

Barriers to Effective Developmental Screening of Children (0-24 Months) at Well-Baby Clinics in a Low-Income Community in Kenya

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ABSTRACT

Several studies have emphasized the significance of developmental screening, which is necessary for early detection of children's developmental delays. These delays include motor, cognitive, socio-emotional, as well as speech and language delays, which need to be identified during the critical period of development. Many children with delays, especially from low-income communities in Kenya, are not identified early enough. Consequently, these children fail to receive timely intervention that will enable them to reach their full potential. However, little research concerning developmental screening of children in low-income communities in Kenya exists. This study aimed to identify the barriers to effective developmental screening of children aged 0-24 months at well-baby clinics in a low-income community in Kenya. The study used a descriptive survey research design and an accessible sample of 248 respondents comprising children (0-24 months), their caregivers, and healthcare providers. Purposive sampling was used to sample the clinics, children aged 0-24 months, and their caregivers while convenience sampling was applied for the healthcare providers. Data collection was done by administering questionnaires to caregivers and interviewing the healthcare providers in the clinics. Using descriptive statistics, quantitative data were analyzed and presented in frequencies and percentages. The qualitative data obtained in the study was analyzed and coded thematically. According to the study findings, most caregivers and healthcare providers lacked knowledge in regards to developmental screening. Financial constraints, lack of screening locations, inadequate training and resources, lack of a standardized screening tool, insufficient staff and workload, as well as time constraints hindered developmental screening in the MCH clinics. The study recommended implementation of policies to facilitate awareness programs, implementation of appropriate screening strategies and referral procedures, adoption of a standardized screening tool, employment of more healthcare providers, and enhancing accessibility to screening locations in low-income communities in Kenya.

Keywords: Developmental screening, developmental delays, MCH clinics

INTRODUCTION

Developmental screening facilitates early detection of children at risk of developmental delays, including motor, cognitive, socio-emotional, speech, and language delays. This is essential for enhancing early identification and advocating for early intervention programs (Hirai et al., 2018). Globally, over 200 million children residing in low- and middle-income countries experience developmental delays (Van der Linde et al., 2015). The American Academy of Pediatrics (AAP) advocates for screening of children at 9, 18, and 30 months in well-baby clinics to promote early identification and interventions to enhance the outcome of children with delays (Hirai et al., 2018). However, identification rates of developmental delays are low, with about 12% to 16% of children being estimated to have delays. In most cases, only a small percentage of such children get the chance to be diagnosed before starting school (Hirai et al., 2018).

In the United States, for example, Hirai et al.'s (2018) research showed that approximately 30.4 % of children aged three years and below underwent a parent-completed developmental screening. A higher number received developmental surveillance with a healthcare provider asking parents whether they had concerns about the development of their children. Despite this, the developmental screening rates in the US are low, although there have been efforts for quality improvement (Hirai et al., 2018). Approximately 20% of children in Australia start school with a developmental delay, and 11% have delays in two or more domains of development (Sheeran et al., 2021). Based on recent data, more than 43% of children below age five in Low- and Middle-Income Communities (LMICs) are at great risk for language and motor delays, with more than 60% living in sub-Saharan Africa (McHenry et al., 2021). Children from low-income families are at a very high risk for physical and mental developmental delays because of poverty and related factors, such as HIV/AIDS. Such children are barely ready for the social and academic requirements of the school structure and this is when most of the delays are identified (Van der Linde et al., 2016). Approximately 62% of South African youngsters reside in poverty-stricken rural areas and receive health care from public clinics (Abdoola et al., 2019). However, access to services such as developmental screening of children is limited in low-income areas, hence limiting early identification and intervention.

Kibera, for instance, is a low-income community in Kenya characterized by congestion, unemployment, poor living conditions, poor infrastructure, crime and violence, and poor sanitation (Onyango & Tostensen, 2015). Health facilities like hospitals and public clinics are not easily accessible; hence, individuals mostly rely on services offered by Non-Governmental Organizations (Onyango & Tostensen, 2015). In such clinics, primary healthcare services are prioritized while less attention is given to services like developmental screening, hence contributing to the late identification of children with developmental delays. According to Oyungu et al. (2021), many caregivers who visit Maternal and Child Health (MCH) clinics know about immunization and weight monitoring services. However, only 2.6% of caregivers are aware of developmental monitoring. Additionally, although healthcare providers value developmental monitoring, it is not performed consistently in clinics (Oyungu et al., 2021). The situation is much worse in low-income communities such as Kibera, where access to health services, including developmental screening of young children, is a challenge.

Despite the benefits of developmental screening, it is hardly performed in well-baby clinics due to inappropriate developmental screening measures (Oyungu et al., 2021). Little research has been done to establish the barriers to effective developmental screening of children aged 0-24 months at well-baby clinics in Kenyan low-income communities. Consequently, the needs of infants and toddlers with developmental delays in such areas are not addressed. This study was inspired by the need to promote early identification and intervention for young children with developmental delays in low-income communities in Kenya.

Rationale

Most children who have developmental delays in low-income communities are often identified when they start preschool since the delays hinder academic progress. Most parents report concerns for children aged three years and above than for those two years and below. This is basically because parents note that the children are barely ready to meet the academic demands once they start preschool. As rapid brain development occurs in the first three years of a baby's life, a late diagnosis limits the opportunity for early intervention. Most studies that have been carried out concerning developmental screening tend to leave out infants and toddlers below two years of age, hence failing to address the needs of this population. Therefore, this study is imperative in establishing the barriers to effective developmental screening of children (0-24 months) in Kibera. Understanding this would help in successfully implementing strategies that will promote developmental screening and further facilitate early intervention for young children with developmental delays in low-income Kenyan communities.

Purpose

This study aimed to identify the barriers to effective developmental screening of children aged 0-24 months in Kibera, Kenya.

Conceptual Framework

Drawing insights from the Three Delays Model, this study examined the barriers to timely identification of developmental delays in children. Thaddeus and Maine, in 1994, developed the Three Delays Model to identify the factors contributing to maternal mortality (Thaddeus & Maine, 1994). The two were motivated to enhance the management of obstetric problems to reduce maternal deaths. Majority of maternal deaths during that period were due to direct obstetric reasons which could be avoided with prompt medical attention (Vidler et Al., 2023). The model outlines three critical delays that directly affect both the mother and baby's survival. The first delay is making the decision to seek medical care which is associated with community and family-related factors (Thaddeus & Maine, 1994). The second delay is identifying and getting to the health facility and includes issues associated with accessibility challenges. The third delay is receiving the necessary treatment at the health facility which includes issues concerning services provided at the health facility (Thaddeus & Maine, 1994).

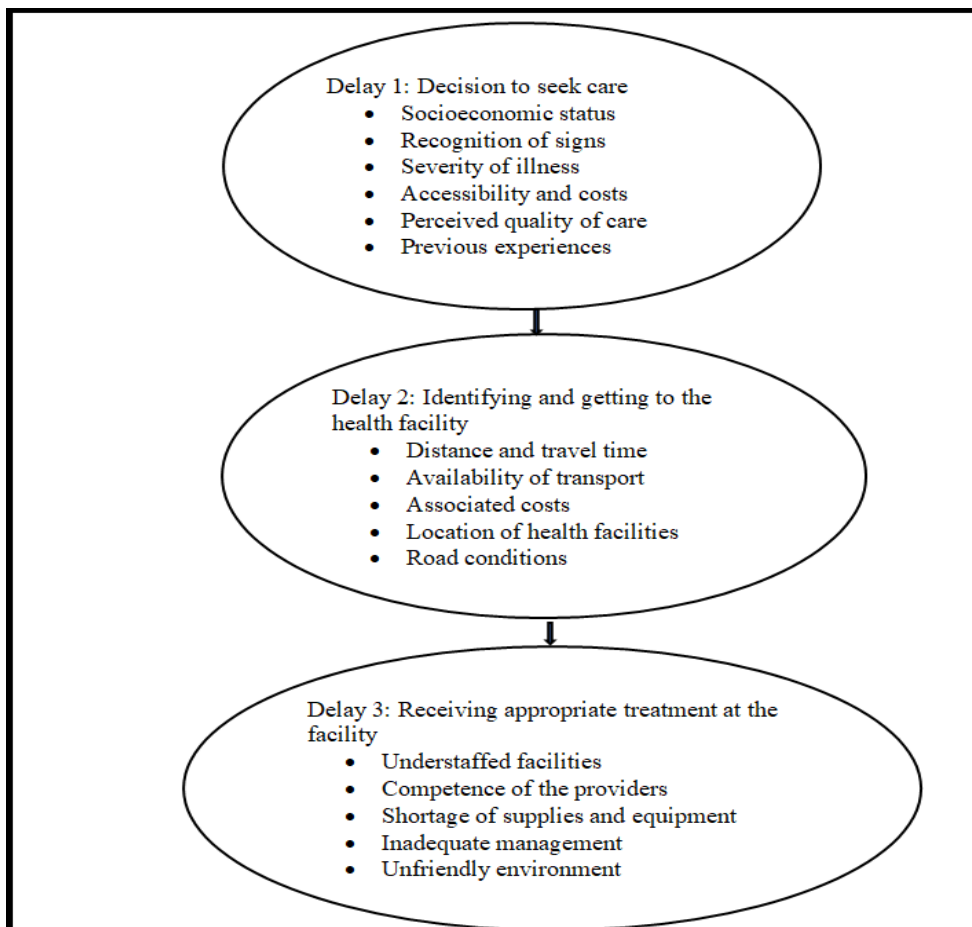


Figure 1: Conceptual Framework

Based on its structure, the model is a practical tool for the identification of challenges using a holistic approach (Actis Danna et al., 2020). It shows different challenges at different levels including the health facility, household, and community levels. The first delay in making a decision to seek care is associated with factors such as the status of the woman, recognition of complications and the severity of illness. It also includes issues to do with accessibility of the healthcare facility, associated costs, perceived quality of care and previous experiences in the healthcare system. After one decides to seek care, the second delay happens in identifying and getting to the health facility. Factors contributing to this include availability of transport, distance and travel time, road conditions, location of the health facility and the associated costs of getting to the facility. The third delay happens at the level of the health facility. Factors contributing to this include understaffed facilities, competence of the health providers, shortage of supplies and equipment as well as poor management of the facility. The Three Delays Model is pertinent to this study as it targets both the service providers and the users. By gathering information from the caregivers and the healthcare providers, this study provides a deeper understanding of the barriers to developmental screening of children aged between 0-24 months in Kibera.

METHODOLOGY

Research Design

A descriptive survey research design, which was ideal for describing the nature of the existing situation regarding barriers to developmental screening of children aged 0-24 months in Kibera, was used for the study. Both qualitative and quantitative methodologies were used to collect data.

Locale

Maternal and Child Health clinics in Kibera, a low-income community in Nairobi City County, were the location of the study. Kibera is a low-income community where most children who are likely to have developmental delays are identified late; after they reach the school-going age. Being a low-income community, most caregivers rely on MCH clinics for weight monitoring and vaccination services for their children. This made the location appropriate for providing an adequate study population for the research.

Target Population

Children aged between 0 and 24 months in Kibera were targeted because they were of the appropriate age group for the study. These children will likely benefit from early identification and intervention during the critical period of development once the barriers to effective developmental screening are identified and appropriate strategies put in place. Caregivers and the healthcare providers in the clinics were targeted as they provided the necessary information concerning the barriers to effective developmental screening of children aged 0-24 months in Kibera.

Sampling

MCH clinics serving mothers and children in Kibera were purposively sampled. This was based on their location, which is a low-income community that is affected by poverty, unemployment, undernutrition, and HIV/AIDS, among other environmental factors that put children at risk for developmental delays. Within these clinics, 1-3 days each week are dedicated to paediatric services where caregivers take their children. The other days focus primarily on prenatal care. Based on the clinical records in these clinics, approximately 400 caregivers of children aged between 0-24 months visit the clinics weekly for weight monitoring and vaccination services. The study employed purposive sampling to select caregivers of children between 0-24 months of age who visited the clinics as this was the appropriate age group for the study. Convenience sampling was used in the selection of healthcare providers who were working in the clinics during the days of the interview. This was based on their availability and accessibility during the data collection process. If the target population is below 10,000, a sample size of between 10% and 30% is appropriate in representing the population (Mugenda & Mugenda, 2013). The study sample size was 120 caregivers of the selected 120 children aged 0-24 months and 30 healthcare providers making a total of 270 participants.

Table I. Sample Size

Category	Target Population	Sample Size	Percentage
Children Aged 0-24 months	400	120	30%
Caregivers to the Children	400	120	30%
Healthcare providers	30	30	100%
Total	830	270	

Research Instruments

Questionnaires and interviews were used to collect information from the respondents hence providing both quantitative and qualitative data. The questionnaires were distributed to the caregivers of children aged between 0-24 months to collect data concerning barriers to developmental screening. Semi-structured interview guides were used to gather relevant data from healthcare providers. These allowed the researchers to elicit verbal responses from the respondents, hence probing them to give more in-depth information. Piloting

was done to ensure the clarity and appropriateness of the research instruments. Piloting was done in a health clinic in Mathare, Nairobi City County, which had similar characteristics to the area under study.

Data Collection and Analysis

Following approval from NACOSTI Kenya, the Ministry of Health, the Health Department of Nairobi County, and the selected healthcare facilities, the questionnaires were administered to the caregivers. The process entailed picking the infants and caregivers from the MCH clinics, acquiring written informed consent, and filling in the questionnaires. In the end, a total of 109 out of 120 questionnaires were collected after being completed by the caregivers. The researchers also scheduled meetings with 30 healthcare providers who were respondents to the study. Semi-structured interview guides were used to collect data about barriers to developmental screening of children aged 0-24 months. A thorough inspection of the data gathered during the research was conducted to ensure its accuracy. Using SPSS version 26, the researchers organized, summarized, and analyzed quantitative aspects of data. Descriptive statistics were used to analyze and present the data in frequency tables and percentage form. Qualitative data obtained from the research was coded, and responses were categorized into emerging themes. The data was then summarized in meaningful categories.

Ethical Considerations

The ethical guidelines stipulated by the Ethical Review Committee of Kenyatta University were adhered to by this study.

RESULTS AND DISCUSSION

A. Demographic Characteristics

The demographics of the participants in terms of gender, age, education level, child's age and gender, as well as their employment status, were established. Of the 120 sampled caregivers, 109 completed and returned the questionnaires, making up 90.8% of the respondents, which is excellent for analysis and discussions. The researchers were also able to interview all the 30 healthcare providers who were respondents to the study.

Table II. Demographic Characteristics of the Respondents

Category	N=139	Caregivers n= 109		Healthcare Providers n=30	
		Frequency	Percentage	Frequency	Percentage
Gender	Male	19	17.4	8	26.7
	Female	90	82.6	22	73.3
Age	≤ 25	54	49.5	7	23.3
	26-35	37	33.9	14	46.7
	36-45	18	16.5	9	30.0
	≥ 46	0	0	0	0
Level of Education	Primary	48	44.0	0	0
	Highschool	32	29.4	0	0
	College	20	18.3	25	83.3
	University	9	8.3	5	16.7
Employment Status	Employed	19	17.4	30	100
	Self-employed	37	34.0	0	0
	Unemployed	53	48.6	0	0
Child's Age (Months)	0-6	26	23.9	0	0
	7- 12	21	19.3	0	0
	13-18	35	32.1	0	0
	19-24	27	24.8	0	0
Child's Gender	Male	58	53.2	0	0
	Female	51	46.8	0	0

The table above shows that most of the participants were female; that is, 90 (82.6%) caregivers and 22 (73.3%) healthcare providers. The men were the minority, with only 19 (17.4%) and 8 (26.7%) for the caregivers and healthcare providers, respectively. This implies that many caregivers who take their young ones to MCH clinics are females probably due to cultural influence that bestows the responsibility of children's development on women. It also implies that most healthcare providers working in MCH clinics are female. However, this gender disparity did not have any significant implications on the study's findings.

In regards to age, 54 (49.5%) of the caregivers were aged 25 years and below, 37 (33.9%) were aged between 26-35 years, and 18 (16.5%) were between 36 and 45 years of age while none was above the age of 46 years. For the healthcare providers, 7 (23.3%) were 25 years and below, 14 (46.7%) were between 26-35 years, and 9 (30%) were between 36 and 45 years of age. Participants were also required to indicate their education levels. 25 (83.3%) healthcare providers indicated that they had attained college-level education, while 5 (16.7%) had studied up to the university level. On the other hand, 44% (48) of the caregivers had not studied beyond the primary level, 32 (29.4%) had a high school certificate, 20 (18.3%) had attained college-level education, and only 9 (8.3%) had university-level education.

Further, information on employment status established that all the healthcare providers were employed at the MCH clinics as Nursing Officers. For the caregivers, 19 (17.4%) indicated that they were employed, 37 (34%) were self-employed, mostly carrying out small-scale businesses, and 53 (48.6%) indicated that they were unemployed. The caregivers were also required to state their children's gender and age. 53.2% (58) were male while 46.8% (51) were female. In terms of age, 26 (23.9%) were between 0-6 months, 21 (19.3%) were between 7-12 months, 35 (32.1%) were between 13-18 months, and 27 (24.8%) were between 19-24 months.

B. Barriers to Effective Developmental Screening of Children Aged 0-24 Months

The study aimed to identify the barriers to effective developmental screening of children aged 0-24 months in MCH clinics in Kibera. The researchers collected data from both caregivers and healthcare providers using questionnaires and interview guides respectively. Questionnaires were administered to the caregivers who participated in the study. Out of the 120 caregivers who were sampled for the study, 109 completed and returned the questionnaires providing enough data for analysis. The figure below summarizes caregiver responses.

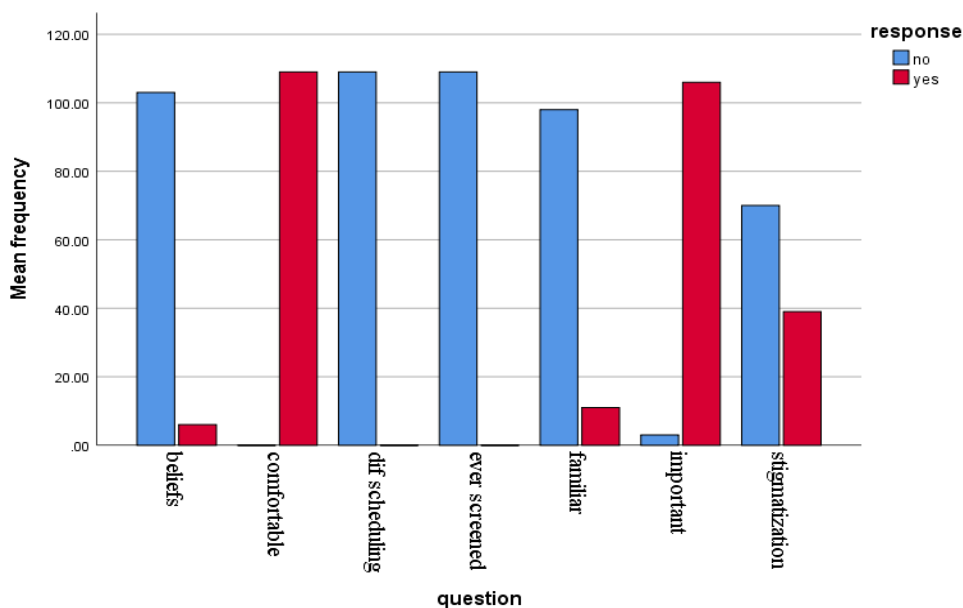


Figure 2: Caregiver responses concerning barriers to effective developmental screening

As shown in the figure above, 103 (94.5%) caregivers indicated that their views on developmental screening were not influenced by any cultural or personal beliefs, while only 6 (5.5%) reported that they were influenced by cultural and personal beliefs. All of them reported that they were comfortable discussing their children's

development with a healthcare provider hence; this did not hinder them from taking their children for developmental screening. Additionally, all the 109 caregivers stated that they had never experienced any challenges scheduling an appointment since none of them had ever taken their child for developmental screening. Furthermore, the majority of the caregivers (106) agreed that developmental screening of children is important, while only 3 (2.8%) did not see any importance of the service. Concerning stigmatization related to developmental delays, 70 (64.2%) caregivers reported that they were not concerned about stigmatization, while 39 (35.8%) admitted that they were concerned about stigmatization related to developmental delays of their children.

Caregivers were also required to indicate whether they were familiar with developmental screening of children. 98 (89.9%) admitted that they were not familiar. This was a totally new concept for them. Only 11 (10.1%) indicated that they knew about it. Out of the 11 caregivers who knew about developmental screening, 4 (3.7%) indicated that they heard about it from healthcare providers, 4 (3.7%) from family and friends, and 3 (2.7%) learned about it from the internet or social media. None of them indicated that they learnt about it from childcare or playgroup settings. These findings show that there is little to no awareness concerning developmental screening of children among caregivers who take their children to MCH clinics in Kibera. This is illustrated in the figure below:

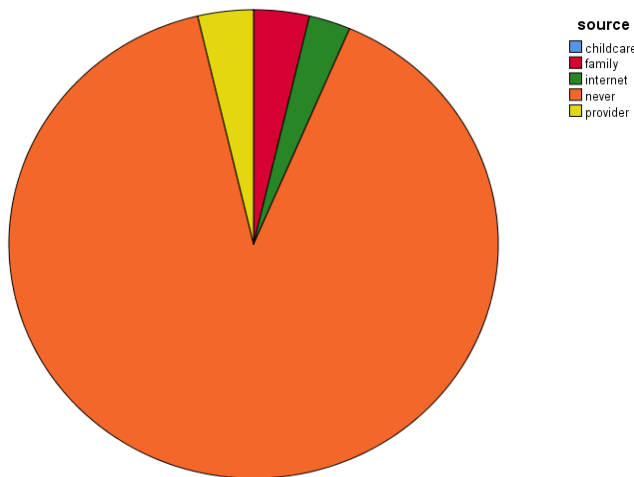


Figure 3: Source of information concerning developmental screening

None of the respondents indicated time constraints, transportation issues, distance, or language barriers as the reasons for failure to take their children for screening. This is basically because most of them stay close to the MCH clinics. However, out of the few who knew about the service, 0.9%, 2.8%, and 6.4%, indicated difficulties understanding the process, financial constraints, and no screening locations respectively, as the reasons why they have never taken their children for developmental screening. 89.9% indicated that they had never taken their children for developmental screening since they did not have any information concerning the service.

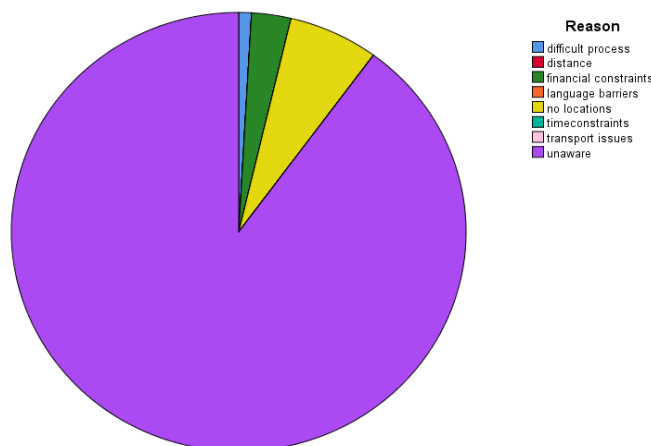


Figure 4: Reasons for not seeking developmental screening services

Lack of caregiver awareness concerning developmental screening is a major barrier to effective developmental screening of children in low-income communities (Hirai et al., 2018 & Oyungu et al., 2021). Most caregivers expressed the need for the creation of awareness about developmental screening in order to enhance the developmental screening of young children in Kibera. Oyungu et al. (2021) conducted a study concerning developmental monitoring in Kenyan well-baby clinics, and the results agree with the outcomes of this study. The study showed that most caregivers were unaware of developmental screening and its significance in identifying developmental delays in children. Therefore, the current study gives more insight into the need to enhance caregiver education concerning developmental screening as a way of creating awareness.

Emerging Themes

Qualitative data collected using the interview guides with the 30 healthcare providers was based on 8 items covering the objective of the study. The researchers asked the healthcare providers a range of questions to establish barriers to effective developmental screening of young children. The data obtained was coded, and responses were categorized into emerging themes that agreed with the stated objective. The following are the themes that emerged from the data collected.

Limited knowledge, understanding, and experience in developmental screening

Based on the responses provided, most healthcare providers had a rough idea concerning developmental screening but none of them had in-depth knowledge or experience about the processes involved or how exactly it is done. One healthcare provider expressed that; *"I understand developmental screening as the process of assessing for developmental delays in achieving milestones. I find it challenging considering I am not an expert in that area. I only know the basics and I have not had enough experience conducting screening."* Another stated; *"I understand it as the close monitoring of infants and toddlers in speech development. I do not have full information concerning what it entails because I have never offered the service."* Another respondent further stated that; *"It is the assessment of an infant's or toddler's development on the motor, cognitive, language, and socio-emotional skills. It is done by asking questions about a child's development. Based on the answers given by the parents, one can be able to tell whether or not the child is achieving the milestones appropriately."* From the above claims, it is clear that most healthcare providers are not well informed about developmental screening and the processes involved. Most have little to no experience in screening since they do not offer the services at the MCH clinics. These findings concur with those of Sheeran et al. (2021), who conducted a study in Australian MCH clinics and established limited knowledge, experience, and skills as one of the factors hindering effective developmental screening of children. As a result, most children at risk for developmental delays go undetected hence hindering early intervention.

Inadequate training and resources

All the respondents reported that they did not get adequate training and resources to conduct effective developmental screening. None of them claimed to have received any form of training concerning developmental screening. One of the respondents particularly said; *"Ever since I graduated from college, the only training I have received in regards to service provision is about primary healthcare. I have never received additional training about monitoring the development of children. It is, therefore, difficult for one to conduct effective screening when one lacks the necessary skills required to offer the service"* This is a response that was echoed by majority of the healthcare providers in the MCH clinics. Based on their responses, it was evident that the training and resources provided to them were not adequate enough for them to screen children for developmental delays. These results agree with those of Hirai et al. (2018) who found out that a lack of proper training on administering, scoring, and interpreting the results when conducting screening is one of the barriers to effective developmental screening of children. Consequently, most children with developmental delays are hardly identified on time despite visiting the clinics regularly.

The availability of a standardized developmental screening tool

As much as some healthcare providers claimed to conduct developmental screening, the majority of them reported that they had no standardized tool that they used to conduct the screening. Most of them relied on the

basic knowledge about the development of children to establish whether or not a child is achieving the milestones appropriately. One of the healthcare providers said; *“We do not have any specific tool for conducting screening. We basically rely on general questions.”* Another respondent claimed; *“We use MOH 511. It is about asking questions about the development of children and the milestones they have achieved.”* The responses given by the healthcare providers showed that there is no standardized tool that is used to conduct developmental screening of children in MCH clinics in Kibera. Therefore, most healthcare providers that rely on common knowledge end up providing invalid results of the screening process. This negatively affects effective developmental screening. These findings support those of du Toit et al. (2021) whose study established that inappropriate developmental screening measures and non-compliance with proper screening protocols are likely to invalidate the results of the screening.

Insufficient staff and high workload

The majority of the healthcare providers claimed that they were understaffed, therefore being subjected to high workloads. This, therefore, makes it hard for them to provide primary healthcare services at the MCH clinics as well as conduct developmental screening. Some of the responses given include: *“There are only five nursing officers in this clinic. On clinic days, especially Mondays, we receive approximately 80 caregivers who bring their children for vaccination, weight monitoring, and other primary healthcare services. This is a large number for the five of us to handle in a day so it is very difficult to offer all these services and at the same time conduct developmental screening.”* Another respondent claimed; *“The workload is really large at this facility. We have many children with different needs that we have to attend to but we do not have enough staff. At the end of the day, we only end up providing primary services as it is difficult to conduct the screening.”* From the responses provided by majority of the healthcare providers, it is clear that insufficient staff and high workloads make it difficult for them to conduct developmental screening. These findings concur with that of Sheeran et al. (2021) whose study showed that insufficient staff and high workloads were challenges that made nurses only focus on provision of service instead of continuity of care in Australian MCH clinics. This, in turn, affects effective developmental screening of children at MCH clinics.

Time constraints

This is one of the major barriers to effective developmental screening of children in MCH clinics. The majority of the healthcare providers stated that they hardly find time to conduct developmental screening of children. Considering their workloads, most of them admitted that they tend to prioritize other healthcare services over developmental screening to avoid running out of time. One healthcare provider said; *“We hardly get time to conduct developmental screening since we have a lot of work to do. Such a service hardly crosses my mind as I have to plan the limited time that I have to ensure I get to see all the patients that are waiting in line.”* Similarly, another respondent argued; *“Limited time to attend to clients is one of the biggest challenges we face as healthcare providers. If we had more staff working here, it would have been easier to provide all these services without overlooking developmental screening.”* The responses provided by the healthcare providers showed that one of the major barriers to conducting effective developmental screening of children at MCH clinics is time constraints. This clearly affects developmental screening as children who are vulnerable to developmental delays fail to be identified on time therefore hindering early intervention. These findings are similar to that of Hirai et al. (2018) whose study established that limited time for screening is one of the challenges that has been recognized within busy well-baby visits. This is basically because clinicians cannot forego crucial aspects of childcare to conduct screening besides lacking proper training on administering, scoring, and interpreting the results.

SUMMARY AND CONCLUSION

Developmental screening is essential in detecting children's developmental delays. This, in turn, promotes early intervention, ensuring that children achieve their optimum level of performance. However, early detection of children's developmental delays in low-income areas such as Kibera is challenging. This study aimed to establish the barriers to effective developmental screening of children aged between 0-24 months in Kibera. The study established several barriers that hindered caregivers from taking their children for developmental screening. One of the major barriers is lack of caregiver awareness concerning developmental

screening services. Most caregivers, therefore, fail to take their children for developmental screening due to lack of information. In addition, financial constraints, lack of screening locations, and difficulties understanding the screening process were also noted as barriers that made it difficult for caregivers to seek developmental screening services for their children. Furthermore, personal and cultural beliefs, including stigmatization related to developmental delays, also make caregivers reluctant to take their children for developmental screening.

The study further established barriers that hindered healthcare providers from providing developmental screening services. A number of healthcare providers, for instance, stated that limited knowledge, understanding and experience concerning developmental screening hindered provision of the service. It was also noted that healthcare providers in MCH clinics lack adequate training and resources to conduct developmental screening. Additionally, inappropriate screening strategies and lack of a standardized tool also affect effective developmental screening in MCH clinics. Furthermore, insufficient staff, heavy workloads, and time constraints make it difficult for healthcare providers to offer developmental screening services because primary healthcare services are prioritized over developmental screening. Consequently, children with developmental delays go unidentified therefore failing to get early intervention services. In general, this study concludes that the creation of awareness concerning developmental screening will promote early detection of children who have developmental delays in Kibera.

RECOMMENDATIONS

To improve early detection and intervention for young children who have developmental delays in low-income communities, policies should be enforced to create awareness. Caregiver education concerning developmental screening and early intervention should be provided during routine check-ups in MCH clinics to ensure early identification and intervention. The Kenyan government should also establish policies to provide adequate training and resources to healthcare providers in MCH clinics. At least three healthcare providers in each MCH clinic should be trained in developmental screening within the next 12 months. Additionally, standardized tools like the mHealth developmental screening tool should be introduced in the clinics to facilitate effective developmental screening. The government should further initiate policies to ensure that MCH clinics are well staffed to reduce the workload of healthcare providers. For instance, ensuring that every MCH clinic in Kibera has at least 10 healthcare providers each day would make it easier for them to offer all services including developmental screening of children.

REFERENCES

1. Abdoola, S., Swanepoel, D. W., Van Der Linde, J., & Glascoe, F. P. (2019). Detecting developmental delays in infants from a low-income South African community: comparing the BSID-III and PEDS tools. *Early Child Development and Care*.
2. Actis Danna, V., Bedwell, C., Wakasiaka, S., & Lavender, T. (2020). Utility of the three-delays model and its potential for supporting a solution-based approach to accessing intrapartum care in low-and middle-income countries. A qualitative evidence synthesis. *Global health action*, 13(1), 1819052.
3. du Toit, M. N., Van der Linde, J., & Swanepoel, D. W. (2021). mHealth developmental screening for preschool children in low-income communities. *Journal of Child Health Care*, 25(4), 573-586.
4. Hirai, A. H., Kogan, M. D., Kandasamy, V., Reuland, C., & Bethell, C. (2018). Prevalence and variation of developmental screening and surveillance in early childhood. *JAMA pediatrics*, 172(9), 857-866.
5. Johnson, P. R., Bushar, J., Dunkle, M., Leyden, S., & Jordan, E. T. (2019). Usability and acceptability of a text message-based developmental screening tool for young children: pilot study. *JMIR pediatrics and parenting*, 2(1), e10814.
6. McHenry, M. S., Maldonado, L. Y., Yang, Z., Anusu, G., Kaluhi, E., Christoffersen-Deb, A., ... & Ruhl, L. J. (2021). Participation in a Community-Based Women's Health Education Program and At-Risk Child Development in Rural Kenya: Developmental Screening Questionnaire Results Analysis. *Global Health: Science and Practice*, 9(4), 818-831.
7. Mugenda, O., & Mugenda, A. (2013). *Research methods. Qualitative and Quantitative Approaches*. Nairobi: Acts Press.

8. Onyango, P., & Tostensen, A. (2015). The situation of youth and children in Kibera. CMI report, 2015(3).
9. Oyungu, E., Roose, A., Ombitsa, A. R., Vreeman, R. C., & McHenry, M. S. (2021). Child development monitoring in well-baby clinics in Kenya. *International Journal of Maternal and Child Health and AIDS*, 10(1), 128.
10. Sheeran, L., Zhao, L., Buchanan, K., & Xenos, S. (2021). Enablers and barriers to identifying children at risk of developmental delay: A pilot study of Australian maternal and child health services. *Maternal and Child Health Journal*, 25, 967-979.
11. Thaddeus, S., & Maine, D. (1994). Too far to walk: maternal mortality in context. *Social science & medicine*, 38(8), 1091-1110.
12. Van der Linde, J., Swanepoel, D. W., Glascoe, F. P., Louw, E. M., Hugo, J. F., & Vinck, B. (2015). Risks associated with communication delays in infants from underserved South African communities. *African Journal of Primary Health Care & Family Medicine*, 7(1), 1-7.
13. Van der Linde, J., Swanepoel, D. W., Hanekom, L., Lemmer, T., Schoeman, K., Vinck, B., & Glascoe, F. P. (2016). Early detection of communication delays with the PEDS tools in at-risk South African infants. *African Journal of Disability*, 5(1), 1-5.
14. Vidler, M., Kinshella, M. L. W., Sevene, E., Lewis, G., von Dadelszen, P., & Bhutta, Z. (2023). Transitioning from the “Three Delays” to a focus on continuity of care: a qualitative analysis of maternal deaths in rural Pakistan and Mozambique. *BMC Pregnancy and Childbirth*, 23(1), 748.