts through popular media (primarily TV) and social media initiatives have been organized by individuals. Anecdotal evidence shows that some parents share parenting information and resources via social media, such as the "My Child.jo: Supporting Every Child's Development" Facebook group. In addition, Donya Ya Donya, a popular morning television program with over two million subscribers on YouTube, includes episodes on topics such as "The Difference

[21] Non-public kindergartens are not obliged to adhere to this curriculum.

Between Desires and Needs," "How Do We Choose the Type of School System and School for our Children," "Childhood and Motherhood - How Do We Modify Child Behavior."

In order to reach Syrian parents in Jordan, in particular, the International Rescue Committee has adapted the "Vroom" program, which was developed by the Bezos Family Foundation, to instruct parents on how to turn "everyday moments into brain building moments" (Wilton, Shioiri-Clark, Galanek, & Murphy, 2017). Vroom shared video (more effective) and text (less effective) messages via Facebook and WhatsApp and found that messages that incorporated information on brain development were particularly effective. This echoes findings from international research on the benefits of parents' knowledge of child development and of holding incremental theories of intelligence (growth mindsets) and suggests that future social messaging for Jordanian parents should include these elements.

Parenting beliefs and behaviors in Jordan and the MENA region

Only a limited amount of research has been conducted on MENA-region parents' knowledge and beliefs about their role in early childhood learning. A small-scale qualitative study of four focus groups for parents with children ages 0 to six years old in Morocco found that parents across different education and income levels do not believe that children's experiences in their first years of life affect their longer-term intellectual development or school success (Zellman, Perlman, & Karam, 2014). Moreover, these parents see little value in early intellectual stimulation or formal preschool education. Another Moroccan study found that parents engaged in literacy and numeracy activities roughly one time per week, with approximately equal engagement among mothers and fathers and with children of both sexes (Zellman, Karam, & Perlman, 2014). In addition, while more than half (68%) of parents in the sample believed that a child's experiences from 0–1-year-old have an impact on his or her academic performance, only 15.5% believed that brain development and learning begin during infancy and a roughly equal amount (17.9%) of parents believed that brain development and learning didn't begin until the child is 4 years old.

Tradition versus modernity in parenting

Tensions appear to exist between perceptions of "traditional" and "modern" parenting practices in Jordan. International research has shown that the most common source of parenting knowledge comes from parents' own families. In their seminal chapter on parental belief systems, McGillicuddy-De Lisi and Subramanian (1996) describe parents reporting that they have learned the most about parenting from their own parents and how they themselves were raised. However, in Jordan, there is some evidence that this is not always a straightforward process when young parents perceive that their own parents are "traditional" but strive to be "modern" parents. Sixty young parents and support providers described in semi-structured interviews that they have accepted information from their parents "with much resistance and reluctance," creating a dilemma between traditional and modern child rearing (Mrayan, Cornish, Dhungana, & Parfitt, 2016). Most of the twenty mothers and twenty support

providers included in the sample only had a school education, whereas most of the twenty fathers in the sample had a university education.

A comparative study on parenting styles in Arab countries found that Jordanian parents did not consistently adhere to one particular parenting style (using Baumrind's typology of parenting styles: authoritative, authoritarian, and permissive) (Dwairy et al., 2006). The authors of the study ascribe the lack of a clear parenting style with the rapid political and social changes taking place in Jordan, and they suggest that having a consistent style appeared to provide children with a more supportive environment. In addition, the study also found that higher economic status was associated with a permissive style, men were more likely to have an authoritarian style, and women were more likely to have an authoritative style.

In addition to the tensions between modern and traditional parenting styles, prior research has indicated the particular importance of Islamic teachings about familial roles in Jordanian parents' conception of parenthood (Takash & Al-Hassan, 2014). For example, a qualitative study of 110 Jordanian mothers and fathers from Irbid found that three themes were most commonly brought up in interviews about what parenting meant to them: (1) Parenting is embraced by Islam, (2) Parenting is a means for transmitting cultural values, and (3) Parenting is challenging (Oweis, Gharaibeh, al Maaitah, Gharaibeh, & Obeisat, 2012). Messaging to parents about their role in readiness to learn should be mindful of how the messages fit within Islamic teachings.

Jordanian parenting behaviors

The goal of the present study is to better understand parenting behaviors in Jordan, including what informs parenting practices and how they can be influenced. Prior research on parenting has been insufficient, since it has not included fathers at the same rate as mothers, has not taken special consideration of non-Jordanian parents, has not been comprehensive in terms of the types of behaviors it captures, and has not focused narrowly on behaviors associated with early learning and children's' school readiness. However, those studies that have examined parents' early learning behaviors have found that many homes contain few or no children's books, most parents did not regularly participate in shared book reading activities, parents believe that learning in preschool is more important than learning in the home, and many parents believe that direct instruction is the most effective pedagogical strategy in the early years (Hatamleh et al., 2019).

Key challenges and risks to promoting readiness to learn

Previous policy mandates have been unsuccessful, in part, due to the lack of coordination and cooperation among the various governmental and non-governmental actors with a stake in parenting programs including, but not limited to, government entities such as the Ministry of Education, Ministry of Health, Ministry of Social Development, and Ministry of Labor. Other organizations working in parenting or on ECD include the National Council for Family Affairs, Queen Rania Foundation, UNICEF (Better Parenting Programme), Jordan River Foundation (Child Safety Programme), Madrasati, Save the Children, and the Iman Learning Center. However, recent efforts have been made to increase coordination and cooperation, including the establishment of a National Team for Early Childhood Development, led by Plan International and the National Council for Family Affairs. Additionally, there is a unit responsible for monitoring the Human Resources Development Strategy.

The impact of the COVID-19 pandemic on children's readiness to learn is also currently unknown but likely to be significant. A recent report from the World Bank describes the MoE of Jordan and World Bank partnership in providing online instruction for grades 1-12 in Arabic, English, Math, and Science and support for preparation to take the secondary school leaving exam. 84% of students have access to the internet and the MoE also took over two TV channels. ECD should be added to this educational technology effort.

Understanding parents and children's beliefs, practices, and capabilities is an important step in ensuring children reach their academic potential. However, schools must also be ready to nurture children's learning and work in partnership with parents to promote ongoing cognitive development. In addition, the potential impact of poor ECE opportunities can be costly and result in inefficiencies: seminal work by economist James Heckman suggests that investing in high quality birth to age 5 education programs can have up to a 13% rate of return on investment, vastly higher than the return on investment from interventions later on in a child's life (García et al., 2017).

Appendix C: Qualitative interview guide

Interview Guide and Protocol
Prepared by **World Education, Inc.**
December 15th, 2020

Introduction

In order to inform the final design of the survey, interviews will be conducted with a small sample of parents. In the interest of time and to use limited resources most effectively, the subsample will include only a predetermined set of households to help the research team gain insight into the variety of parenting behaviors in Jordan. The subsample will include a mixture of Syrian and Jordanian households across 5-6 governorates.

The enumerator will conduct an interview with the parent via a video conference through MS Teams or Zoom. Since the research team will not conduct these interviews personally and will be conducted by enumerators who may not have the subject knowledge needed to improvise or adapt questions based on responses, the interviews will be structured and feature a combination of open-ended and closed-ended questions.

Limitations

Many of the items in this interview guide are drawn from existing questionnaires that have been adapted to the Jordanian context and address the research questions of this particular study. The research team has also added some new questions to the interview guide to ensure that all goals of the study will be met. The interview will inform the design of the final list of items included in the national survey.

The interview and survey will identify existing behaviors, attitudes, and knowledge to inform messaging that encourages behavior change that increases parental engagement with their children (Phase 2 of this project). However, the survey will not capture all aspects of parenting behaviors and all barriers and motivators to specific behaviors. The survey, which will follow this portion of data collection, will fill in some of the gaps in our knowledge, and future studies could continue to build on this work.

Procedure

Length:

- Approximately 50 minutes

Location: Video conferencing

Sample:

- Total of 30 interviews
- 5-6 households in each governorate
- 5-6 governorates across the north, central and south regions
- To the extent possible, the enumerator should rotate between interviewing mothers and fathers and Syrians and Jordanians with male and female children ages 0-5. For example, one Jordanian mother from Irbid governorate with a 0–5-year-old girl; one Syrian father from Amman governorate with a 0-5-year-old boy, etc.
- The enumerator should only interview one parent per household.

Pretesting

This instrument should be tested with at least four individuals prior to being finalized for use with a full sample of 30 participants:

- 1 Jordanian mother
- 1 Jordanian father
- 1 Syrian mother
- 1 Syrian father

Following the pretesting, the research team will review the responses and finalize the interview guide and protocol.

Guide

Introduction		
#	**Question/Responses** ***Interviewer script***	**Explanation/Rationale** ***For internal purposes***
1	Hello! My name is [name of enumerator] from the [name of data collection vendor] - an independent research entity. We'd like to ask you a couple of questions today to understand the common practices of parents of young children. Data collection for the study is being conducted in cooperation with the MoE and the data will be used by members of a group of international/national partners to understand parenting practices in Jordan. After the study has ended, all personal information will be destroyed which means all the information you provide will be anonymous. **This interview will take about an hour.** Would you like to participate?	Courtesy. Establish rapport. Information about the study plus initial consent to participate.
	[Yes] [No] *Subject answers yes or no. If yes, continue. If no, thank the subject for his or her time and end the interview.*	
2	Are you a parent of a child aged five or younger? *Note to enumerator: We're looking for children who have not yet entered grade 1.*	Qualifying question.
	*Subject answers yes or no. If **yes**, continue. If **no**, thank the subject for his or her time and end the interview.*	
3	Thank you! We really appreciate your help with this! This survey is not a test and there are no right or wrong answers. If you feel uncomfortable, you should feel free to stop the interview at any time. We just want to learn what parents in our community think children need to be ready for primary school.	Additional information about the study and the procedure. Topics to cover include: - Purpose - Confidentiality - Voluntary

	I will be taking notes about what you say, but I will not be collecting your name or the names of your children. No one will be able to identify you as the person who shared this information after I leave here.	- 2nd consent
	No response required. If the subject does not object, second consent is assumed. Answer any questions they have, and try to allay any fears of evaluation or judgement.	
4.1	How many children live in the home and what are their dates of birth? *Please fill in for all children living in the household*	Child census.
	Child 1 = MONTH/YEAR OF BIRTH *Child 2 = MONTH/YEAR OF BIRTH* *Child 3 = MONTH/YEAR OF BIRTH* *Child 4 = MONTH/YEAR OF BIRTH* *Child XX = MONTH/YEAR OF BIRTH* *Total number of children = XX.* *Enumerator: Please use this information to identify the focal child - a child under the age of 6 whose birthday is next up in the calendar year. Please identify this child's name, hereinafter referred to as "focal child".* *NOTE FOR ENUMERATOR: please write down the age of the child on a separate piece of paper and have reference to it during the interview, as some questions are meant for parents with children in a specific age group.*	
4.2	What is the sex of [focal child's name]? 1. Male 2. Female	
4.3	Does [focal child's name] have a disability or developmental delay? 1. Yes - physical disability 2. Yes - mental disability 3. Yes – developmental delay 4. No	

BEGIN INTERVIEW		
#	**Question/Responses** ***Enumerator script***	**Explanation/Rationale** ***For internal purposes***
	Introduction	
5	There are many different things that parents want in life for their children. What is the one thing you desire most in life for [focal child's name]?	Motivation.
6	Parenting can be both highly rewarding, yet also highly challenging. Can you tell us about a time where you felt being a parent was very rewarding?	Driver of parental behavior.
7	How did you learn about parenting and your role as a parent? *(Note to interviewer: Probe with the following options if the parent doesn't answer the initial question: from your own parents? Other relatives? From books? From television and movies? From apps or social media pages? From other sources? Please specify.)*	Sources of knowledge and beliefs. Potential drivers of behaviors.
8	I'd now like to ask you some questions about a typical weekday for you and [focal child's name]. Please think of your relationship with [focal child's name] when you answer. Some questions will be short, and some will be longer. Please remember that there are no correct answers and this is not a test. You are helping us to learn about parenting in Jordan!	Courtesy. Transition to interview.
	Parental Behaviors	
9	Who usually spends the most time with [focal child's name] during the day?	Understand who the child spends most time with.
10	What does [focal child's name] daily schedule look like? What are all the things that s/he is doing? *If a participant has trouble answering, probe with the following question: "When you are home with your [focal] child, how do you typically spend your day?" Or, "think of the past two days and tell me how you spent one of those days with [focal child's*	Opportunities for learning. Daily activities.

	name]" *Record all of the activities the subject mentions.*	
11	What are you doing while [focal child's name] is doing those things? *Record all of the activities the subject mentions.*	Opportunities for learning. Daily activities.
12	When you are doing chores at home, do you usually talk to [focal child's name] while you are doing the housework or do you prefer to focus on the housework without much talking? Why or why not? (For fathers, start by asking:) Do you help with housework? (If they answer yes, ask:) When you are doing chores at home, do you usually talk to [focal child's name] while you are doing the housework or do you prefer to focus on the housework without much talking? Why or why not?	[Adapted from HOME-SF] Opportunities for learning. Oral language development.
13 A	During a typical week, does [focal child's name] play with any other children (siblings, cousins, friends)? [Yes] [No]	Understand who the child spends most time with.
13 B	[*Ask this question if the respondent answers Yes to previous question*] Who are the other children they spend time with?	
13 C	[*Ask this question if the respondent answers Yes to question 13A*] When your child plays, do you think they are affected? How?	Understand who the child spends most time with.
14	We've asked about your child's daily schedule during the week and now we'd like to ask more specifically about last weekend. What did you do with [focal child's name] last weekend? *Record all of the activities the subject mentions.*	Opportunities for learning. Daily activities.
If the respondent responds with reading, singing, playing with the focal child, teaching them numbers/shapes/letters, encouraging them to play with other children, talking to them about their feelings, sit on their own, encourage them to control their emotions, encourage them to change their own clothes, please ask them question 15 If the respondent doesn't mention any of these activities, please skip to Q16.		

15 A	Why do you do [activity 1 from previous question] with [focal child's name]?	Parent motivation.
15 B	Why do you do [activity 2 from previous question] with [focal child's name]?	Parent motivation.
15 C	Why do you do [activity 3 from previous question] with [focal child's name]?	Parent motivation.
	Repeat the previous question for all activities from the above list the parent mentions.	
We would now like to ask you specific questions about the past two days and the activities you might have done.		
16	Have you read with [focal child's name] in the past two days? Why or why not?	[Adapted from HOME-SF] Reading/literacy behaviors
17	[*Ask this question if the respondent answers Yes to the previous question*] What would make it easier for you to read more often to [focal child's name]? *[Ask this question if the respondent answers ↑No to the previous question]* What would make it easier to start reading to [focal child's name]?	Barriers.
	Probe with "What else?"	
18	Do you have access to children's books? By this we mean borrowing, buying or downloading books through the Internet or applications.	Reading/literacy
	[Yes] [No]	
19	[*Ask this question if the respondent answers Yes to previous question*] If yes, can you tell me more about how/where you are able to access books from?	Reading/literacy
20	Have you told your [focal child's name] stories in the past two days? Why or why not?	[Adapted from HOME-SF] Opportunities for learning. Daily

		activities.
21	Have you played with [focal child's name] in the past two days? If yes, what did you use to play with [focal child's name] or how did you play?	Parent provision of learning/play materials
22	Have you sung with [focal child's name] in the past two days? Why, why not?	
23	[*Ask this question if the respondent answers Yes to previous question*] Can you tell me what sorts of things you sing with your child?	
We would now like to understand more about speech in general between you and [NAME OF FOCAL CHILD].		
24 A	[*Ask if the focal child is below 1 year*] Do you talk to your baby although he/she can't talk, or are you waiting until they are older and can talk? Can you tell me why?	
24 B	[*Ask if the focal child is 1 year or older*] When [focal child's name] was just a baby and unable to talk, did you used to talk to him/her, or did you wait until he/she started talking to begin talking with him/her? Can you tell me why?	Knowledge of learning processes. Oral language development.
25	Do you speak to [focal child's name] in Modern Standard Arabic? Why or why not?	Modern Standard Arabic
We've asked in general about the activities you might be doing with your child. We'd now like to ask about things more specifically related to teaching.		
26	*[Ask this question if focal child is 3 months and above]* What sorts of things do you teach [focal child's name]? (*Note to interviewer: Probe with the following options if the parent doesn't answer the initial question: Manners? Cultural/religious values? Alphabet? Language/new words?*)	Role of the parent.
27	*[Ask this question if the focal child is 2 to 5 years old]* Do you help [focal child's name] learn numbers at home?	[Adapted from HOME-SF] Role of the parent. Numeracy behaviors.
	[yes] [no] *If the parent explains how s/he teaches this, include in notes.*	
28	*[Ask this question if the focal child is 2 to 5 years old]* Do you help [focal child's name] learn letters/the alphabet at home?	[Adapted from HOME-SF]

	[yes] [no] *If the parent explains how s/he teaches this, include in notes.*	Role of the parent. Literacy behaviors.
29	*[Ask this question if the focal child is 2 to 5 years old]* Do you help [focal child's name] learn colors at home?	[Adapted from HOME-SF] Role of the parent. Literacy/Numeracy behaviors.
	[yes] [no] *If the parent explains how s/he teaches this, include in notes.*	
We would now like to ask you about certain situations that might happen with [NAME OF FOCAL CHILD] and how you might act in these situations.		
30	Can you think of a time when [focal child's name] was displaying lots of emotions, whether happiness, sadness, excitement, worry, anger, and tell us what you did?	
	If the respondent is unable to answer, probe with: for example, if the child was really upset one day and did not want to interact with anyone, what did you do?	
31	Can you think of a time when [focal child's name] was attempting to do something that was slightly difficult for him/her, and tell us what you did?	
	If the respondent is unable to answer, probe with; for example, if they were trying to drink out of a cup but were struggling, were trying to get dressed and it was taking them a long time, were not able to sit up straight on their own. Did you guide them on how to do it? Did it for them? Helped them do it? Asked a sibling to help them? Modeled how to do it to them? Let them figure it out on their own?	
32	*[Ask this question if the focal child is 1 year or older]* Can you think of a time when [focal child's name] was fighting with their siblings, cousins, friends over a toy or game, and tell us what you did?	

We would now like to ask you about what you think contributes to [focal child's name] readiness to enter grade1.				
Note for enumerator: For this set of questions, please ask about each skill fully (i.e., ask Q33 34 and 35 for skill1, and again, Q33, 34 and 35 for skill 2, etc.).				
	33. What are the most important skills you think [focal child's name] needs to be prepared for entering grade 1?	**34.** How can [focal child's name] learn this before entering grade 1?	**35.** Why do you think this is important?	Role of the parent. Locus of control.
1				
2				
3				
4				
5				

36	In your opinion, how will [focal child's name] be doing at school when s/he starts it? Why do you say so?	Parental beliefs/expectations.
37	What would be your main reasons for wanting [focal child's name] to do well at school?	Motivation.
38	Do you think the experiences a child has in the first year of his or her life are important for later success in school? Why do you think so?	*[Adapted from Zellman et al., 2014.]* Knowledge of learning processes.
39	Whose responsibility do you think it is to make sure that [focal child's name] is ready to start grade 1? Please feel free to list more than one person if multiple adults are responsible. Why do you think so?	Role of the parent. Locus of control.
40	Do you believe parents can influence their children's intelligence?	Knowledge of learning processes.

	[If they respond yes] To what extent do you believe you can or cannot influence [focal child's name]'s intelligence?	
41	Do you think there are differences in how girls and boys should be prepared for school? Can you tell me why you think that is?	Gender. Social norms.
42	What do you find most challenging about supporting [focal child's name] in learning new things? *(Note to interviewer: Probe with the following option if the parent doesn't mention people, "Are there any people who make it challenging for you to support your child learning new things?")*	Barrier of parental behavior.
43	What would make it easier for you as a parent to support [focal child's name] in learning new things? *(Note to interviewer: Probe with the following option if the parent doesn't mention people, "Are there any people who make it easier for you to support your child learning new things?")*	Barrier of parental behavior.
44	Do you rely on religion to teach [focal child's name] values? [If the respondent answers, yes] How? [If the respondent answers no, move on to the next question]	Sources of knowledge and beliefs. Potential drivers of behaviors.
We would now like to ask you about your general perceptions regarding what makes good or bad parents.		
45	How would you describe a good mother? (*Note to interviewer: Probe with the following options "What characteristics do you think make a good mother?" "What do you think someone who is a good mother does with her child?" "Imagine a mother interacting with her child, what sorts of things do you think she would be doing that would make you think, 'that's a good mom!'?"* *Are these practices common?*	Parental beliefs.
46	How would you describe a bad mother? (*Note to interviewer: Probe with the following options "What characteristics do you think make a bad mother?" "What do you think someone who is a bad mother does with/to her*	Parental beliefs.

	child?" "Imagine a mother interacting with her child, what sorts of things do you think she would be doing that would make you think, 'that's a bad mom!'?" *Are these practices common?*	
47	How would you describe a good father?	Parental beliefs.
	(*Note to interviewer: Probe with the following options "What characteristics do you think make a good father?" "What do you think someone who is a good father does with her child?" "Imagine a mother interacting with her child, what sorts of things do you think she would be doing that would make you think, 'that's a good father!'?"* *Are these practices common?*	
48	How would you describe a bad father?	Parental beliefs.
	(*Note to interviewer: Probe with the following options "What characteristics do you think make a bad father?" "What do you think someone who is a bad father does with his child?" "Imagine a father interacting with his child, what sorts of things do you think he would be doing that would make you think, 'that's a bad father!'?"* *Are these practices common?*	
Now I would like to ask you questions about a slightly different topic.		
49 A	(*If the focal child is 0-4 years old*) Do you plan to send [focal child's name] to kindergarten? Why or why not?	Prevalence of KG.
49 B	(*If the focal child is 5 years old*) Do you send [focal child's name] to kindergarten? Why or why not?	
50	(*If the respondent answers yes on Q48B*) How often are you in contact with [focal child's name's] kindergarten teacher - if at all?	Knowledge of KG. Awareness of readiness to learn.
51	Have you participated in any sort of parenting education program? For example: workshops, forums, or programs	Prior parenting education.

	about raising children or even groups or pages about parenting on social media? *If yes, record the name of the program or the page or group or other information.* [yes] [no]	
52	[*Ask this question if the respondent answers Yes on Q51*] Who offered these programs/workshops/forums?	Prior parenting education.
53	Has COVID changed your daily schedule? If yes, how so?	COVID
54	Has COVID changed how you spend time with [focal child's name]? If yes, how so?	COVID
55	Those are all of the questions that I have for you today. Do you have any questions for me?	Opportunity for the subject to ask questions.
56	Thank you so much for being so generous with your time and for offering your perspective. We believe that this study is going to help us to understand how we can better support parents and young children. Thank you so much for being a part of it! You might be contacted again to ask your opinion about further aspects of this study. Do you agree? [yes] [no]	Thank you and closing.

Final Reflection	
57	Immediately after completing the interview, either on the street, in your car, or in a café nearby, take 5-10 minutes to write a brief reflection on the interview. Do not save these reflections for the end of the day! ● Write down anything that struck you as important, given your knowledge of the goals of this study. ● Make note of any methodological issues or questions that came up (e.g. a question that didn't work, a situation where you didn't know what to do, a deviation you had to make from the plan).

Appendix D: Sampling frame

Sample Selection of Neighborhoods for the Survey on Parental Behavior in the Early Years

Jean Dumais
18 February, 2020

Foreword

This document amends and updates a similar document dated 22 January, 2020 based on sampling of localities. Since then, additional, more detailed information has become available for the establishment of the sampling plan. Most changes occur in sections 5 and 6 below.

Introduction

A first sampling plan for the survey of "Parental Behaviour in Early Years" was proposed to the QRF. After discussion with their prospective vendors and the Department of Statistics (DoS), the QRF pointed to a census file listing each locality and its population (*The Population of the Kingdom by Administrative Divisions, according to the General Census of Population and Housing result 2015*, accessed on the DoS web site 15 January 2020).

Hence, the original sampling plan based on the selection of the much larger Sub-District could be improved using the locality as the first-stage unit. Table 1 gives a breakdown of the Kingdom, by Directorate, district and by urban/rural status. To determine the urban/rural status of localities, we used the following rule: a locality is deemed to be "rural" if its population is fewer than 5000 people; the locality is otherwise deemed to be "urban". This classification is based on the Department of Statistics' classification of urban/rural areas in Jordan.

Upon inspection, it was observed that a very large number of localities were quite small and would not likely yield, if selected, the expected number of interviews. In consultation with the QRF, it was decided and localities with fewer than 2500 people would be considered "out of scope". While the number of localities thus excluded may appear large, the population excluded is about 5% of the total population of Jordan.

Table 1*:*

Number of Localities and Population by Directorate, District and Survey Status

	Survey Status						Total	
	Out of Scope		Urban		Rural In Scope			
Directorate District	Number of Localities	Total Population	Number of Localities	Total Population	Number of Localities	Total Population	Number of Localities	Population
Ajloun	**40**	**25752**	**11**	**147742**	**1**	**2586**	**52**	**176080**
Ajlun Qasabah	31	18507	10	116727	1	2586	42	137820
Kufranjah	9	7245	1	31015			10	38260
Al-Balqa	**34**	**28411**	**21**	**403665**	**16**	**60475**	**71**	**492551**
Ain Albasha	8	7386	6	162420	2	6920	16	176726
Dair Alla	5	6924	5	44491	6	22904	16	74319
Mahes & Fuhais			2	36670			2	36670
Salt Qasabah	20	12003	4	121044	5	19075	29	152122
Shoonah Janoobiyah	1	2098	4	39040	3	11576	8	52714
Al-Karak	**74**	**54321**	**16**	**187243**	**22**	**75065**	**112**	**316629**
Aghwar Janoobiyah	7	7131	3	44742	1	2994	11	54867
Ayy	1	1467			2	6685	3	8152
Faqo'e	3	2062	1	7300	2	7444	6	16806
Karak Qasabah	23	17778	5	56639	8	26960	36	101377
Mazar Janoobee	27	15463	4	58157	6	21504	37	95124
Qasr	12	9591	2	13335	2	6481	16	29407
Qatraneh	1	829	1	7070	1	2997	3	10896
Al-Mafraq	**122**	**102981**	**20**	**383073**	**19**	**63894**	**161**	**549948**
Badiah Sh.Gh.	23	23522	11	208250	5	15259	39	247031
Badiah Shamaliyah	46	41753	3	25949	9	31529	58	99231
Mafraq Qasabah	48	35947	5	143143	5	17106	58	196196
Rwaished	5	1759	1	5731			6	7490
Amman	**60**	**59545**	**37**	**3895991**	**15**	**51213**	**112**	**4006749**
Al Jamiah			5	743980			5	743980
Alquaismeh			3	582659			3	582659
Amman Qasabah			6	855955			6	855955
Jizeh	22	17184	1	95045	2	5775	25	118004
Marka			4	956104			4	956104

Mowaqqar	11	7693	7	60001	5	16676	23	84370
Na'oor	14	23269	6	81651	7	24730	27	129650
Sahab			1	169434			1	169434
Wadi Essier	13	11399	4	351162	1	4032	18	366593
Aqaba	**23**	**17684**	**2**	**160240**	**3**	**10236**	**28**	**188160**
Aqaba Qasabah	11	6669	1	148398	1	3951	13	159018
Diesah	4	3503			1	2861	5	6364
Quairah	8	7512	1	11842	1	3424	10	22778
Irbid	**48**	**55026**	**68**	**1634771**	**21**	**80361**	**137**	**1770158**
Aghwar Shamaliyah	13	12000	8	104579	2	5751	23	122330
Bani Kenanah	9	12009	12	94480	7	25308	28	131797
Bani Obeid	2	1666	6	202647			8	204313
Irbid	4	5058	3	46443			7	51501
Koorah	8	3646	12	153866	1	3993	21	161505
Mazar Shamali	4	4901	4	56419	4	17107	12	78427
Qasabah Irbid	6	11170	20	946326	5	20218	31	977714
Wastiyyah	2	4576	3	30011	2	7984	7	42571
Jaresh	**34**	**30761**	**13**	**182434**	**6**	**23864**	**53**	**237059**
Jarash Qasabah	34	30761	13	182434	6	23864	53	237059
Ma'an	**54**	**43935**	**6**	**77914**	**6**	**22233**	**66**	**144082**
Huseiniya	1	32	1	12687	1	4604	3	17323
Ma'an Qasabah	30	24156	3	52649	3	10847	36	87652
Petra	10	7250	2	12578			12	19828
Shobak	13	12497			2	6782	15	19279
Madaba	**62**	**26853**	**7**	**147988**	**4**	**14351**	**73**	**189192**
Dieban	46	15584	3	20838			49	36422
Madaba Qasabah	16	11269	4	127150	4	14351	24	152770
Tafieleh	**29**	**13960**	**6**	**75069**	**2**	**7262**	**37**	**96291**
Bsaira	5	1374	2	19191	1	4680	8	25245
Hasa	1	2159	1	8084			2	10243
Tafieleh Qasabah	23	10427	3	47794	1	2582	27	60803
Zarqa	**39**	**32533**	**12**	**1315193**	**5**	**17152**	**56**	**1364878**
Hashemiyah	7	4211	2	65423	3	11079	12	80713
Russeifa			2	481900			2	481900
Zarqa Qasabah	32	28322	8	767870	2	6073	42	802265
Total général	**619**	**491762**	**219**	**8611323**	**120**	**428692**	**958**	**9531777**

A revised sampling plan

The material conditions for the collection of data have not changed: there is still no unique, comprehensive, universal, up-to-date list of households available to QRF for sampling directly. Multi-stage sampling is still the appropriate strategy and the analytical requirements are unchanged.

Thus, changing from Sub-District for Locality as first-stage units does not entail a radical change of strategies, but merely dealing with a larger sampling frame comprised of more, smaller, units.

The overall strategy is still to select, within each Governorate, 3 rural localities and 3 urban localities. From each selected locality, a sample of 2 neighborhoods will be selected (where possible), from which a sample 2 blocks will be selected. Once blocks are selected, a sample of 15 in-scope households will be chosen per block, for a total of 30 in-scope households per neighborhood, as shown in Table 2.

Table 2:
Theoretical Sample Allocation of Households and Neighborhoods by Localities, stratified by Governorate and Urbanisation[22]

Sample of Households by Neighborhood (N) and Locality (L)		North						Centre				South				Total
		G1		G2		G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	
		N1	N2	N1	N2											
Urban	L1	30	30	480												5760
	L2	30	30													
	L3	30	30													
Rural	L1	30	30	480												5760
	L2	30	30													
	L3	30	30													
By Governorate		960		960		960	960	960	960	960	960	960	960	960	960	11,520
By Region		3840						3840				3840				

[22] In some localities, there was only one neighborhood. As such, the total expected sample size is 2,520.

The sample of localities is stratified by Governorate and Region (automatically obtained as a by-product) and by urban/rural status.

The sample allocation strategy remains unchanged from the plan based on Sub-districts. However, the actual implementation of the plan is likely to show discrepancies with the theoretical plan displayed in Table 2 as some localities are too small to provide two neighborhoods; the sample blocks may then need some adjustment to maintain the expected number of interviews.

Table 3 displays how the stratification scheme is laid out.

Table 3*:*
Original Identification of Strata

Region	Governorate	Urban	Rural
Centre	Amman	1	2
	Al-Balqa	3	4
	Madaba	5	6
	Zarqa	7	8
North	Ajloun	9	10
	Irbid	11	12
	Jerash	13	14
	Al-Mafraq	15	16
South	Aqaba	17	18
	Al-Karak	19	20
	Ma'an	21	22
	Tafieleh	23	24

Sample selection

First, the list of localities was copied from its PDF version available on the DoS web site to an Excel worksheet, for easier manipulation and processing.

After identifying the in-scope localities and creating the strata described in the previous section, samples of 3 localities were drawn independently from each stratum, with probability proportional to the size (PPS) of the locality in its stratum. Clearly, the larger the locality, the better the chances of being selected; and conversely, the smaller localities have less chance of being selected. This strategy is common practice in multi-stage sampling of human populations as it concentrates collection, hopefully reducing or containing collection costs, and usually improves the precision (smaller sampling errors) of the ensuing estimates.

As is often the case in similar surveys, the larger localities are "just too large" for their stratum and have to be selected with certainty. This situation occurred 14 times. In each case, the locality was set aside in its own stratum, and the selection process was restarted for the remaining units. Such selections can also be a consequence of the number of localities to select from: any stratum comprised of 3 or fewer localities would have all its localities automatically selected; those are thus selected with certainty.

As a by-product of the sample selection, the first-stage design weights were computed as the inverse of the selection probability (foreseeing Horvitz-Thompson estimation at the end of the process). The first-stage weight should be greater than 1, indicating the number of localities that the selected locality represents on average over repeated sampling (see Kish's, Lohr's or Särndal's books on sampling theory for the mathematical foundations and details). In the case of localities selected with certainty, the first-stage weight was set to 1 (100% chance of being selected) indicating that that locality only represents itself (*i.e.*, self-representing)

Table 4 displays a breakdown of how many localities were selected at random (with PPS) and how many were selected with certainty, by design stratum. Since each self-representing locality forms its own stratum, the numbering system had to be modified to accommodate those 14 special cases. For easy reference, the stratum number for a certainty unit is its original stratum number multiplied by 100 and a suffix 1 is added as needed. For example, of the 3 localities to be selected at random from the 7 units comprising stratum 5, one showed to be too large; that locality is thus set aside in its own stratum, now labelled 501, and 2 units are then selected from the remaining units of stratum 5.

In the case of stratum 10 (Ajloun, rural), only 1 unit was left after determining what localities had a population of at least 2500. That locality is necessarily self-representing and its stratum identification becomes 1001.

Table 4:
Final Stratification and Number of Localities Selected per Stratum

Stratum	Region	Governorate	Status	Number of Localities	Total Population	Random Selections	Certainty Selections	Total locality
1	Centre	Amman	Urban	37	3895991	3	0	3
2			Rural In Scope	15	51213	3	0	3
3	Centre	Al-Balqa	Urban	21	403665	3	0	3
4			Rural In Scope	16	60475	3	0	3
5	Centre	Madaba	Urban	6	42635	2	0	2
501				1	105353	0	1	1
6			Rural In Scope	3	9705	2	0	2
601				1	1061	0	1	1

7	Centre	Zarqa	Urban	10	207429	2	0	2
71				1	635160	0	1	1
72				1	472604	0	1	1
8			Rural In Scope	5	17152	3	0	3
9	North	Ajloun	Urban	11	147742	3	0	3
1001			Rural In Scope	1	2586	0	1	1
11	North	Irbid	Urban	68	1634771	3	0	3
12			Rural In Scope	21	80361	3	0	3
13	North	Jarash	Urban	13	182434	3	0	3
14			Rural In Scope	6	23864	3	0	3
15	North	Al-Mafraq	Urban	20	383073	3	0	3
16			Rural In Scope	19	63894	3	0	3
1701	South	Aqaba	Urban	1	148398	0	1	1
1702				1	11842	0	1	1
1801			Rural In Scope	1	3951	0	1	1
1802				1	3424	0	1	1
1803				1	2861	0	1	1
19	South	Al-Karak	Urban	16	187243	3	0	3
20			Rural In Scope	22	75065	3	0	3
21	South	Ma'an	Urban	5	36859	2	0	2
2101				1	41055	0	1	1
22			Rural In Scope	6	22233	3	0	3
23	South	Tafieleh	Urban	5	47510	2	0	2
2301				1	27559	0	1	1
2401			Rural In Scope	1	4680	0	1	1
2402				1	2582	0	1	1
Total locality sample size				55		14		69

Sampling of Neighborhoods

Once the sample of localities was selected and shipped to QRF, finer census data were obtained from the DoS. For each selected locality, neighborhood-level population counts were provided to QRF, who forwarded them to us for the second stage of sampling.

Thus, within each selected locality, 2 neighborhoods were selected at random with probability proportional to their size (as measured by the population count at census) in the locality. Some of the selected localities are comprised of a single neighborhood; it was therefore selected with certainty. In total, 84 neighborhoods were selected. The details are shown in Table 5.

Table 5

Number of Selected Neighborhoods per Selected Locality

Stratum	Governorate	Selected locality	Number of Selected Neighborhoods
1	Amman	Alnaser	2
		Alyarmok	2
		Jizeh	2
2		Hesban	1
		Manshiyyeh	1
		Naqera	1
3	Al-Balqa	Baq'ah	2
		Salt	2
		Twal Janoobi	1
4		Rmemen	2
		Shoonah Jadideh (Sokneh)	1
		Twal Shamali	1
5	Madaba	Dieban	1
		Leb	1
6		Heialaleyeh (Falha)	1
		Khaldeyyeh (Abu Ezqal)	1
501		Madaba	3
601		Jrainah	1
7	Zarqa	Azraq Janoobi	1
		Mukhayyam Azraq	2
8		Abu Ezziegan	1
		Doqarah	1
		Um Essalleeh	1
701		Zarqa	2
702		Russeifa	2
9	Ajloun	Anjarah	1
		Ebbien	1
		Wahadneh	1
1001		Rasoon	1
11	Irbid	Doaqarah	1
		Irbid	2

		No'ayymeh	1
12		Fo'arah	1
		Hoafa El-Mazar	1
		Mkhaibeh El-Tehta	1
13	Jarash	Ejbarat	1
		Mukhayyam Ghazzeh	1
		Sakeb	1
14		Dair Elliyyat	1
		Jebbah	1
		Nahleh	1
15	Al-Mafraq	Al-Mafraq	2
		Mabrookah	1
		Mukhayyam Al-Za'tary	2
16		Amra & Amiereh	1
		Dafyaneh	1
		Manshiyyet Essoltah	1
1701	Aqaba	Aqaba	2
1702		Quairah	1
1801		Qraiqreh	1
1802		Rashdyah	1
1803		Diesah	1
19	Al-Karak	Ghawr Safi	1
		Karak	1
20		Ghawr Faifa	1
21	Ma'an	Huseiniya	1
		Taybah	1
22		Basta	1
		Hashemiyah	1
		Manshiyyeh	1
2101		Ma'an	2
23	Tafieleh	Bsaira	1
		Qhadesiyeh	1
2301		Tafieleh	2
2401		Gharandal	1
2402		Aimeh	1
Total			84

With this list, the QRF returned to the DoS for additional census information about the city blocks forming the selected neighborhoods. Population counts and the number of blocks per neighborhood were provided to QRF.

Because the number of neighborhoods selected was much lower than anticipated at first, it was decided to increase the number of households to be selected per neighborhood from 20 to 30.

An inspection of the block-level data pointed to the neighborhoods where the average number of households was low and where the expected sample yield would reasonably not be met. In all neighborhoods but one, the random selection of 2 blocks should suffice; however, in one

neighborhood, it would be necessary to select three blocks. That information was sent to QRF for revision and further processing.

The selection of blocks will be done by the DoS following requirements expressed by the QRF. We provided the QRF with examples of SAS and SPSS code that could be used to efficiently draw the sample of blocks.

Concluding remarks

From a maximum sample of 72 localities (24 strata, 3 localities per stratum), we selected a sample of size 69, 14 self-representing, 55 selected at random (with PPS).

For statistical reasons (stability of estimation weights, increased precision of estimates) second-stage units should be drawn with PPS from the selected localities and third-stage units should be drawn with equal probability (simple random or systematic random sampling).

Appendix E: Quantitative Survey Instrument

Parental Behaviors in the Early Years
National Survey

Interview Data
Interviewer's Name: _____ Date: ____/____/_____

1. Table below for enumerator to fill in based on household selection tool sheet

1.1 Questionnaire ID #	
1.2 Household ID #	
1.3 Block ID #	
1.4 Neighborhood ID #	
1.5 Neighborhood name	
1.6 Area type	**1. Urban** **2. Rural**
1.7 Locality	
1.8 Sub-district	
1.9 District	
1.10 Governorate	1. Amman 2. Balqa 3. Madaba 4. Zarqa 5. Irbid 6. Ajloun 7. Jerash 8. Mafraq 9. Karak 10. Tafileh 11. Ma'an 12. Aqaba
1.11 Who to interview?	1. Mother 2. Father

Scripted Introduction

Hello! My name is [NAME OF ENUMERATOR] from Ipsos - an independent research group. This study is being conducted in cooperation with the Ministry of Education to understand the ways parents interact with their children so that we can offer parents in the Kingdom of Jordan advice and support on this topic. We are surveying families from all over Jordan about this topic and you were selected to participate because you have at least one child under the age of six. Your participation will help us better support parents and their young children, so your participation is really valuable.

After the study has ended all personal information will be destroyed, which means all your information will be anonymous and your name will not appear anywhere.

As such, I'd like to spend some time with you to ask questions about you and your family. This will take 30-40 minutes total of your time where I ask you questions. You can stop me at any time if you do not wish to continue.

2. Would you like to participate?

1. Yes
2. No

IF RESPONDENT ANSWERS OPTION 1: Thank you for agreeing, let's get started.

IF RESPONDENT ANSWERS OPTION 2: ***Thank the participant and end the interview.***

Section A - Household Survey & Focal Child Profile

S101. [Question for the enumerator - do not ask the respondent]
What is the respondent's gender?

1. Male
2. Female

S102. What is your nationality?

1. Jordanian
2. Syrian
3. Other [please specify]

S103. What is your marital status? Are you married, separated, divorced, or widowed?

1. Married
2. Separated
3. Divorced
4. Widowed
5. Other [please specify]

S104. How many people live in your household? Please mention children and adults, including yourself and any domestic helpers living with you.

(This may also include people the respondent lives with, who are not related to them or their spouse)

XX people [Enter whole number]

S105_01. How many children ages 6- 18 live in your household?

XX children [Enter whole number]

S105_02. How many children below the age of 6 live in your household?

XX children [Enter whole number]

S106 I would now like to ask you some questions about the children below the age of 6 currently living in your household.

[Please fill in the information for all individuals living in the household in the table below. Please ask questions along the vertical line (by column)]

S106_01	Names	Respondent's name	Person 1 name	Person 2 name	Person XX name
S106_02	What is this child's gender?	1.Male 2. Female	1.Male 2. Female	1.Male 2. Female	1.Male 2. Female
S106_03	What is this child's relationship to you?	1.My birth child 2. My adopted child	1.My birth child 2. My adopted child	1.My birth child 2. My adopted child	1.My birth child 2. My adopted child
S106_04	What is this child's date of birth?				
S106_05	Does the child have any disabilities, developmental delays or learning difficulties?	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No
S106_06	Is the child enrolled in NOTE: enumerator to read all options to the right, then mark response	1. Nursery - This may also include online learning 2. KG1 - This may also include online learning 3.KG2 - This may also include online learning 4. Informal pre-school (e.g. Quranic centers or home-based nurseries)	1. Nursery - This may also include online learning 2. KG1 - This may also include online learning 3.KG2 - This may also include online learning 4. Informal pre-	1. Nursery - This may also include online learning 2. KG1 - This may also include online learning 3.KG2 - This may also include online learning 4. Informal pre-school (e.g. Quranic centers or home-based nurseries) 5. None	1. Nursery - This may also include online learning 2. KG1 - This may also include online learning 3.KG2 - This may also include online learning 4. Informal pre-school (e.g. Quranic centers or home-based nurseries) 5. None

		5. None	school (e.g. Quranic centers or home-based nurseries) 5. None		
S106_07	*Note to enumerator:* Please mark the focal child, that is the child (under 6 years old, whose birthday is up next in the calendar year (i.e. next birthday method)				

S107. *[Only ask this question to respondents who responded option 2 on all of 7.5 above]* **For your children who are not enrolled in nursery or KG, to what extent have the below reasons influenced your decision to enroll your child in nursery or KG, where 4 is to a great extent, 3 is to some extent, 2 is to a little extent and 1 is not at all?**

Please note that enrollment in nursery/ kindergarten also includes online learning.
Please mark one choice for each option below.

		To a great extent (4)	To some extent (3)	To a little extent (2)	Not at all (1)
S107_01	Because I or another member of my family care for the child/children full-time				
S107_02	Because the nursery/kindergarten costs too much				
S107_03	Because the nursery/kindergarten is far away				
S107_04	There wasn't an available space for my child in the nursery/ kindergarten I wanted				
S107_05	I am afraid of the health risks relating to COVID-19 if I send my child to nurseries/kindergartens				

S107_06	Because nurseries/ kindergartens are not safe (other safety issues that are not related to COVID-19)				
S107_07	Because the child learns at home more than at the nursery or kindergarten				
S107_08	Because what children learn at nursery or KG is not important				
S107_09	The child is too young.				
S107_10	I did not want to enroll my child and pay the fees for online learning				
S107_11	For another reason, specify				

Throughout the rest of this survey, we want to focus on only one of your children. As I ask you questions, please think specifically about [FOCAL CHILD'S NAME].

We know that while it is a joy to have children, it can also sometimes be difficult for parents. We would like to make sure that we understand parents well and therefore we will be grateful if you always answer according to your true experience, feelings and opinions. We appreciate your transparency in responding to these questions.

S108. [ENUMERATOR - do not read out loud unless it is unclear] What is the sex of [FOCAL CHILD'S NAME]?

1. *Male*
2. *Female*

S109. [ENUMERATOR] Does [FOCAL CHILD'S NAME] have any disability, developmental delay or learning difficulty?

1. *Yes*
2. *No*

S110. [ENUMERATOR] Is [FOCAL CHILD'S NAME] enrolled in?

1. Nursery - This may also include online learning
2. KG1 - This may also include online learning
3. KG2 - This may also include online learning
4. Informal pre-school (e.g. Quranic centers or home-based nurseries)
5. None

S111. What is the age of [FOCAL CHILD'S NAME]?

1. 1 day-2 months
2. 3-5 months
3. 6-12 months
4. 13-24 months (Older than 1 year, up to 2 years)
5. 25-36 months (Older than 2 years, up to 3 years)
6. 37-48 months (Older than 3 years, up to 4 years)
7. 49-60 months (Older than 4 years, up to 5 years)
8. 61-72 months (Older than 5 years, up to 6 years)

S112.On a typical day, who spends the most time taking care of [FOCAL CHILD'S NAME]?

[open-ended; enumerator mark the most appropriate answer; mark one choice only]

1. Mother
2. Father
3. Mother and father
4. Male guardian
5. Female guardian
6. Both male and female guardians
7. Grandparent(s)
8. Siblings

9. Extended family
10. Nursery/ Kindergarten teachers
11. Nanny/non-relative caretaker
12. Other, specify

Section B - Parental Behaviors

S201. There are many different things that parents want in life for their children. What are the key things you desire most in life for [FOCAL CHILD'S NAME]?

[open-ended; enumerator mark the most appropriate answer; mark a maximum of 3 options only]

1. Good health and/or safety
2. Happiness
3. Wealth
4. All the material things they want/need (clothes, toys, home, etc.) and are well-provided for.
5. Career success
6. Good education / be smart
7. Be a good person or have a strong character
8. Religious piety
9. Obedience
10. Marriage/starting a family
11. Other [Please specify]

Now I would like to ask you more generally about helping [FOCAL CHILD'S NAME] be ready for grade 1 and your time with the child.

S202. Who do you think is *most* responsible for helping [FOCAL CHILD'S NAME] be ready for beginning grade 1?

[open-ended; enumerator mark the most appropriate answer; mark one choice only]

1. Mother
2. Father
3. Mother and father
4. Male guardian
5. Female guardian
6. Both male and female guardians
7. Grandparent(s)
8. Siblings
9. Extended family
10. Nursery/ Kindergarten teachers
11. Nanny/non-relative caretaker
12. Other, specify

S203. Can you tell me what are the main things that you do during a typical day when you are at home?

[open-ended; note to enumerator: do not read the following options, please mark the most appropriate answer; Please select all that apply]

1. Help my children get ready for the school day.
2. Housework
3. Help my children with their schoolwork
4. Play with my children
5. Teach my children things
6. Talk with my children
7. Visit relatives
8. Read the newspaper
9. Read books
10. Spend time with my family
11. Other, specify

S204. Now please think about how you spent the past 3 days, especially anything you did with [FOCAL CHILD'S NAME]

[Give the respondent some time to think]

Please tell me everything you did with [FOCAL CHILD'S NAME] in the past 3 days, especially any activities that [FOCAL CHILD'S NAME] likes or you think are good for her/his learning.

(***NOTE TO ENUMERATOR****: do not read options below, please select as many of the options that apply based on the respondents' answers*).

[Keep probing: "There are different things that parents sometimes do with their children. For example, [read the following slowly!] singing, playing, reading to them, counting with them, showing them things, talking to them, asking them about things and other activities. In the past 3 days, have you done any of these activities? [If the answer is YES, ask -] Which activities?" "In the past 3 days, what else did you do with [FOCAL CHILD'S NAME]? Please feel free to mention everything you did with her/him, even every little thing." … "Anything else that you can recall, especially things that s/he likes or you think are good for the child?"]

1. Sang with him/her
2. Read with him/her/ Read to my child
3. Told him/her a story
4. Played with him/her
5. Visited relatives with him/her
6. Talked to him/her about different things
7. Taught him/her how to pronounce specific letters or words
8. Taught him/her letters
9. Taught him/her shapes
10. Taught him/her things related to life skills
11. Counted with him/her/ taught him/her numbers
12. Looked at him/her and make faces-smile to see their reactions
13. Cooing and gurgling with baby - repeating their sounds
14. Tummy time- lay him/her on the floor and let him/her kick and move
15. Tried to help him/her improve their behavior or character

16. Watched videos/played on the internet
17. Coloring
18. Playing sports
19. Going to a public park/ play area/ entertainment venue
20. Did not mention any of the behaviours above
21. Other [specify]

S205. In your opinion, what are the most important things that a parent can do to help their children aged below 6 years to be ready to enter grade one socially and in terms of learning?

(***NOTE TO ENUMERATOR****: do not read options below, please select as many of the options that apply based on the respondents' answers*).

*[**Keep probing**: "What else can a parent do to help the child to be ready to enter grade one socially and in terms of learning?" Probe further: "What other good practices do you know about?" or "What else comes to your mind?"]*

1. Nothing, children will be ready on their own. *(Do not probe further - skip to next question)*
2. Nothing, it's the school's job to prepare him/her to learn. *(Do not probe further - skip to next question)*
3. Nothing, it is the nursery/kindergarten's job to prepare him/her to learn. *(Do not probe further - skip to next question)*
4. Making sure that they are physically healthy.
5. Reading to him/her.
6. Doing arts and crafts.
7. Talking and singing with him/her.
8. Teaching him/her the alphabet.
9. Teaching him/her how to pronounce.
10. Teaching him/her how to play with other children.
11. Teaching him/her how to obey the rules.
12. Teaching him/her how to be independent e.g. eating alone, getting dressed on their own.
13. Teaching him/her to express their emotions and feelings productively.
14. Taking him/her on trips and teaching him/her about the world around him/her.
15. Teaching him/her maths concepts like numbers, size, quantity, shapes, colours.
16. Encouraging him/her and making him/her like the idea of school by talking about it
17. Strengthening their character and boosting their confidence
18. Teaching him/her moral and manners
19. Other [specify]

I am now going to ask you specific questions about activities that some parents like to carry out with their children, while other parents prefer not to carry them out. I fully understand that there are different reasons why parents sometimes cannot do these activities and therefore I would like to ask you to answer to me according to your actual experience.

S206. *[Ask these questions if the respondent responds options 1, 2, 3 or 4 on Q 12.]* **Some parents tend to follow their child's gaze or pointing and respond to it while other parents do not. How about you? How often do you follow what [FOCAL CHILD'S NAME] looks at or points to and respond to it? Would you say that you do it very often, sometimes, rarely or never?**

1. Very often
2. Sometimes
3. Rarely
4. Never

S207. *[Ask these questions if the respondent responds options 1, 2, 3 or 4 on Q12.]* **Some parents mimic their child's noises while other parents do not mimic their child's noises. How about you? Would you say that you do it very often, sometimes, rarely or never?**

1. Very often
2. Sometimes
3. Rarely
4. Never

Now I would like to ask about your opinion regarding how children learn specific things.

S208. *[Ask this question if the respondent responds option 5 or 6 or 7 or 8 on Q12]* **Can you name some ways in which you can help [FOCAL CHILD'S NAME] learn letters?**

*(**NOTE TO ENUMERATOR**: do not read options below, please select as many of the options that are appropriate based on the respondents' answers).*
Probe at least twice: What else can you do? What else comes to your mind? What other ideas do you have?

1. Memorizing letters by referring to them in a book or by copying them onto paper
2. Playing a video that teaches letters
3. Playing a TV show episode that teaches letters (e.g. Ahlan Simsim)
4. Looking at books with child
5. Pointing out familiar letters or words (Focus on meaningful print such as a child's name, words on a cereal packet or a book title.)
6. Playing with toys that have letters on them (fridge magnets, puzzles with letters)
7. Read stories that children already know, pausing at intervals to encourage him/her to 'read' the next word.
8. Support children in recognising and writing their own names or simple words they know.
9. Talk to children about the letters that represent the sounds they hear at the beginning of their own names and other familiar words.
10. Demonstrate writing so that children can see spelling in action.
11. Demonstrate how to segment the sounds (phonemes) in simple words
12. Demonstrate how the sounds are represented by letters (graphemes).
13. This is the responsibility of my spouse/ other parent.
14. Other, specify
15. I don't know/not sure

S209. ***[****Ask this question if the respondent responds option 5 or 6 or 7 OR 8 on Q12.]* **Can you name some ways in which you can help [FOCAL CHILD'S NAME] learn about numbers, sizes, quantities, and shapes?**

(***NOTE TO ENUMERATOR****: do not read options below, please select as many of the options that are appropriate based on the respondents' answers*).
Probe at least twice: What else can you do? What else comes to your mind? What other ideas do you have?

1. Model and encourage counting on fingers
2. Memorizing numbers by looking at them in a book or copying them on paper
3. Identify numbers, shapes, sizes, or quantities in the environment (e.g. numbers on the keypad or on license plates)
4. Making reference to quantities, shapes, sizes or numbers in daily speech (e.g. we have more oranges than apples in the fridge)
5. Use words such as 'one', 'two', 'three', 'big', 'small', 'lots', 'fewer', 'hundreds', 'how many?' and 'count' in a variety of situations.
6. Model counting of objects and abstraction by counting things that are not objects, such as hops, jumps, clicks or claps
7. Use pictures and objects to illustrate counting songs, rhymes and number stories.
8. Talk about the methods children use to answer a problem they have posed, e.g. 'Get one more, and then we will both have two.'
9. Demonstrate the language for shape, position and measures in discussions, e.g. 'sphere', 'shape', 'box', 'in', 'on', 'inside', 'under', long, longer', 'longest', 'short', shorter', 'shortest', 'heavy', 'light', 'full' and 'empty'.
10. Watch a video that teaches numbers/ shapes/ sizes/ quantities
11. Through playing
12. This is the responsibility of my spouse/ other parent.
13. Other, specify
14. I don't know/not sure

S210. ***[****Ask these questions if the respondent responds option 7 OR 8 on Q12.]* **Can you name some ways in which you can help [FOCAL CHILD'S NAME] manage his/her feelings?**
(NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers).
Probe at least twice: What else can you do? What else comes to your mind? What other ideas do you have?

1. Talk to child about his/her feelings
2. Ask him/her questions about how they feel
3. Name and talk about a wide range of feelings and make it clear that all feelings are understandable and acceptable, including feeling angry, but that not all behaviours are.
4. If my child is stubborn, I empower him or her by giving him/her choices.
5. Model how you label and manage your own feelings (e.g. 'I'm feeling a bit angry and I need to calm down, so I'm going to…')
6. Ask children for their ideas on what might make people feel better when they are sad or cross. Show your own concern and respect for others, living things and the environment.
7. Establish routines with predictable sequences and events.
8. Prepare children for changes that may occur in the routine.
9. Model and involve children in finding solutions to problems and conflicts.
10. Tell the child to take a deep breath
11. Teach the child they can't get everything they want
12. This is the responsibility of my spouse/ other parent.
13. Other, specify
14. I don't know/not sure

Section C: Barriers and Motivators

In the following section, I'll be asking you about what helps you do certain activities and what makes it difficult to do certain activities with [FOCAL CHILD'S NAME] and what are the positive and negative things that happen as a result of doing those activities. The questions might sound similar, but they will be about different activities, and your answers will be very important.

NOTE TO ENUMERATOR: *If the respondent answers options 1, 2, 3 or 4 on Q12, please read the below*

"In the following questions, I'll be asking you about 'reading with [FOCAL CHILD'S NAME] from a book (whether physical or online), picture book or any other text each day'. This means reading to this child any book that is relevant to her/his age for at least 5 minutes or longer, as your schedule allows."

If the respondent answers options 5 or 6 on Q12, please read the below

"In the following questions, I'll be asking you about 'reading with [FOCAL CHILD'S NAME] from a book (whether physical or online), picture book or any other text each day'. This means reading to this child any book that is relevant to her/his age for at least 10 minutes or longer, as your schedule allows."

If the respondent answers options 7 or 8 on Q12, please read the below

"In the following questions, I'll be asking you about 'reading with [FOCAL CHILD'S NAME] from a book (whether physical or online), picture book or any other text each day'. This means reading to this child any book that is relevant to her/his age for at least 15 minutes or longer, as your schedule allows."

Questions about Reading with the Focal Child	
If the respondent answered option 2 on Q17 (i.e. is a DOER) = **→ only ask questions in this LEFT column ↓**	**If the respondent did not say option 2 on Q17 (i.e. is a NON-DOER) =** **→ only ask questions in this RIGHT column ↓**
S301. **Perceived Self-Efficacy/Skills (Reading)**	
S301_01_01. What helps you to read with [FOCAL CHILD'S NAME] each day? **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. Being able to read myself 2. Being able to find books in colloquial Arabic 3. Having books that are appropriate (easy or short in length and with pictures) 4. I feel like my child enjoys reading 5. It is a great opportunity to spend time with my child 6. Reading calms my child down 7. Finding cheap books options that I can buy 8. Having access to books through libraries or apps 9. I have some time in the day to read with my child 10. I have the energy to read with my child 11. That my child can read 12. Knowing that reading will benefit my child in the future 13. Having the peace of mind and not feeling stressed 14. My child is old enough 15. Other, specify	**S301_02_01. What would help you to read with [FOCAL CHILD'S NAME] each day?** **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. If I were able to read myself 2. If I am able to find books in colloquial Arabic 16. If I had books that are appropriate (easy or short in length and with pictures) 3. If my child enjoyed reading 4. It would be a great opportunity to spend time with my child 5. If reading would calm my child down 6. If I can find cheap book options that I can buy 7. If I had access to books through libraries or apps 8. If I had more time to read with my child 9. If I had more energy to read with my child 10. If my child could read 11. If I knew how reading would benefit my child in the future 12. If I had the peace of mind and did not feel stressed 13. If my child was old enough 14. Other, specify

S301_01_02. What are the main reasons that make reading books with [FOCAL CHILD'S NAME] each day difficult for you? **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. My child does not enjoy reading 2. My child is too young to understand books 3. My child can't read 4. My child has low attention span or moves around a lot 5. My child asks a lot of questions about the book 6. Not having money to buy books 7. My other children tend to interrupt or want attention 8. Finding enough number of books that are interesting 9. Finding enough number of books that are appropriate for my child 10. Finding time to read with my child 11. I feel stressed / do not have peace of mind 12. I cannot read myself 13. Being preoccupied with other house work 14. Having a job 15. I don't see the value in reading 16. I don't have the energy 17. Routine/child becomes bored 18. None 19. Other, specify	**S301_02_02. What are the main reasons that might make reading books with [FOCAL CHILD'S NAME] each day difficult for you?** **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* **1.** My child does not enjoy reading **2.** My child is too young to understand books **3.** My child can't read **4.** My child has low attention span or moves around a lot **5.** My child asks a lot of questions about the book **6.** Not having money to buy books **7.** My other children would interrupt or want attention **8.** Finding enough number of books that are interesting **9.** Finding enough number of books that are appropriate for my child **10.** Finding time to read with my child **11.** I feel stressed / do not have peace of mind **12.** I cannot read myself **13.** I am preoccupied with other house work **14.** Having a job **15.** I don't see the value in reading **16.** I don't have the energy **17.** Routine/ child becomes bored **18.** None **19.** Other, specify
S302. **Perceived Positive Consequences**[23] **(Reading)**	

[23] *Positive consequences can be translated also as "the positive things that happen when you [insert the behaviour]".*

S302_01_01. What are all the positive things that happen as a result of reading books with [FOCAL CHILD'S NAME] each day? **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. My child becomes smarter 2. My child learns new things 3. My child becomes creative 4. My child's language skills improve 5. It improves my child's mood 6. It helps my child focus on a task 7. It improves my relationship with my child 8. It allows my child and I to spend time together 9. It boosts my child's self confidence 10. Other, specify	**S302_02_01. What are all the positive things that might happen as a result of reading books with [FOCAL CHILD'S NAME] each day?** **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. My child would become smarter 2. My child would learn new things 3. My child would become creative 4. My child's language skills would improve 5. It would improve my child's mood 6. It would help my child focus on a task 7. It would improve my relationship with my child 8. It would allow my child and I to spend time together 9. If it boosted my child's self confidence 10. Other, specify
S303. **Perceived Negative Consequences (Reading)**	
S303_01_01. What are all the negative things that happen as a result of reading books with [FOCAL CHILD'S NAME] each day? (*NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers*) *Probe respondent with, what else?* 1. There are some inappropriate concepts in the books that the child may be exposed to 2. My child will become too introverted 3. My child will want me to read books with him/her every day 4. My other children feel jealous 5. It takes away from my time to fulfill my other duties 6. It takes away from my energy to fulfill my other duties 7. Books encourage children to be too imaginative	**S303_02_01. What are all the negative things that might happen as a result of reading books with [FOCAL CHILD'S NAME] each day?** (*NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers*) *Probe respondent with, what else?* 1. They would be exposed to some inappropriate concepts in the books 2. My child would become too introverted 3. My child would want me to read books with him/her every day 4. My other children would feel jealous 5. It would take away from my time to fulfill my other duties

8. My child would feel bored/routine 9. None 10. Not sure 11. Other, specify	6. It would take away from my energy to fulfill my other duties 7. Books encourage children to be too imaginative 8. My child would feel bored/routine 9. None 10. Not sure 11. Other, specify
S304. **Perceived Social Norms (Reading)**	
S304_01_01. Who are all the people that support the idea [24] of you reading books with [FOCAL CHILD'S NAME] each day? **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, who else? anyone in particular?* 1. Spouse 2. My mother 3. My mother-in-law 4. My father 5. My father-in-law 6. Siblings 7. Other relatives 8. Neighbors 9. The child him/herself 10. My other children/the child's siblings 11. Religious figure in community 12. My friends 13. Social media groups and experts 14. Child's teacher 15. Not sure 16. Other, specify	**S304_02_01. Who are all the people that would support the idea of you reading books with [FOCAL CHILD'S NAME] each day?** **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, who else? anyone in particular?* 1. Spouse 2. My mother 3. My mother-in-law 4. My father 5. My father-in-law 6. Siblings 7. Other relatives 8. Neighbors 9. The child him/herself 10. My other children/the child's siblings 11. Religious figure in community 12. My friends 13. Social media groups and experts 14. Child's teacher 15. Not sure 16. Other, specify

[24] *The meaning of "approve" in this question is very subtle. It implies the idea of "in favour of…." It does not mean "give permission" or "allow". Translators should use care when selecting the word to convey the meaning of this word and also "disapprove".*

S305. **Perceived Access (Reading)**	
S305_01_01. How difficult is it to get a sufficient number of books that are relevant to [FOCAL CHILD's NAME]'s age so that you can read with him/her each day? Is it very difficult, somewhat difficult or not difficult at all? ❑ A. Very difficult ❑ B. Somewhat difficult ❑ C. Not difficult at all	**S305_02_01. How difficult would it be to get a sufficient number of books that are relevant to [FOCAL CHILD's NAME]'s age so that you can read with him/her each day? Would it be very difficult, somewhat difficult or not difficult at all?** ❑ A. Very difficult ❑ B. Somewhat difficult ❑ C. Not difficult at all
S306. **Perceived Cues for Action/Reminders (Reading)**	
S306_01_01. How difficult is it to remember to read books with [FOCAL CHILD'S NAME] each day? Is it very difficult, somewhat difficult or not difficult at all? ❑ A. Very difficult ❑ B. Somewhat difficult ❑ C. Not difficult at all	**S306_02_01. How difficult do you think it would be to remember to read books with [FOCAL CHILD'S NAME] each day? Would it be very difficult, somewhat difficult or not difficult at all?** ❑ A. Very difficult ❑ B. Somewhat difficult ❑ C. Not difficult at all
S307. **Perceived Severity (Reading)**	
S307_01_01. How serious would it be if [FOCAL CHILD'S NAME] would not be able to read well by age 10? Would it be very serious, somewhat serious or not serious at all? ❑ A. Very serious ❑ B. Somewhat serious ❑ C. Not serious at all	**S307_02_01. How serious would it be if [FOCAL CHILD'S NAME] would not be able to read well by age 10? Would it be very serious, somewhat serious or not serious at all?** ❑ A. Very serious ❑ B. Somewhat serious ❑ C. Not serious at all

S308. **Perceived Action Efficacy (Reading)**	
S308_01_01. How likely is it that [FOCAL CHILD'S NAME] would not be able to read well by age 10 if you read books with [her/him] each day in the first 5 years? Is it very likely, somewhat likely or not likely at all? ❑ A. Very likely ❑ B. Somewhat likely ❑ C. Not likely at all	**S308_02_01. How likely is it that [FOCAL CHILD'S NAME] would not be able to read well by age 10 if you read books with [her/him] each day in the first 5 years? Is it very likely, somewhat likely or not likely at all?** ❑ A. Very likely ❑ B. Somewhat likely ❑ C. Not likely at all

"In the following questions, I'll be asking you about 'talking with [FOCAL CHILD'S NAME] each day'. This means talking with the child during the day. It can include talking with [FOCAL CHILD'S NAME], encouraging him/her to talk, giving him/her instructions or responding to him/her and engaging in reciprocal communication.

Questions about Talking with the Focal Child	
S309. **Perceived Self-Efficacy/Skills (Talk)**	
If the respondent answered option 6 on Q17 (i.e. is a DOER) = → only ask questions in this LEFT column ↓	If the respondent did not say option 6 on Q17 (i.e. is a NON-DOER) = → only ask questions in this RIGHT column ↓
S309_01_01. What helps you to talk with [FOCAL CHILD'S NAME] each day? *(NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers)* *Probe respondent with, what else?* 1. Having time to talk with the child 2. My child is old enough to talk 3. My child understands me and I understand him/her 4. Having the peace of mind to talk with my child - not feeling stressed 5. My child enjoys it when we talk together 6. It is an innate drive	**S309_02_01. What would help you to talk with [FOCAL CHILD'S NAME] each day?** *(NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers)* *Probe respondent with, what else?* 1. If I had time to talk with the child 2. If my child were old enough to talk 3. If my child were able to understand me and I were able to understand him/her

7. Having things to talk about with the child 8. Knowing the value talking with the child brings to their development 9. Other, specify	4. If I felt less stressed and had the peace of mind to talk to my child 5. If my child enjoyed it when we talk together 6. I do not feel an innate drive to do so 7. If I knew what to say to him/her/ had enough things to talk about with the child 8. If I knew the value talking with the child brings to their development 9. Other, specify
S310. **Perceived Positive Consequences (Talk)**	
S310_01_01. What are all the positive things that happen as a result of talking with [FOCAL CHILD'S NAME] each day? *(NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers)* *Probe respondent with, what else?* 1. My child learns words 2. My child becomes creative 3. My child feels happy. 4. It improves the trust and relationship I have with my child 5. It allows my child and I to spend time together 6. My child can become more social 7. My child can learn how to pronounce letters and words 8. My child learns a lot of things when we talk 9. It boosts my child's confidence 10. It improves my child's cognitive development 11. Not sure 12. Other, specify	**S310_02_01. What are all the positive things that might happen as a result of talking with [FOCAL CHILD'S NAME] each day**? *(NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers)* *Probe respondent with, what else?* 1. My child would learn words 2. My child would become creative 3. It would make my child feel happy 4. It would improve the trust and relationship I have with my child 5. It would allow my child and I to spend time together 6. My child would become more social 7. My child would learn how to pronounce letters and words 8. My child may learn a lot of things when we talk 9. If it boosted my child's confidence 10. It would improve my child's cognitive development 11. Not sure 12. Other, specify

"The following questions are about 'singing with [FOCAL CHILD'S NAME] each day'. This means singing with or to the child for at least 5 minutes or longer throughout the day. It can include all sorts of songs, including lullabies, nursery rhymes, songs from TV or YouTube or regular songs."

Questions about Singing with the Focal Child	
S311.**Perceived Self-Efficacy/Skills (Singing)**	
If the respondent answered option 1 on Q17 (i.e. is a DOER) = **→ only ask questions in this LEFT column ↓**	**If the respondent did not say option 1 on Q17 (i.e. is a NON-DOER) =** **→ only ask questions in this RIGHT column ↓**
S311_01_01. What helps you to sing with [FOCAL CHILD'S NAME] every other day? **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. Having time to sing with the child 2. My child learns new things while singing 3. My child is old enough to sing/talk 4. My child interacts with me and responds to my singing 5. It calms my child down 6. Having peace of mind and not feeling stressed 7. My child enjoys it when we sing together 8. I enjoy singing with the child. 9. Having enough songs to sing with my child 10. Knowing many children's songs 11. I know the value singing brings to the child 12. I can sing well 13. My child asks me to sing with him/her 14. I have electronic devices like computers or tablets 15. Other, specify	**S311_02_01. What would help you to sing with [FOCAL CHILD'S NAME] every other day?** **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. If I had time to sing with the child 2. If my child learned new things through singing 3. If my child were old enough to sing/talk 4. If my child interacted with me and responded to my singing 5. If I saw it helps calm my child down 6. If I had peace of mind and did not feel not stressed 7. If my child enjoyed it when we sing together 8. I enjoy singing with the child 9. If I had enough songs to sing with the child 10. If I knew more children's songs 11. If I knew the value singing brings to the child 12. If I could sing well 13. If my child asks me to sing with him/her 14. If I had electronic devices like computers or tablets 15. Other, specify

S311_01_02. What are the main reasons that make singing with [FOCAL CHILD'S NAME] every other day difficult for you? **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* **1.** My job takes up a lot of my time **2.** House work takes up a lot of my time **3.** I have to support my other children in their studies, leaving little time for singing **4.** I do not have much energy to sing with the child **5.** I feel stressed and don't have peace of mind **6.** The lack of songs to sing **7.** I don't see the value in singing **8.** My child prefers to sing alone/with others/without me **9.** I cannot sing well **10.** The songs are in another language I cannot speak **11.** My child's mood **12.** My child is too young **13.** None **14.** Other, specify	**S311_02_02. What are the main reasons that might make singing with [FOCAL CHILD'S NAME] every other day difficult for you?** **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. My job takes up a lot of my time 2. House work takes up a lot of my time 3. I have to support my other children in their studies, leaving little time for singing 4. I do not have much energy to sing with the child 5. Feeling stressed and not having peace of mind 6. The lack of songs to sing 7. If I saw the value in singing 8. My child prefers to sing alone/ with others/without me 9. I cannot sing well 10. The songs are in another language I cannot speak 11. My child's mood 12. My child is too young 13. None 14. Other, specify
S312. **Perceived Positive Consequences (Singing)**	
S312_01_01. What are all the positive things that happen as a result of singing with [FOCAL CHILD'S NAME] every other day? **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?*	**S312_02_01. What are all the positive things that might happen as a result of singing with [FOCAL CHILD'S NAME] every other day?**

1. My child releases energy 2. My child becomes creative 3. It improves my child's mood 4. It improves my relationship with my child 5. It allows my child and I to spend time together 6. My child can learn a lot through singing 7. My child will learn new words and/or how to pronounce letters and words 8. It boosts my child's confidence 9. Not sure 10. Other, specify	**(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. My child would release energy 2. My child would become creative 3. It would improve my child's mood 4. It would improve my relationship with my child 5. It would allow my child and I to spend time together 6. My child can learn a lot through singing 7. It would help my child learn new words and/or how to pronounce letters and words 8. If it boosted my child's confidence 9. Not sure 10. Other, specify
S313. **Perceived Negative Consequences (Singing)**	
S313_01_01. What are all the negative things that happen as a result of singing with [FOCAL CHILD'S NAME] every other day? (*NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers*) *Probe respondent with, what else?* 1. It takes away from time where I could be teaching the child 2. It takes away from my time to fulfill my other duties 3. It takes away from my energy to fulfill my other duties 4. My other children feel jealous 5. I am perceived as silly 6. The child starts liking music too much and make lots of noise 7. I feel bad because of religious rulings that prohibit singing 8. The child focuses more on singing than more important things 9. The child feels bored 10. Not sure 11. None	**S313_02_01. What are all the negative things that might happen as a result of singing with [FOCAL CHILD'S NAME] every other day?** (*NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers*) *Probe respondent with, what else?* 1. It would take away from time where I could be teaching the child 2. It would take away from my time to fulfill my other duties 3. It would take away from my energy to fulfill my other duties 4. My other children would feel jealous 5. I would be perceived as silly

12. Other, specify	6. The child might start liking music too much and make lots of noise 7. I would feel bad because of religious rulings that prohibit singing 8. The child would focus more on singing than more important things 9. The child would feel bored 10. Not sure 11. None 12. Other, specify

"The following questions are about 'playing with [FOCAL CHILD'S NAME] each day'. This means playing with the child for at least 15 minutes. It can include all sorts of activities in which you are actively playing and engaging in an activity with [FOCAL CHILD'S NAME], including tummy-time, making faces, playing tag, peek-a-boo, pretend play (for example, pretending to take care of a doll or pretending to be a doctor), arts and crafts, and sports."

Questions about Playing with the Focal Child	
S314. **Perceived Self-Efficacy/Skills (Play)**	
If the respondent answered option 4 on Q17 (i.e. is a DOER) = **→ only ask questions in this LEFT column ↓**	**If the respondent did not say option 4 on Q17 (i.e. is a NON-DOER) =** **→ only ask questions in this RIGHT column ↓**
S314_01_01. What helps you to play with [FOCAL CHILD'S NAME] each day? **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. Having time to play with the child 2. Having the space in the house to play 3. Having the peace of mind to play/ not being stressed 4. My child enjoys it when we play together 5. I enjoy playing with the child. 6. Having enough things in the house to play with the child 7. I have several ideas of ways to play with the child 8. Seeing the value play brings to the child 9. My child learns new things while playing 10. My child knows how to play the games/ with the toys 11. My other children play with us 12. Other, specify 13. Don't know	**S314_02_01. What would help you to play with [FOCAL CHILD'S NAME] each day?** **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. If I had time to play with the child 2. If I had the space in the house to play 3. If I were less stressed or had the peace of mind 4. If my child enjoyed it when we play together 5. If I enjoyed playing with the child. 6. If I had enough things in the house to play with the child 7. If I had ideas of how to play with the child 8. If I saw the value play brings to the child 9. If my child learns new things while playing 10. If my child knew how to play the games or with the toys 11. If my other children play with us 12. Other, specify 13. Don't know

S314_01_02. What are the main reasons that make playing with [FOCAL CHILD'S NAME] each day difficult for you? **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* **1.** My job takes up a lot of my time **2.** House work takes up a lot of my time **3.** I have to support my other children in their studies, leaving little time for play **4.** I do not have much energy to play with the child **5.** I feel stressed and don't have peace of mind **6.** The lack of things to play with **7.** I don't see the value in playing **8.** The lack of space in the house to play in **9.** My child prefers to play alone/ with others/without me **10.** Restrictions from my physical health **11.** Wastes a lot of time **12.** Social commitments **13.** I need to care for my younger child **14.** Other, specify **15.** None	**S314_02_02. What are the main reasons that might make playing with [FOCAL CHILD'S NAME] each day difficult for you?** **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* **1.** My job takes up a lot of my time **2.** House work takes up a lot of my time **3.** I have to support my other children in their studies, leaving little time for play **4.** I do not have much energy to play with the child **5.** Feeling stressed and not having peace of mind **6.** The lack of things to play with **7.** I don't see the value in playing **8.** The lack of space in the house to play in **9.** My child prefers to play alone/with others/ without me **10.** Restrictions from my physical health **11.** Wastes a lot of time **12.** Social commitments **13.** I need to care for my younger child **14.** Other, specify **15.** None
S315. **Perceived Positive Consequences (Play)**	
S315_01_01. What are all the positive things that happen as a result of playing with [FOCAL CHILD'S NAME] each day? **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?*	**S315_02_01. What are all the positive things that might happen as a result of playing with [FOCAL CHILD'S NAME] each day?** **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)**

1. My child releases energy 2. My child becomes creative 3. It improves my child's mood 4. It improves my relationship with my child 5. It allows my child and I to spend time together 6. My child can learn a lot through play 7. My child feels loved 8. It helps me understand my child and their thoughts 9. It boosts my child's confidence and strengthens his/her character 10. It improves my child's development 11. Not sure 12. Other, specify	*Probe respondent with, what else?* 1. My child would release energy 2. My child would become creative 3. It would improve my child's mood 4. It would improve my relationship with my child 5. It would allow my child and I to spend time together 6. My child may learn a lot through play 7. My child would feel loved 8. It would help me understand my child and their thoughts 9. It would boost my child's confidence and strengthen his/her character 10. It would improve my child's development 11. Not sure 12. Other, specify
S316. **Perceived Negative Consequences (Play)**	
S316_01_01. What are all the negative things that happen as a result of playing with [FOCAL CHILD'S NAME] each day? (*NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers*) *Probe respondent with, what else?* 1. It takes away from time where I could be teaching the child 2. It takes away from my time to fulfill my other duties 3. It takes away from my energy to fulfill my other duties 4. My other children feel jealous 5. I am perceived as silly 6. My child wants to play with me all day 7. It distracts the child from studying 8. Other, specify 9. Not sure 10. None	**S316_02_01. What are all the negative things that might happen as a result of playing with [FOCAL CHILD'S NAME] each day?** (*NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers*) *Probe respondent with, what else?* 1. It would take away from time where I could be teaching the child 2. It would take away from my time to fulfill my other duties 3. It would take away from my energy to fulfill my other duties 4. My other children would feel jealous 5. I would be perceived as silly 6. My child would want to play with me all day

	7. It would distract the child from studying 8. Other, specify 9. Not sure 10. None
S317. **Perceived Social Norms (Play)**	
S317_01_01. Who are all the people that support the idea of you playing with [FOCAL CHILD'S NAME] each day? (*NOTE TO ENUMERATOR*: do not read options below, please select as many of the options that are appropriate based on the respondents' answers) *Probe respondent with, who else? anyone in particular?* 1. Spouse 2. My mother 3. My mother-in-law 4. My father 5. My father-in-law 6. Siblings 7. Other relatives 8. Neighbors 9. The child him/herself 10. My other children/the child's siblings 11. Religious figure in community 12. My friends 13. Social media groups and experts 14. Child's teacher 15. Not sure 16. Other, specify	**S317_02_01. Who are all the people that would support the idea of you playing with [FOCAL CHILD'S NAME] each day?** (*NOTE TO ENUMERATOR*: do not read options below, please select as many of the options that are appropriate based on the respondents' answers) *Probe respondent with, who else? anyone in particular?* 1. Spouse 2. My mother 3. My mother-in-law 4. My father 5. My father-in-law 6. Siblings 7. Other relatives 8. Neighbors 9. The child him/herself 10. My other children/the child's siblings 11. Religious figure in community 12. My friends 13. Social media groups and experts 14. Child's teacher 15. Not sure 16. Other, specify
S318. **Perceived Access (Play)**	
S318_01_01. How difficult is it to find the playthings needed to play with [FOCAL CHILD'S NAME] each day? Is it very difficult, somewhat difficult or not difficult at all?	**S318_02_01. How difficult would it be to find the playthings needed to play with [FOCAL CHILD'S**

❑ A. Very difficult ❑ B. Somewhat difficult ❑ C. Not difficult at all	**NAME] each day? Would it be very difficult, somewhat difficult or not difficult at all?** ❑ A. Very difficult ❑ B. Somewhat difficult ❑ C. Not difficult at all
S318_01_02. How difficult is it for you to find ideas of ways to play with "[FOCAL CHILD'S NAME]? ❑ A. Very difficult ❑ B. Somewhat difficult ❑ C. Not difficult at all	**S318_02_02. How difficult would it be for you to find ideas of ways to play with "[FOCAL CHILD'S NAME]?** ❑ A. Very difficult ❑ B. Somewhat difficult ❑ C. Not difficult at all

"The following questions are about 'counting with [FOCAL CHILD'S NAME] each day'. This means using fingers to count, counting objects and showing the child what 2 looks like in comparison to 3, using words such as 'one', 'two', 'three', 'lots', 'fewer', 'hundreds', 'how many?' and 'count' in a variety of situations. In the questions, we'll refer to this as counting, but please bear in mind the other activities we've just mentioned when responding."

Questions on Counting with the Focal Child	
S319. **Perceived Self-Efficacy/Skills (Counting)**	
If the respondent answered option 11 on Q17 (i.e. is a DOER) = **→ only ask questions in this LEFT column ↓**	**If the respondent did not say option 11 on Q17 (i.e. is a NON-DOER) =** **→ only ask questions in this RIGHT column ↓**
S319_01_01. What helps you to count with [FOCAL CHILD'S NAME] each day? **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. That my child can speak 2. That my child has learned numbers/counting at nursery/kindergarten	**S319_02_01. What would help you to count with [FOCAL CHILD'S NAME] each day?** **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. If my child could speak

3. My child is old enough to understand 4. Having time 5. Having experience from when my older children were young 6. My child enjoys it 7. I know how to teach math 8. Knowing that it will help my child become good at math 9. Having peace of mind and not being stressed 10. I have resources such as books, electronic devices, access to Internet, or toys with numbers on them 11. The home environment is conducive to learning 12. Knowing ways to count through play 13. Other, specify	2. If my child has already learned numbers/counting at nursery or kindergarten 3. If my child were old enough to understand 4. If I had more time 5. If I had experience from having other children 6. If my child enjoyed it 7. If I knew how to teach math 8. Knowing that it will help my child become good at math 9. If I had peace of mind and was not stressed 10. If I had resources such as books, electronic devices, access to Internet, toys with numbers on them 11. If the home environment were conducive to learning 12. If I knew ways to count through play 13. Other, specify
S319_01_02. What are the main reasons that make counting with [FOCAL CHILD'S NAME] each day is difficult for you? (*NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers*) *Probe respondent with, what else?* 1. Child is young 2. Having time 3. My child is not interested 4. I don't see the value in counting 5. My other children interrupt 6. My child has low attention span/ moves around a lot 7. Being preoccupied with the education of my older children 8. Not having resources (such as books, electronic devices or access to Internet or toys with numbers on them) 9. Boredom/ routine 10. Not sure	**S319_02_02. What are the main reasons that might make counting with [FOCAL CHILD'S NAME] each day difficult for you?** (*NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers*) *Probe respondent with, what else?* 1. If my child *were* young 2. If I didn't have much time 3. If my child were not interested 4. If didn't see the value in counting 5. If my other children interrupt 6. If my child had low attention span/ moved around a lot

11. Other, specify 12. None	7. If I were preoccupied with the education of my older children 8. If I didn't have resources (such as books, electronic devices or access to Internet or toys with numbers on them) Boredom/routine 9. Not sure 10. Other, specify 11. None
S320. **Perceived Positive Consequences (Counting)**	
S320_01_01. What are all the positive things that happen as a result of counting with [FOCAL CHILD'S NAME] each day? **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. My child becomes smarter 2. My child learns new things 3. It prepares my child well for school 4. My child's math skills improve 5. It allows my child and I to spend time together 6. Not sure 7. Other, specify	**S320_02_01. What are all the positive things that might happen as a result of counting with [FOCAL CHILD'S NAME] each day?** **(***NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers***)** *Probe respondent with, what else?* 1. My child would become smarter 2. My child would learn new things 3. It would prepare my child well for school 4. My child's math skills would improve 5. It would allow my child and I to spend time together 6. Not sure 7. Other, specify
S321.**Perceived Negative Consequences (Counting)**	
S321_01_01. What are all the negative things that might happen as a result of counting with [FOCAL CHILD'S NAME] each day? (*NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers*) *Probe respondent with, what else?* 1. It takes away from time where I could be teaching the child 2. It takes away from my time to fulfill my other duties	**S321_02_01. What all the negative things that might happen as a result of counting with [FOCAL CHILD'S NAME] each day?** (*NOTE TO ENUMERATOR: do not read options below, please select as many of the options that are appropriate based on the respondents' answers*) *Probe respondent with, what else?*

3. It takes away from my energy to fulfill my other duties 4. My other children feel jealous 5. Other, specify 6. The child feels bored 7. Not sure 8. None	1. It takes away from time where I could be teaching the child 2. It would take away from my time to fulfill my other duties 3. It would take away from my energy to fulfill my other duties 4. My other children would feel jealous 5. Other, specify 6. The child would feel bored 7. Not sure 8. None

Section D: Sources of Information

For the next set of questions, I will ask you about the sources of information or people you turn to when you need to learn more about [FOCAL CHILD'S NAME]'s development and learning. Some parents turn to these people or sources of information, while some don't feel that need.

S401. How often do you turn to the following people or sources of information when you have a problem or question related to [FOCAL CHILD'S NAME]'s learning, development or behaviour? Would you say that you do it "'VERY OFTEN', 'SOMETIMES', 'RARELY', or 'NEVER', or 'NOT APPLICABLE'"

401_01 (*Only ask if respondent responds option 1 on Q5)* **Your spouse?**

1.Very often
2.Sometimes
3.Rarely
4.Never
5.Not applicable

401_02 Your own mother or father?

1. Very often
2. Sometimes
3.Rarely
4.Never
5.Not applicable

401_03 (*Only ask if respondent responds options 1 or 4 on Q5)* **Your in-laws?**

1. Very often
2. Sometimes
3.Rarely
4.Never
5.Not applicable

401_04 Your siblings?

1. Very often
2. Sometimes
3.Rarely
4.Never
5. Not applicable

401_05 Friends or other adults who have babies or young children of their own?

1. Very often
2. Sometimes
3.Rarely
4.Never
5.Not applicable

401_06 Pediatricians, doctors, or specialists?

1.Very often
2.Sometimes
3.Rarely

4.Never

401_07 A religious figure?

1.Very often
2.Sometimes
3.Rarely
4.Never

401_08 A religious text or teaching?

1. Very often
2. Sometimes
3.Rarely
4.Never

401_09 Searching on the Internet?

1. Very often
2. Sometimes
3.Rarely
4.Never
5.Not applicable

401_10 A parenting expert?

1.Very often
2.Sometimes
3.Rarely
4.Never

401_11 Radio?

1.Very often
2.Sometimes
3.Rarely
4.Never

401_12 Movies or television?

1 Very often
2.Sometimes
3.Rarely
4.Never

401_13 Newspapers?

1.Very often
2.Sometimes
3.Rarely
4.Never

401_14 Magazine articles or books?

1.Very often
2.Sometimes
3.Rarely
4.Never

401_15 Social media (e.g. Facebook, YouTube or Instagram)?

1.Very often
2.Sometimes
3.Rarely

4.Never

401_16 Websites that discuss parenting?

1.Very often
2.Sometimes
3.Rarely
4.Never

401_17 *[List answers coded 1, 2, or 3 on Q45 A-P]* **Which of the aforementioned sources that you said you used is the most helpful to you when you need to learn more about [FOCAL CHILD'S NAME]'s development and learning?**

[Please select only one option below and reread options to respondents if necessary]

S402. Are you part of any social media groups (including Facebook groups, pages and WhatsApp groups) that are for parents and discuss and provide advice on issues related to raising children?

1. Yes, please specify No [Go to Question 47]

S403. Do you visit any parenting websites?

- Yes, please specify
- No

S404. Do you have any parenting applications on your mobile/tablet?

1. Yes, please specify
2. No

S405. *[Ask this question only if the respondent responded options 3, 4, 5, 6, 7, or 8 on Question 12* **] Does [FOCAL CHILD'S NAME] use a mobile phone or tablet to access applications or YouTube?**

(Note to enumerator: please read the options below and select all that apply)

1. Yes-Games
2. Yes-Educational applications
3. Yes- YouTube
4. Yes- Other, specify
5. Doesn't use any of the above

S406.I've asked you a lot about the sorts of activities parents do with their children, now I'd like to understand a bit more about the language spoken at home.

S406_01. Modern Standard Arabic can be very different from the colloquial Arabic we speak on a day to day basis. To what extent would you say you feel confident speaking in Modern Standard Arabic? Would you say that you feel very confident, somewhat confident, somewhat not confident or not confident at all?

1. Very confident
2. Somewhat confident
3. Somewhat not confident
4. Not confident at all
5. Don't Know / no response

S406_02. [*Ask this question only if respondent answers options 1 or 2 on Question 50a*] **To what extent would you be open to the idea of using Modern Standard Arabic in some of your speech with [FOCAL CHILD'S NAME]? To a large extent, to some extent, or not at all?**

1. To a large extent
2. To some extent
3. Not at all
3. Don't Know / no response

Section E: COVID-19

We're now going to ask you some questions about COVID-19 and how it may have influenced your family and routines.

S501. As a result of COVID-19, would you say that you have more or less time to sing, play, talk, read or count with [FOCAL CHILD'S NAME] at home, or has it remained the same?

[Enumerator: do not read options below, please select all that apply]

1. I have more time to sing with the child at home
2. I have more time to play with the child at home
3. I have more time to talk with the child at home
4. I have more time to read with the child at home
5. I have more time to count with the child at home
6. I have less time to sing with the child at home
7. I have less time to play with the child at home
8. I have less time to talk with the child at home
9. I have less time to read with the child at home
10. I have less time to count with the child at home
11. COVID-19 has not changed the amount of time I have to do the various activities with my child at home.

S502. *[Note to Enumerator: only ask if the respondent responded option 1,2, 3 or 4 on any of Q7.5]* **Has the nursery/kindergarten of any of your children closed due to COVID-19 in the last 2 weeks?**

1. Yes
2. No
3. It was a holiday/ school break, not applicable

S503. [NOTE TO ENUMERATOR: only ask the following question if parents have children aged 6-18 (i.e. Q7a > 0 -- if they don't have children aged 6-18 please skip to Q54] **To what extent have you had to support your school-aged children/child in their online learning during the pandemic? Would you say you did not have to support them at all, to a small extent, to some extent or to a large extent?**

1.To a large extent
2.To some extent
3.To a small extent
4.Not at all
5.Not applicable (child not enrolled in school/ online learning)

Section F: Demographic Information

Finally, I would like to ask you some questions about yourself and your household.

S601. How long have you lived in Jordan for?

1. My whole life
2. Most of my life
3. 10+ years
4. 6-9 years
5. 0-5 years

S602. *(Note to enumerator: please ask this question to respondents who choose options 3, 4, or 5 on Q54*). **Which other country/countries have you lived in other than Jordan?**

(Select all that apply)

1. Syria
2. Iraq
3. Palestine
4. Other Arab country
5. A Western country (US, Canada, Europe, etc.)
6. Other country - not Arab or Western

S603_01. Do you work (as in have a paying job)?

1. Yes
2. No, I am a homemaker.
3. No, I am voluntarily unemployed.
4. No, I am temporarily unemployed.
5. No, I am a school student.
6. No, I am a university/post-secondary student.
7. No, I am retired.

S603_02. *[Note to enumerator: please ask this question if the respondent answered option 1 on Q56A]* **What is your employment status?**

1. Full-Time Employee
2. Part-Time Employee
3. Self-Employed
4. Other [please specify]

S603_03. *[Note to enumerator: please ask this question if the respondent answered option 1 on Q56A]* **What field of work is your job in?**

1. Education
2. Health
3. Management/business
4. Finance
5. Transportation

6. Agriculture
7. Real-estate
8. Military
9. Construction
10. Legal
11. Telecommunication
12. Government and public administration
13. Other (specify)

S603_04. *[Note to enumerator: Ask this question only if respondent chooses option 1, 2, or 3 on Q5]* **Does [your spouse/child's other parent] work (as in has a paying job)?**

1. Yes
2. No, she/he is a homemaker.
3. No, she/he is voluntarily unemployed.
4. No, she/he is temporarily unemployed.
5. No, she/he is a school student.
6. No, she/he is a university/post-secondary student.
7. No, she/he is retired.
8. Not sure

S603_05. *[Note to enumerator: Ask this question only if respondent chooses option 1, 2, or 3 on Q5 AND option 1 on Q56D]* **What is [your spouse's/child's other parent's] employment status?**

1. Full-Time Employee
2. Part-Time Employee
3. Self-Employed
4. Other [please specify]
5. Not sure

S603_06. What is your highest level of education?

1. Illiterate/Uneducated
2. Below 10th Grade (Basic Education)
3. 10th Grade (Compulsory Education)
4. General Secondary Certificate (Tawjihi)
5. Diploma/Community College
6. Undergraduate Degree (Bachelor's Degree)
7. Higher Diploma
8. Postgraduate Degree (Master's Degree)
9. Doctorate Degree (PhD)

S603_07. *[Note to enumerator: Ask this question only if the respondent chooses option 1, 2, or 3 on Q5]* **What is the highest level of education of [your spouse/child's other parent]?**

1. Illiterate/Uneducated
2. Below 10th Grade (Basic Education)
3. 10th Grade (Compulsory Education)
4. General Secondary Certificate (Tawjihi)
5. Diploma/Community College
6. Undergraduate Degree (Bachelor's Degree)
7. Higher Diploma
8. Postgraduate Degree (Master's Degree)

9. Doctorate Degree (PhD)

S604. We would like to understand whether children's learning opportunities are influenced by how much their household earns. Could you please tell us what is your family's average net monthly income (after tax and social security deductions)? We will not share the information with any person or institution outside of our research.

1. No income
2. 260 JOD or less
3. 261-460 JOD
4. 461 - 660 JOD
5. 661 - 860 JOD
6. 861 - 1060 JOD
7. 1061 JOD or more
8. Refused
9. I don't know

S605. Does the household/ any member of your household own any of the following services or devices:

(Enumerator: read all options below and select all that applies)

	Yes	No
Solar heater	Yes	No
Oven/cooker/gas	Yes	No
Microwave	Yes	No
Air conditioner	Yes	No
A private car/truck/van	Yes	No
A mobile	Yes	No
A smartphone	Yes	No
PC/laptop/tablet	Yes	No
Internet subscription	Yes	No
Bed	Yes	No
Water cooler	Yes	No
Fan	Yes	No
Refrigerator	Yes	No

S606_01. How old were you at the birth of your first child?

[Enter whole number]

XX years

S606_02. *[Ask this question only if respondents answer option 2 on Question 7.2 for the focal child]* **How old were you when you became the guardian of [FOCAL CHILD'S NAME]?**

[Enter whole number]

XX years

S606_03. How old are you now?

[Enter whole number]

XX years

S606_04. *[Note to enumerator: Ask this question only if the respondent chooses option 1 on Q5]* **How old is your spouse/ child's other now?**

[Enter whole number]

XX years

Section G - Focus groups and call backs

S701_01. Would you be interested in attending any follow up sessions we have with parents to better understand parental practices with their children in the early years?

1. Yes
2. No

S701_02. *[Ask this question only if the respondent answers option 1 to Q60A]* **What is your phone number?**

XXX-XXXXXXX [enter phone number here]

"Thank you so much for your time. Your answers are going to help us to better understand what makes it possible for parents in Jordan to support their children's early learning before they start school. Before I leave, is there anything else you would like to tell me about this topic or anything you would like to ask me about?"

S702. [open response]

"Thank you again! This has been very helpful. Have a nice day!"

Appendix F: Quantitative data analysis plan

We used a five-step process to understand the trends in the data:

1. **Explored each key or relevant variable.** This is an important process to determine how each key or relevant variable is distributed, value coded, with missing cases, etc. Such variable-level assessment was a critical step for a statistical level usability of the variables for descriptive and relational analysis.

2. **Grouped variables into major conceptual categories/domains based on the initial instrument design and research hypotheses, knowledge, opinions/attitudes, behaviors, etc.** We undertook this step to see to what extent, for example, each variable and domain varied and if there was any significant pattern by gender, education level, region, etc.

3. **Conducted descriptive analyses.**
   a. To examine frequencies and averages (and differences and deviations) to determine how each key variable as a data evidence (shown distribution) informed us about something larger as an issue and how it may be used as a part of numerator or denominator for creating a new indicator variable to be coded. Simple analysis and relevant interpretation was also conducted against our initial hypotheses, expectation, previous studies or known facts.
   b. To determine if each variable should be used for further analysis either in relationship with other variables or together with other variables in statistical modeling.
   c. To determine how each variable distribution varied by known characteristics or other categorical variables such as gender, age cohorts, SES status, regions, etc.

4. **Developed composite variables.**
   a. Based on steps 2 and 3, we conducted multivariate correlational relationships within each and between domains.
   b. We then conducted variable sensitivity analyses to determine how sensitive each variable is to the domain composite measure.
   c. Based on the analysis results from the above, we created new composite variables (new outcome variables) for measuring the domain concepts.

5. **Conducted relational analyses.** We used the composites as outcome variables in the model and other characteristics and "policy or program manipulable" variables as explainable variables. The purpose is to detect to what extent and in which direction that "policy manipulable" variables/factors explain the variation of the composite in the model controlling for the effects of the characteristic variables. These models were generated emically from the data as well as using such models as Bornstein's (Bornstein & Cheah, 2006) theory of the relationship between beliefs

and behaviors. All predictive modeling was performed both with and without bootstrapping to give better population-level estimates.

It is important to note that the analytic process described above was iterative and moved forward and backward through steps as new hypotheses are generated and tested.

Appendix G: Involvement composite description

To understand Jordanian and Syrian parents' involvement related to their children's readiness to learn, we constructed an overall composite indicator that measured the level of involvement of respondents based on how many readiness to learn behaviors they reported engaging in. This section explains how this composite indicator was developed, how it was interpreted, and the implications of the findings.

More than 40 questions and responses were tested for statistical reliability in the development of the key composite indicator of parents' educational perception and practice. After multiple iterations of the item sensitivity tests, 32 items were considered the most reliable items for the composite indicator with the overall reliability alpha coefficient of 0.74.

Table 1G

Reliability statistics for involvement composite variable

Cronbach's alpha	Cronbach's alpha based on standardized items	N of items
0.73	0.74	32

As part of the composite measure development, the analysis tested how each of the variables under the relevant domain is related to the overall scaled composite measure (item-total correlation) and its overall reliability coefficient (Cronbach's alpha) indicator.

Table 2G

Item-total statistics for involvement composite variable

	Scale mean if deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha if item is deleted
Help my children get ready for the school day	4.85	11.97	0.31	0.72
Help my children with their schoolwork	4.72	12.21	0.13	0.74
Play with my children	4.46	11.94	0.17	0.74
Teach my children things	4.78	11.92	0.25	0.73
Talk with my children	4.76	11.49	0.40	0.72
Read books	4.95	12.67	0.08	0.73
Sang with him/her	4.83	12.29	0.15	0.73
Read with him/her – I read to my child	4.91	12.38	0.20	0.73
Told him/her a story	4.92	12.29	0.27	0.73

Talk to him/her about different things	4.79	12.23	0.15	0.73
Taught him/her how to pronounce specific letters or words	4.85	12.00	0.29	0.73
Taught him/her letters	4.80	11.98	0.25	0.73
Taught him/her shapes	4.93	12.22	0.37	0.72
Taught him/her things related to life skills	4.89	12.18	0.27	0.73
Counted with him/her – I taught him/her numbers	4.83	12.29	0.15	0.73
Tried to help him/her improve their behavior or character	4.91	12.56	0.10	0.73
Watched videos/played on the internet	4.87	12.08	0.29	0.73
Coloring	4.92	12.59	0.09	0.73
Playing sports	4.95	12.66	0.11	0.73
Making sure that they are physically healthy	4.92	12.48	0.16	0.73
Reading to him/her	4.86	12.23	0.20	0.73
Doing arts and crafts	4.93	12.53	0.14	0.73
Talking and singing with him/her	4.90	12.27	0.23	0.73
Teaching him/her the alphabet	4.42	11.87	0.20	0.73
Teaching him/her how to pronounce	4.77	11.80	0.29	0.72
Teaching him/her how to play with other children	4.79	11.51	0.42	0.72
Teaching him/her how to obey the rules	4.80	11.79	0.32	0.72
Teaching him/her how to be independent	4.73	11.51	0.38	0.72
Teaching him/her to express their emotions and feelings freely	4.88	11.62	0.55	0.71
Taking him/her on trips and teaching him/her about the world around him/her	4.93	12.27	0.32	0.73
Strengthening their character and boosting their confidence	4.65	11.51	0.33	0.72
Teaching him/her moral and manners	4.69	11.75	0.27	0.73

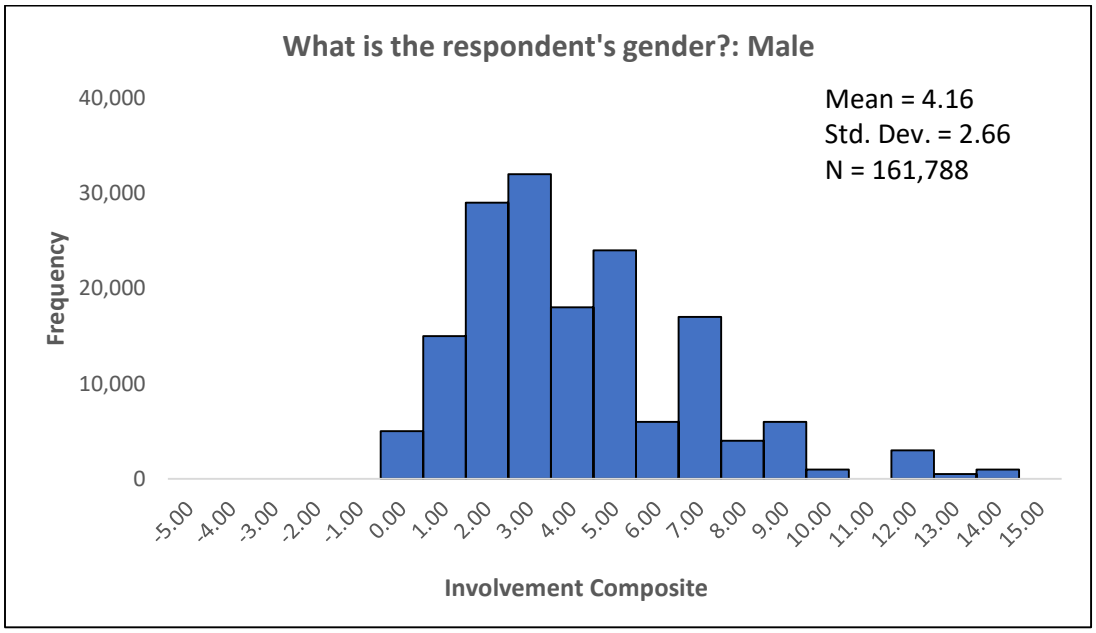
A histogram (distribution) of the composite score shows that there is a fair amount of scaled value difference among the surveyed parents in perception and practices of education. High scores on the composite mean that parents engage in behaviors/practices that support their

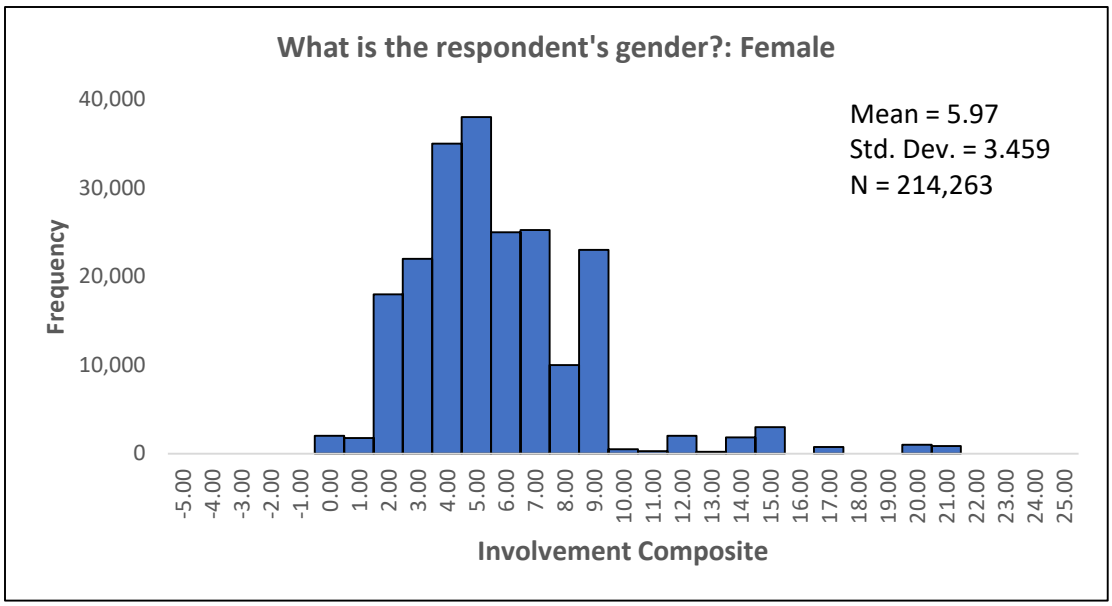
children's early education. The high scoring parents are, therefore, more likely to be involved in behaviors that support children's readiness to learn. Low scores on the composite suggest the opposite.

The composite rank orders the parents' overall score in positive educational attitudes and involvement in behaviors/practices that promote their child's readiness to learn (see histogram distribution). Although it is not a perfect normal distribution, selected score outliers, with composite values larger than 8.55 or smaller than 1.40 (1 standard deviation plus or minus of the mean score) are considered as high and low scores. Noteworthy is the right skewed distribution due to high performing parents, meaning that most parents were reporting engaging in very few of the activities included on the composite. The mean is low in comparison to the possible total score, indicating that while most parents fall into the "mid involvement" category, the number of behaviors and attitudes they do/hold associated with early learning is quite low (around 5 items out of a possible 32). This suggests that there is significant room for improvement even among those mid-level involvement parents. It is also important to know that the self-reported nature of many of the responses in the survey may contribute to the low mean score: many parents may not have recalled in the moment all of the things they had done with the focal child within the past three days.

Figure 1G

Side-by-side distributions of respondents according to score on involvement composite by gender




What is the respondent's gender?: Female
Mean = 5.97
Std. Dev. = 3.459
N = 214,263
Frequency
40,000
30,000
20,000
10,000
0
-5.00
-4.00
-3.00
-2.00
-1.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
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22.00
23.00
24.00
25.00
Involvement Composite

Appendix H: Household items composite description

The study team constructed an overall SES composite indicator measuring possession of household items. All 13 household item survey questions were tested for statistical reliability in the development of the key composite indicator of household SES. After an item sensitivity test, 12 items were considered the most reliable items for the composite indicator with the overall reliability alpha coefficient of .71. The one variable that did not end up being included in the composite indicator was "mobile phone" which was less reliable than the other items.

Table 1H

Reliability statistics for household items/SES composite variable

Cronbach's alpha	Cronbach's alpha based on standardized items	N of items
0.71	0.69	12

As part of the composite measure development, we tested the relation of each of the variables under the relevant domain to the overall scaled composite measure (item-total correlation) and its overall reliability coefficient (Cronbach's alpha).

Table 2H

Item-total statistics for household items/SES composite variable

	Scale mean if deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha if item is deleted
Solar heater	7.34	4.99	0.14	0.71
Oven/cooker/gas	6.45	5.02	0.15	0.71
Microwave	6.86	4.05	0.46	0.67
Air conditioner	6.97	4.13	0.42	0.68
A private car/truck/van	6.93	4.09	0.43	0.68
A smartphone	6.44	4.99	0.24	0.71
PC/Laptop/Tablet	7.11	4.20	0.43	0.68
Internet subscription	7.02	4.31	0.33	0.70
Bed	6.62	4.22	0.49	0.67
Water cooler	6.81	3.93	0.54	0.66
Fan	6.48	4.93	0.19	0.71
Refrigerator	6.42	5.10	0.20	0.71

Appendix I: Barrier analysis summary

Summary

Reading						
Determinant	**Doers %**	**Non-Doers %**	**P-value**	**Doers**		**Non-doers**
What make it easier?						
It is a great opportunity to spend time with my child	23.4%	8.4%	0	Doers are 3 times more likely to give this response than Non-doers.		
What makes it difficult?						
Being preoccupied with other house work	45.0%	15.4%	0	Doers are 3.9 times more likely to give this response than Non-doers.		
I don't have the energy	92.2%	2.9%	0	Doers are 127 times more likely to give this response than Non-doers.		
Perceived Negative Consequences						
My child will become too introverted	6.1%	0.2%	0	Doers are 10.9 times more likely to give this response than Non-doers.		
Books encourage children to be too imaginative	8.6%	1.6%	0	Doers are 4.5 times more likely to give this response than Non-doers.		
Perceived Severity - How serious would it be if focal child would not be able to read well by age 10? Would it be very serious, somewhat serious or not serious at all?						
Not serious at all	2.2%	9.3%	0			Non-doers are 4.3 more likely to give this response than Doers.
Singing						
What makes it easier?						

It calms my child down	38.6%	6.2%	0	Doers are 5.1 times more likely to give this response than Non-doers.		
Perceived Positive Consequences						
My child releases energy	40.7%	14.1%	0	Doers are 3.1 times more likely to give this response than Non-doers.		
Perceived Negative Consequences						
The child starts liking music too much and make lots of noise	2.5%	9.2%	0			Non-doers are 3.5 more likely to give this response than Doers.
Playing						
Perceived Negative Consequences						
The child refused to play with me	63.9%	0.0%	0	Doers are 2.8 times more likely to give this response than Non-doers.		
Social Norms: Who Approves						
Spouse	79.7%	72.6%	0	Doers are 2.2 times more likely to give this response than Non-doers.		
How difficult would it be to find the playthings needed to play with focal child each day?						
Not difficult at all	59.7%	35.0%	0	Doers are 2.1 times more likely to give this response than Non-doers.		
Counting						
Self-Efficacy: What makes it easier?						
Knowing that it will help my child become good at math	23.0%	10.0%	0	Doers are 2.3 times more likely to give this response than Non-doers.		

Appendix J: Focus Group Discussion Guides

Mothers

Parental behavior in the Early Years- Phase 1

Post-quant Mothers' FGD Guide

Discussion guide

The following document is a discussion guide for the focus groups that will be held with parents with children below 6 who participated in the quantitative survey. The purpose is to delve deeper into any unclear findings from the survey.

Pre-FGD Training Notes:

- During the training, facilitators and note takers will be asked to envision multiple FG session scenarios that could happen. Organize role-playing for the FGD training to avoid or handle any of the following potential scenarios:
  - One sided opinion becomes dominant or one or a few participants are dominant.
  - Some participants are clearly "shut off," too quiet, or are afraid to speak up.
  - Some participants get too emotionally expressive or involved and become angry or disruptive, affecting overall FGD sentiment and the qualitative data.
  - Some topics/discussions could not be discussed or prematurely finished or skipped.
  - A potential conflict in debate, argument, or unnecessary oral fight emerges. Make sure we all facilitators allow or permit different ideas and opinions. This is research and no one is right or wrong.
  - Multiple participants talk at the same time and many don't listen to others.
  - One or a few participants walk out the room abruptly or unexpectedly, showing dissatisfaction with questions or inquiries.

- Some participants may not want to express their opinions if they are asked in front of others.

- Plan and follow the FGD time management and practice in a pilot run. Make sure that all critical FGD questions are raised and discussed during the allotted time. During the pilot trial, it may be necessary to allocate a specific time slot for each of the theme questions. For example, for six theme questions, there could be on average 20 minutes each.
- Facilitators must be well prepared before any FG session with questions ready. Carefully review and develop an understanding of the tool before facilitating FG discussions.

On the day of the FGD

A. Introduction:

- Thank the participants for making the time to attend the group discussion.
- Emphasize the importance of their input and state that they are the experts and we are here to listen and learn from them. Also share that their insights will be used to design a national campaign.
- Introduce yourself and mention that the group discussion will be audio recorded in order to have reference to the data at a later stage and for transcription purposes. Get participants' consent.
- Inform respondents that the group discussion data will be handled with high confidentiality and only the research team will review the group discussion data. Please stress that whatever is said during the group discussion will be reported anonymously. Therefore, their names will not be recorded or used at any stage of analyzing and reporting the data. Answer any questions participants may have about this.

- Please confirm that all participating respondents have been informed why they are present. Explain to respondents that they have been invited to the group because they took part in a parenting survey recently that aims to understand the ways parents interact with their children below the age of 6 and we are interested to get a deeper understanding of some of the questions.
- Stress that there are no right or wrong answers and so you would like to hear their honest opinion. Also state that they should respect each other's' opinions.
- Please inform respondents that as a moderator, you are not allowed to give your personal opinion on the discussion topic and you are there to ask them the questions. Please also stress that the respondents have the right to refuse answering any questions if they did not feel like answering it for any reason.
- Note how many participants are in the FGD and welcome participants into a friendly atmosphere. If some participants are absent, document that in the notes.

Other things to keep in mind:

- Ensure general rules of engagement by encouraging one person to talk at a time, permitting different opinions, and letting participants know that notetakers may occasionally interrupt.
- Notetakers must jot down some key quotes from participants, particularly if recording equipment is not used or permitted.
- Moderators can interrupt if necessary to ensure that notes taken are accurate and correct. She/he may interrupt during the FGD discussion by asking questions like "are you saying…"; "do you mean to say…"; "do I understand this correctly that what you are saying is …?" and so on. This is to make sure that information is accurate, and notes are taken authentically.
- Agree on ground rules together as a group to enable the discussion to go well. The participants can even brainstorm together – things like having their phones switched off, not interrupting when another person speaks, using the 'raise hand' function when you want to speak, etc.
- A short locally accepted "ice-breaking" activity should make the participants feel relaxed and comfortable from the start.

B. Introductory question:

1. Please introduce yourself: State your name and how many children you have.
    - After the round of introductions, thank the participants and remind them that for this discussion, the focus will be on their children below the age of 6 and so answers should be about those children only.

C. Transition question:

2. Today we want to understand ways parents interact with their children below 6. What kinds of activities do you do with your child(ren) below 6?

D. In-depth questions:

The first set of questions will be about your general views and daily life.

Please remember there is no right or wrong answer and I welcome different opinions as this will help us get a better understanding of parents in Jordan.

3. Do you think children are born smart, or they are smart because they work hard?
4. How much of an impact do you think parents can have on whether their child is smart?
5. In your opinion, what does it mean for your child to be ready for school?
6. At what age do you think it is appropriate to begin preparing children for school? Why? Why not earlier? What makes you think that?
    - At what age are children old enough to be read to? Why? Why not earlier? What makes you think that?
7. What are the main sources of stress in your life? To what extent do you think stress impacts your ability to spend time with your child?
8. Despite these stressors, how do you try to make sure that you are able to spend some quality time with your child?
    - *Note to moderator:* Good quality time=time that you both enjoy, where a meaningful connection is made between the parent and the child.ds[25]

[25] Here is a very brief article from the (US) National Association for Education of Young Children on "quality time": https://www.naeyc.org/our-work/families/spending-quality-time-with-your-child

- How much time can you spend with your child on helping them learn/ develop?
- What would help you spend more quality time with your child?

I will now ask you some questions specifically about improving the literacy of your child aged 0-6.

9. What activities do you think can help improve your child's literacy skills?
    - If reading is mentioned, probe: How long do you think you have to read with your child in order for it to benefit them?
    - If reading is not mentioned, ask: how about reading? Do you think that reading to your child aged below 6 can help improve or develop their literacy skills? How so?
10. Do you read with your child at least once a week?
    - If not, then ask: Does your older child or other family members read to him/her at least once a week?
11. *Note to moderator:* If the respondent, or their family members read to their child, ask: Can you please describe what the scene of reading to your child looks like?
    - Who is reading? What are you reading? What do you talk about when reading to your child? What time do you read? Who else is there? Where are you? Where is your child sitting? Where are you sitting?
    - Does your child have a favorite book that they like to read? Are there pictures in this book? How long is the book? Do you have many books like this?
12. What do you feel are the biggest personal benefits for you as a parent when/ if you read to your child?
13. What would help you to read to or with your child?

- Would having books written in colloquial Arabic instead of Fus-ha make it easier?

- Do you already know of books written in colloquial Arabic?

14. In your opinion, what is a suitable price for a good children's book?

15. If [stated price] is suitable, how many children's books would you be willing to buy for your child per year?

16. If you compare reading from a book with reading from an app or website, what do you see as the advantages and disadvantages of these two options?

    - Do you read children's books on apps or websites? Why or why not?

I will now ask you some questions about where you get information about your young children's (aged 0-6) development and learning.

17. What do you typically do when you're unsure about your child's development or learning?
    - if turning to someone/source of information comes up, ask "who else in the group does this?"
    - if it doesn't, *probe*: how about turning to someone or a source of information? Is that something you would consider doing?
        - For those who answer they do **not**, *probe*: what do you do with your child in case you are not sure about something in their learning or development?

        - For those who answer yes, which sources of information or people do you turn to when you need to learn more about the development and learning of your children below 6?

    - What kind of information do you get from these sources?

- If any answer they get information from their spouse, ask: What kind of information do you get from your spouse on parenting or your child's development and learning?
    - If no one answers "spouse" as a source- *probe*: Do you sometimes turn to your spouse?
        - What kind of information do you get from your spouse on parenting or your child's development and learning?

18. What is it about these sources of information or people that makes you turn to them in particular? What factors make you turn to these sources?

> ***Note to moderator:*** only probe with the below after initial round of answers, if the respondents' answers don't hint at convenience and trust

- *Probe*: Is it for convenience?
- Is it because you really trust these resources?
- Other reasons?

19. Who do you consider to be experts on the topic of parenting and child development? Why?
    - Do you turn to such experts when you have problems regarding your child's development or learning? Why or why not?
    - If yes, what kind of information do you get from these experts on parenting or your child's development and learning?

20. Have you ever heard messages about parenting--how to be a better parent or ideas about things to do with your child--on TV or on the radio?

- If yes, what did you think of those messages? Who were they from? Did you trust them or find them valuable?
- If you haven't, what would you think if you heard messages about parenting on TV or on the radio? Would you find this information trustworthy?

This question is a general question about technology.

21. In what ways is technology (mobile phones, tablets, etc.) useful to you as a parent?
    - In what ways does it make parenting more difficult?
    - How do you manage the ways that they make it more difficult?

I would now like to ask you a few questions specifically about your husbands' role and involvement.

9. Can you describe your husband's involvement in your child's life?
    - How about their involvement in your child's learning?

10. What could your husband do to make it easier for you to engage in learning activities with your child?

11. If your husband could describe your role in your child's learning, how would he describe it?

5. **Closure:**

Thank you all for your time and the ideas you shared. These are all the questions I have. Does anyone have any comments or questions?

Thank the participants again and wrap up the FGD.

Post-FGD

● Spend a few minutes between facilitator and notetaker at the end of the FGD session, and give a brief rating on the FGD session such as "1=excellent, 2=good, and 3=wish it had been better" and try to explain why the rating (whatever it is) is provided. In addition, note and summarize some specific and unique issues or challenges or problems that take place. This is particularly useful if recording is not permitted so that general impressions of the FGD session are noted right away.

Fathers

Parental behavior in the Early Years- Phase 1

Post-quant Fathers' FGD Guide

Discussion guide

The following document is a discussion guide for the focus groups that will be held with parents with children below 6 who participated in the quantitative survey. The purpose is to delve deeper into any unclear findings from the survey.

Pre-FGD Training Notes:

● During the training, facilitators and notetakers will be asked to envision multiple FG session scenarios that could happen. Organize role-playing for the FGD training to avoid or handle any of the following potential scenarios:

○ One sided opinion becomes dominant or one or a few participants are dominant.

○ Some participants are clearly "shut off," too quiet, or are afraid to speak up.

○ Some participants get too emotionally expressive or involved and become

angry or disruptive, affecting overall FGD sentiment and the qualitative data.

○ Some topics/discussions could not be discussed or prematurely finished or skipped.

○ A potential conflict in debate, argument, or unnecessary oral fight emerges. Make sure we all facilitators allow or permit different ideas and opinions. This is research and no one is right or wrong.

○ Multiple participants talk at the same time and many don't listen to others.

○ One or a few participants walk out the room abruptly or unexpectedly, showing dissatisfaction with questions or inquiries.

○ Some participants may not want to express their opinions if they are asked in front of others.

- Plan and follow the FGD time management and practice in a pilot run. Make sure that all critical FGD questions are raised and discussed during the allotted time. During the pilot trial, it may be necessary to allocate a specific time slot for each of the theme questions. For example, for six theme questions, there could be on average 20 minutes each.
- Facilitators must be well prepared before any FG session with questions ready. Carefully review and develop an understanding of the tool before facilitating FG discussions.

On the day of the FGD

A. Introduction:

- Thank the participants for making the time to attend the group discussion.
- Emphasize the importance of their input and state that they are the experts and we are here to listen and learn from them. Also share that their insights will be used to design a national campaign.
- Introduce yourself and mention that the group discussion will be audio recorded in order to have reference to the data at a later stage and for transcription purposes. Get participants' consent.
- Inform respondents that the group discussion data will be handled with high confidentiality and only the research team will review the group discussion data. Please stress that whatever is said during the group discussion will be reported anonymously. Therefore, their names will not be recorded or used at any stage of analyzing and reporting the data. Answer any questions participants may have about this.
- Please confirm that all participating respondents have been informed why they are present. Explain to respondents that they have been invited to the group because they took part in a parenting survey recently that aims to understand the ways parents interact with their children below the age of 6 and we are interested to get a deeper understanding of some of the questions.
- Stress that there are no right or wrong answers and so you would like to hear their honest opinion. Also state that they should respect each other's' opinions.
- Please inform respondents that as a moderator, you are not allowed to give your personal opinion on the discussion topic and you are there to ask them the questions. Please also stress that the respondents have the right to refuse answering any questions if they did not feel like answering it for any reason.
- Note how many participants are in the FGD and welcome participants into a friendly atmosphere. If some participants are absent, document that in the notes.

Other things to keep in mind:

- Ensure general rules of engagement by encouraging one person to talk at a time, permitting different opinions, and letting participants know that notetakers may occasionally interrupt.

- Notetakers must jot down some key quotes from participants, particularly if recording equipment is not used or permitted.

- Moderators can interrupt if necessary to ensure that notes taken are accurate and correct. She/he may interrupt during the FGD discussion by asking questions like “are you saying…”; “do you mean to say…”; “do I understand this correctly that what you are saying is …?” and so on. This is to make sure that information is accurate, and notes are taken authentically.

- Agree on ground rules together as a group to enable the discussion to go well. The participants can even brainstorm together – things like having their phones switched off, not interrupting when another person speaks, using the ‘raise hand’ function when you want to speak, etc.

- A short locally accepted “ice-breaking” activity should make the participants feel relaxed and comfortable from the start.

B. Introductory question:

1. Please introduce yourself: State your name and how many children you have.
    - After the round of introductions, thank the participants and remind them that for this discussion, the focus will be on their children below the age of 6 and so answers should be about those children only.

C. Transition question:

2. Today we want to understand ways parents interact with their children below 6. What kinds of activities do you do with your child(ren) below 6?

D. In-depth questions:

The first set of questions will be about your general views and daily life.

Please remember there is no right or wrong answer and I welcome different opinions as this will help us get a better understanding of parents in Jordan.

Please ask the following questions to all groups (mothers and fathers)

3. Do you think children are born smart, or they are smart because they work hard?
4. How much of an impact do you think parents can have on whether their child is smart?
5. In your opinion, what does it mean for your child to be ready for school?
6. At what age do you think it is appropriate to begin preparing children for school? Why? Why not earlier? What makes you think that?
   - At what age are children old enough to be read to? Why? Why not earlier? What makes you think that?
7. What are the main sources of stress in your life? To what extent do you think stress impacts your ability to spend time with your child?
8. Despite these stressors, H ow do you try to make sure that you are able to spend some quality time with your child?
   - *Note to moderator:* Good quality time=time that you both enjoy, where a meaningful connection is made between the parent and the child.[26]
   - How do you like to spend time with your child?
   - How much time can you spend with your child on helping them **learn/ develop?**
   - What would help you spend more quality time with your child?

[26] Here is a very brief article from the (US) National Association for Education of Young Children on "quality time": https://www.naeyc.org/our-work/families/spending-quality-time-with-your-child

9. What are your hopes for your child's future, and how much power do you feel you have to help realize those dreams?
10. If you think it is your wife's responsibility to prepare your child for school, why is that? How do you support her to do this?

I will now ask you some questions specifically about improving the literacy of your child aged 0-6.

11. What activities do you think can help improve your child's literacy skills?
    - If reading is mentioned, probe: How long do you think you have to read with your child in order for it to benefit them?
    - If reading is not mentioned, ask: how about reading? Do you think that reading to your child aged below 6 can help improve or develop their literacy skills? How so?
12. Do you read with your child at least once a week?
    - If not, then ask: Does your older child or other family members read to him/her at least once a week?
13. *Note to moderator:* If the respondent, or their family members read to their child, ask: Can you please describe what the scene of reading to your child looks like?
    - Who is reading? What are you reading? What do you talk about when reading to your child? What time do you read? Who else is there? Where are you? Where is your child sitting? Where are you sitting?
    - Does your child have a favorite book that they like to read? Are there pictures in this book? How long is the book? Do you have many books like this?
14. What do you feel are the biggest personal benefits for you as a parent when/ if you read to your child?

15. What would help you to read to or with your child?

    - Would having books written in colloquial Arabic instead of Fus-ha make it easier?

    - Do you already know of books written in colloquial Arabic?

16. In your opinion, what is a suitable price for a good children's book?

17. If [stated price] is suitable, how many children's books would you be willing to buy for your child per year

18. If you compare reading from a book with reading from an app or website, what do you see as the advantages and disadvantages of these two options?

    - Do you read children's books on apps or websites? Why or why not?

I will now ask you some questions about where you get information about your young children's (aged 0-6) development and learning.

19. What do you typically do when you're unsure about your child's development or learning?
    - if turning to someone/source of information comes up, ask "who else in the group does this?"
    - if it doesn't, *probe*: how about turning to someone or a source of information? Is that something you would consider doing?
        - For those who answer they do **not**, *probe*: what do you do with your child in case you are not sure about something in their learning or development?

        - For those who answer yes, which sources of information or people do you turn to when you need to learn more about the development and learning of your children below 6?

- What kind of information do you get from these sources?
- If any answer they get information from their spouse, ask: What kind of information do you get from your spouse on parenting or your child's development and learning?
    - If no one answers "spouse" as a source- *probe*: Do you sometimes turn to your spouse?
        - What kind of information do you get from your spouse on parenting or your child's development and learning?

20. What is it about these sources of information or people that makes you turn to them in particular? What factors make you turn to these sources?

> ***Note to moderator:*** only probe with the below after initial round of answers, if the respondents' answers don't hint at convenience and trust

- *Probe*: Is it for convenience?
- Is it because you really trust these resources?
- Other reasons?

21. Who do you consider to be experts on the topic of parenting and child development? Why?
    - Do you turn to such experts when you have problems regarding your child's development or learning? Why or why not?
    - If yes, what kind of information do you get from these experts on parenting or your child's development and learning?

22. Have you ever heard messages about parenting--how to be a better parent or ideas about things to do with your child--on TV or on the radio?
    - If yes, what did you think of those messages? Who were they from? Did you trust them or find them valuable?
    - If you haven't, what would you think if you heard messages about parenting on TV or on the radio? Would you find this information trustworthy?

This question is a general question about technology.

23. In what ways is technology (mobile phones, tablets, etc.) useful to you as a parent?
    - In what ways does it make parenting more difficult?
    - How do you manage the ways that they make it more difficult?

- **Closure:**

  Thank you all for your time and the ideas you shared. These are all the questions I have. Does anyone have any comments or questions?

  Thank the participants again and wrap up the FGD.

Post-FGD

● Spend a few minutes between facilitator and notetaker at the end of the FGD session, and give a brief rating on the FGD session such as "1=excellent, 2=good, and 3=wish it had been better" and try to explain why the rating (whatever it is) is provided. In addition, note and summarize some specific and unique issues or challenges or problems that take place. This is particularly useful if recording is not permitted so that general impressions of the FGD session are noted right away.