It is however to note that despite the study did not assess the impact of COVID-19 on the immunization program, it is important to emphasized that, directly and indirectly, the COVID-19 pandemic has had a catastrophic effect on many facets of life throughout the world. Managing the massive number of severely sick patients and deaths puts a strain on healthcare facilities and personnel. As of right now, a number of studies have documented a drop-in vaccination rates during the epidemic. According to WHO reports, delays in primary vaccination programs have been observed in at least 68 countries worldwide, affecting over 80 million children [26]. There has been a notable decrease in the ordering and administration of vaccines in various US states [27,28].

During the COVID-19 pandemic lockdown [29], the average daily vaccination visits in Karachi, Pakistan, fell by 52.8% as compared to the baseline. Immunization programs and child healthcare services were significantly impacted in sub-Saharan Africa [30] Several studies in Saudi Arabia during the epidemic revealed a reduction of almost 25% [31,32].

In comparison to data recorded prior to the COVID-19 interruption, there was an overall, modest decline of 13.4% in the average monthly attendance of children at immunization clinics during a 3-month period of the pandemic, according to a study done in The Gambia on the impact of the pandemic on the uptake of immunization services in rural Gambia. In comparison to the pre-COVID-19 baseline period, there was a 38.3% decrease in the average monthly vaccination antigen delivery during the COVID-19 interruption period. The decline in the mean monthly vaccination rate throughout the COVID-19 shutdown was most noticeable for vaccinations administered early in life, including BCG, birth dose Hep B, Penta1, OPV1, and PCV1 [33].

Potentially fatal childhood infections will resurface if children's primary immunization schedules are disrupted. This would undermine the current efforts to stop these VPDs. According to a benefit-risk analysis research conducted in Africa, the additional risk of COVID-19-related deaths at vaccination clinics is greatly outweighed by the deaths avoided by supporting routine children's vaccines. For every COVID-19 fatality linked to an illness contracted during a normal clinic visit, 84 fatalities in children may have been avoided by receiving standard childhood vaccinations [34].

As eluded earlier in the introduction all the population-based surveys have indicated the lowest coverage in Kanifing Municipality and there was the need to review why and thus the study also had a KAPP component to determine the factors for low coverage. The findings of this study revealed that 287 (95.7%) children surveyed aged 12-23 months old had Infant Welfare Card (IWC) and out of which from the total children (N=287) 74.6% were fully immunized before 12 months while 80.5% were fully immunized by 24 months. Children who were partially immunized account for 56 (19.5%).

In The Gambia, the Multiple Indicator Cluster Surveys (MICS) conducted in 2000, 2010, and 2018 showed fully immunization coverage before the before 12 months old in the Kanifing Municipality varying from 57.1% [19], 85.3% [20] and 92.8% [21] respectively and the two (2) Demographic Health Surveys (DHS) in 2013 and 2019-20 showed 70.9% [22], while in 2019-20, indicated 76.9% [23]. Both results from the GDHS (2013 and 2019-20) were not far from the findings of the study.

Similar studies conducted by Martin Nyaaba Adokiya [16], 2016, revealed that out of 600 children survey, 89,5% were fully immunized and another study by Elias legesse and Worku Dechasi [17] in 2013 assessing child immunization coverage and its determination in Sinana district, Southeast Ethiopia revealed that 76.8% of Children aged 12 to 23 months were fully vaccinated by card plus history. Another cross-sectional survey was conducted in Dechang , West Region Cameroun during a polio outbreak on vaccine coverage and determinants in incomplete vaccination in children aged 12-23 months revealed that 85.9% of the children were fully immunized [18].

The study findings regarding the overall who received BCG was 100%; OPV3 88.9%; PCV3 87.1%; Penta3 87.8%; IPV2 87.8%; Rota2 92.3%; Measles-Rubella1 92.3% and Yellow Fever 92.3%. The results found out from this study was not much of a difference from the results of previous surveys conducted in The Gambia. In 2000, the coverage for BCG was 93.3%; Penta3 63.8%; OPV3 80.0%; Measles 88.6%, [19]. In 2010, the coverage for BCG was 98.2%; Penta3 92.6%; OPV3 92.8%; Yellow fever 92.1%; Measles 92.5% [20].

In the year 2018, coverage for BCG was 96.9%; Penta3 90.4%; OPV3 88.2%; Pneumo3 89.9%; Rota2 89.4%; IPV2 33.5%; Yellow fever 80.9%; Measles -Rubella1 83.5%; Measles-Rubella 2 89.3% [21]. Unlike the MICS, coverage for BCG was 95.1%; Penta3 82.7%; OPV3 83.4%; Measles 84.3% [22], in 2019-20, the coverage for BCG was 98.0%; Penta3 86.0%,; OPV3 85.9%; IPV1 85.1%; PCV3 86.5%; Rota2 90.1%; Yellow Fever 85.8%; Measles-Rubella1 84.9% [23]. This was further collaborated with the study conducted in Dechang, West Region Cameroun in that 98.8% had Measles; 92.8% Penta3; 91.6% OPV3; 90% Measles; 90% yellow fever [18].

The findings of this study further revealed that Coverage rates decline for subsequent doses of OPV, PCV, Penta, IPV, Rota, and Measles-Rubella. OPV0 to OPV4 coverage rates declined from 100% OPV0 to 88.9% OPV3; PCV1 from 98.6% to 87.1% PCV3; Penta1 from 98.6% to 87.1% Penta3; Rota1 from 91.3% to 87.8% Rota2; IPV1 from 91.3% to 87.8% IPV2; and MR1 from 92.3% to MR2 58.9%. Measles-Rubella has the highest decline as depicted

above. The proportion of children who started certain vaccines but did not complete the next intended vaccines was 7.7% for BCG to MR1; 11.7% for Penta1 to Penta3; 9.6% for OPV1 to OPV3 and 6.4% for Penta1 to MR1.

The respondents/Parents who had not completed their children's vaccination were further asked for the reason that had caused it. The reasons were classified into three (3) broad perspectives namely (i) lack of information (ii) lack of motivation and (iii) obstacles. Out of the 56 (19.5%) children partially immunized/vaccinated, 13 (23.2%) were unaware of the need to return for a second or third dose; 11 (19.6%) said that the place and/or time of immunization was unknown; 12 (21.4%) said mothers were too busy while 6 (10.7% said they were unaware of the need for immunization. Thirty-one (55.4%) describe lack of information for not completing their children's vaccination; 1 (1.8%); lack of motivation and 24 (42.9%) had various obstacles that warranted their children to complete their immunization status.

The findings of this study also collaborated with the survey findings of a survey conducted in rural Gambia regarding COVID-19, of which 40% of respondents stated that transportation was a problem. This could be because interstate travel was restricted by lock downs and curfews implemented during the epidemic. It could also be the result of delays in the ordering and distribution of vaccines, particularly in regions where widespread immunization programs are underway. In the future, initiatives like providing passes or expanding home care services should be prioritized in order to lower this barrier to necessary preventative therapies [33].

In addition, a lot of parents refrained from bringing their kids, especially infants, to EPI clinics out of concern that they would get COVID-19 during the vaccination clinics [35].

These findings are also similar with the findings from the study conducted in Dechang, West Region Cameroun wherein 14.1% were partially immunized. Out of those partially immunized the reason were mothers too busy accounted for 32.2% (n=22) [18] and the study from conducted by Martin Nyaaba Adokiya et al, 2016, revealed that out of 600 children survey, 89,5% were fully immunized and another study by Elias legesse and Worku Dechasi in 2013 assessing child immunization coverage and its determination in Sinana district, Southeast Ethiopia revealed 9.5% were partially immunized while 1.0% had not received any vaccine [16]. In the same study, it has revealed that of the 63 children not fully immunized, 57.1% reported time was not convenient and 14.3% said the place of immunization was not known or the mother was too busy.

CONCLUSION

Infectious illnesses are the primary cause of morbidity and death in children, with immunization being a crucial technique for ensuring their health and well-being. In the Gambia, the Expanded Programme on Immunization services are offered free in public health facilities, private clinics, and hospitals, but the immunization rate remains low in some areas. The study revealed that 287 (95.7%) children aged 12-23 months old had Infant Welfare Card (IWC), with 74.6% being fully immunized before 12 months and 80.5% being fully immunized by 24 months.

Children who were partially immunized account for 56 (19.5%). The study also found that coverage rates declined for subsequent doses of OPV, PCV, Penta, IPV, Rota, and Measles-Rubella. Out of the 56 (19.5%) partially immunized children, 23.2% were unaware of the need to return for a second or third dose, 19.6% said the place and/or time of immunization was unknown, 22.4% said mothers were too busy, and 10.7% said they were unaware of the need for immunization. Thirty-one (55.4%) described a lack of information for not completing their children's vaccination, 1.8% had a lack of motivation, and 24 (42.9%) had various obstacles that warranted their children to complete their immunization status. In conclusion, the immunization rate in the Gambia remains low, with a need for increased vaccination coverage and better immunization practices.

IMPLICATIONS

The healthcare professionals should be able to effectively explain to parents the value of vaccinations, their safety, and the repercussions of not adhering to the recommended schedules. Parents and healthcare professionals alike need to be aware of the issue with declining immunization rates. The findings of this study demonstrated how crucial healthcare professionals are in influencing parents' views and immunization habits.

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