Introduction

The well-baby clinics (WBC), or well-child clinics as they are commonly known, deal with the health and well-being of children and families.[1] As public health clinics, they provide a safety net...
for the economically disadvantaged by offering low-cost health care.\textsuperscript{[3]} The clinics operate on a sliding fee scale or give free care to families who are unable to pay. One of the important services offered by WBCs is providing immunizations for childhood diseases such as tetanus, diphtheria, pertussis, polio, hemophilus influenza type b, hepatitis B, measles, mumps, rubella, and varicella.\textsuperscript{[3,4]} The clinics are assigned for tracking immunization rates in the community and notifying families when the time of vaccines is. Families usually ask why their children need routine health care when they have already received all their required immunizations. The answer is simply that well-child clinics provide an array of preventative services and diagnostic procedures.\textsuperscript{[6]} Infants and children are checked for growth and delay in development. The staff checks muscle imbalance at each visit, the ears for infection, the eyes for vision abnormalities, the heart for murmurs, and the hips for developmental dysplasia.\textsuperscript{[5-7]} Families are often not aware of available community services and programs. The staff of WBCs provides referrals to other agencies for financial counseling. Referrals to other health coverage programs are also often discussed in the WBC.\textsuperscript{[8,9]} Most importantly, the staff provides parenting guidance for those with no support system to reduce child abuse and neglect.\textsuperscript{[10]} With appropriate information and support from primary care physicians in WBCs, they could provide much of the care for children. Generalists and specialists are both accountable for educating and directing parents about the role of WBCs. The primary care physicians can play in caring for children with serious chronic illnesses.\textsuperscript{[11]} The current study was conducted to assess parents’ awareness and perception regarding the WBCs in primary health care centers in Abha city, Kingdom of Saudi Arabia (KSA). Also, to assess attendants’ determinants of their awareness and perception regarding WBCs.

Methodology

A descriptive cross-sectional approach was used in the current study. The study targeted all babies’ caregivers attending well-baby clinics in primary health care centers in Abha city. A total sample of 770 babies’ caregivers were required assuming that awareness level regarding the clinics’ services and skills equals 50% (assumed due to lack of similar information on literature) with a precision of 5% at 95% confidence level. The children’s parents were included using the three stages cluster sample technique. In the first stage, all districts of Abha city were included. In the second stage, primary health care centers with WBCs in the sectors were included. In the third stage, a random sample of caregivers was included using a systematic random sample method by including each 3\textsuperscript{rd} attendant. After having the ethical approval, the data were collected using a direct interview questionnaire developed by the researchers after intensive literature review and expert’s consolation besides reviewing provided health care services and skills within the questionnaire. Questions included participants’ demographic data such as age, gender, relation to the baby, educational level, work, and monthly income. Awareness regarding the WBC was assessed using two main items covering hearing about the clinic and parents’ services. Parents’ perception was assessed using two dimensions including the availability and work time of WBC besides parents’ satisfaction regarding the provided services. The third section included items covering the availability of medical staff, equipment, and health education advice and instruments.

Data analysis

After the data were collected, they were modified, coded, and entered into statistical software IBM SPSS version 22 (SPSS, Inc. Chicago, IL). All statistical analysis was done using two-tailed tests. \textit{P} values less than 0.05 were considered to be statistically significant. Descriptive analysis based on the frequency and percentage distribution was done for all variables, including parents’ demographic data, knowledge regarding WBC, practice, and attitude towards WBC’s provided services. Cross tabulation was used to test for the distribution of parents’ awareness regarding WBC by their bio-demographic data. Pearson Chi-square test was used to test for relations significance.

Results

The study included 1593 participants whose ages ranged from 19 to 55 years old with a mean age of 34.6 ± 11.8 years. An exact of 54.3% were mothers, and 63.4% were working. Monthly income of 5000 to 15000 SR was reported among 45.8% of the respondents, and 78.8% were university graduated. Having less than two children was reported by 31.8% of the participants, and 17.1% had five children or more (Table 1). Table 2 shows the distribution of participants’ knowledge regarding WBC by their personal data. An exact 64.1% of the respondents knew about the WBC, which was significantly higher among the females than males (67.4% vs. 60.2%, respectively, \textit{P} = .003). Also, 71.2% of the respondents aged 25–34 years knew about WBC compared to 35% of the parents aged less than 25 years (\textit{P} = .001). An exact of 68.2% of the parents working at governmental section knew about WBC compared to 60.5% of the non-working group (\textit{P} = .001). An exact 67.2% of the parents with 2–5 children knew about WBC compared to 56.6% of those who had less than two children (\textit{P} = .001). Regarding knowing about services provided by WBC, vaccination was reported by 52.3% of the male respondents compared to 47.7% of the females (\textit{P} = .001). Also, vaccination services were reported by 33.1% of the parents aged 35–44 years compared to 18.4% of those aged less than 25 years (\textit{P} = .001). An exact 83.3% of university graduated parents reported for vaccination services at WBC compared to 3.6% of those who had an educational level below secondary (\textit{P} = .023). Also, 50.2% of the parents with 2-5 children knew about vaccination services compared to 19.4% of those with more than five children (\textit{P} = .001).

Table 3 illustrates participants reported practice and services perception regarding the WBC. An exact of 57.1% of the respondents went to the nearest governmental health office at vaccination times. About 46% of the respondents reported that clinic nurse was the main person who dealt with them, and the
most reported services provided by WBC physicians were taking the child medical history (65.9%), greeting and give appropriate consultation and health education (HE) (60.9%), and give analgesics after vaccination (51.5%). Regarding services provided by a nurse at the vaccination clinic, registering child vaccination was the most reported (66.2%), followed by helping mother to make child calm (56.8%), calm the child fear (55.3%), and provide HE for mothers regarding breastfeeding (32%). As for instruments at WBC, 78.8% of the respondents reported weight, temperature, and length instruments, whereas 71.2% talked about childbed, and 60.6% reported manual or electronic child files. An exact 68.8% of the respondents reported that WBC informed them of their child’s coming vaccination date. Also, 15.1% of the respondents reported that child hospital referral by WBC for health problems was done.

With regard to participant’s attitudes regarding services provided by the WBC [Figure 1], 63.3% of the respondents reported that WBC nearly worked all times, whereas 4.5% said that WBC in their area was not working. As for respondent’s satisfaction regarding services provided by WBC, 37.1% were satisfied, 38.7% were partially satisfied, and 5.2% were dissatisfied.

Discussion

The study aimed to assess participant’s awareness and perception regarding WBCs in Abha, Southern of Saudi Arabia. WBC or childcare means caring for and supervising the child, generally from birth till puberty. Childcare may be defined as the care of those children provided by the adults, including health care staff. Unofficially, this service is mainly provided by their families, grandmothers, or other relatives, whereas proper care facilities include government care institutions, school teachers, or private care centers.[9,10] Child care includes identifying child-needed vaccinations, services, and danger signs. Some easily identifiable danger signs have been incorporated in the mother and child pamphlet, mostly not used by mothers or even know about it.[11,13] WBCs may provide mothers and childcare givers with all needed information regarding childcare and developmental milestones.

The current study revealed that nearly two-thirds of the mothers or childcare givers knew about childcare and WBC. Awareness was significantly higher among female participants, young aged group working mothers with more than one child. This can be explained by that females are mostly mothers who work and responsible for child care. Most mothers are the main caregiver for the child who is usually concerned with the vaccination schedule, health assessment and mostly seek medical consultation, which made them more liable to visit WBCs and know about provided services. As for participant’s awareness regarding provided services in the WBC, nearly half of the respondents reported curative services, health education, and vaccinations. Sokhela DG et al.[14] assessed well-baby visits in primary health care facilities in a middle-income country reported that babies were shown to have been immunized in all reviewed records, whereas discussion of side-effects and the given therapy were only recorded in 9.7% charts. Also, nearly 99% of babies were weighed, but only 71% of weights were ‘plotted,’ and 56.3% classified according to the integrated management of childhood illnesses standards. Qayyum A et al.[15] revealed that the majority of mothers had good awareness regarding childcare and care practices. Also, the mother’s understanding, education, and child number influence the quality of childcare. Another study conducted by Kibaru EG and Otara AM[8] revealed that the majority of mothers, i.e. 84.5% identified less than three neonatal danger signs. Fever was the commonly recognized danger sign by 74.9% of postnatal mothers. About 46%, 40%, 35%, and 6% identified difficulty in breathing, poor sucking, jaundice, and lethargy/unconsciousness as newborn danger signs, respectively.
Regarding parents and childcare givers reported practice and services perception for a WBC, the current study showed that more than half of the participants went to the nearest governmental health office, the WBC for child vaccination. The nurse and general practitioner physician were the most reported staff who dealt with mothers while visiting the WBC. Taking the child’s medical history, physical examination of the child, and giving health education notes were the most reported services provided by physicians at the WBCs. Registration of the child for vaccination and calm the child’s fear were the main services provided by the nurse. The surprising findings were that there was a lack of health education posters (only half of the clinics had), and only one-third of the WBC attendants were informed about the next vaccination date, which is a shortage at the staff role. Braun SJ et al., in his published article listed staff roles in the WBC.\[10\] He said that the clinic should have adequate heat, light, and ventilation, as well as running water. Sometimes clients are provided bus tokens for transportation. The nurse is designated responsible for the clinic and its operations in addition to her work with the families, the doctor for the medical care of the family. These two professionals may divide the work in several ways, depending on the nurse-doctor ratio. The current study revealed that only two-thirds of the childcare givers declared that WBCs are usually working and not closed. Also, one-third were totally satisfied regarding services provided by a WBC in their area.

Many studies bases on additional health services and care provided to the children in the general hospitals, with the long-term goal of developing evidence-based practices that map the health care needs of this population with little concern or the role of WBCs. To fill this gap, the current study was concerned to evaluate the nature and satisfaction regarding the services provided in these settings covering physical and mental health conditions. Appropriate role regarding immunizations and milestone assessment was reported, whereas there were some limitations regarding accessibility and provided health education.

### Conclusions

Proper care is vital for a child’s survival as well as optimal physical and mental development. Adequately cared child has proper well-being and happiness. Care is vital for the nutritional well-being of the young child. Caregiving involves breastfeeding, detecting illness, and determining child developmental

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**Table 2:** Distribution of participants’ knowledge regarding WBC by their personal data

| Factors                  | Know about the well-baby clinic | Services at WBC                                                                 |
|--------------------------|---------------------------------|---------------------------------------------------------------------------------|
|                          |                                 | Curative services | Health education | Vaccination only |
| **Gender**               |                                 |                   |                  |                 |
| Male                     | 60.2%                           | 50.5%             | 46.1%            | 52.3%           |
| Female                   | 67.4%                           | 49.5%             | 53.9%            | 47.7%           |
| **P**                    | 0.003*                          |                   | 0.001*           |                 |
| **Age in years**         |                                 |                   |                  |                 |
| <25 Yrs.                 | 53.0%                           | 25.2%             | 23.3%            | 18.4%           |
| 25-34                    | 71.2%                           | 29.2%             | 27.8%            | 32.9%           |
| 35-44                    | 69.1%                           | 29.6%             | 31.9%            | 33.1%           |
| 45+                      | 56.4%                           | 16.0%             | 16.9%            | 15.6%           |
| **P**                    | 0.001*                          |                   | 0.001*           |                 |
| **Work**                 |                                 |                   |                  |                 |
| Not working              | 60.5%                           | 36.0%             | 36.2%            | 33.6%           |
| Governmental             | 68.2%                           | 52.2%             | 53.8%            | 56.5%           |
| Private                  | 54.8%                           | 11.7%             | 10.1%            | 9.9%            |
| **P**                    | 0.001*                          |                   | 0.047*           |                 |
| **Monthly income**       |                                 |                   |                  |                 |
| <5000 SR                 | 57.7%                           | 33.7%             | 30.3%            | 28.1%           |
| 5000-15000 SR            | 67.4%                           | 43.1%             | 47.5%            | 49.3%           |
| 15000-20000 SR           | 70.8%                           | 12.7%             | 12.9%            | 14.1%           |
| >20000 SR                | 60.7%                           | 10.5%             | 9.3%             | 8.4%            |
| **P**                    | 0.001*                          |                   | 0.012*           |                 |
| **Educational level**    |                                 |                   |                  |                 |
| Below secondary          | 62.5%                           | 3.5%              | 4.3%             | 3.6%            |
| Secondary                | 64.1%                           | 16.9%             | 16.7%            | 13.1%           |
| University/above         | 64.2%                           | 79.6%             | 78.9%            | 83.5%           |
| **P**                    | 0.964                           |                   | 0.023*           |                 |
| **Number of children**   |                                 |                   |                  |                 |
| <2 children              | 56.6%                           | 35.9%             | 32.7%            | 30.5%           |
| 2-5 children             | 67.2%                           | 49.6%             | 49.2%            | 50.2%           |
| >5 children              | 68.8%                           | 14.4%             | 18.1%            | 19.4%           |
| **P**                    | 0.001*                          |                   | 0.001*           |                 |

\*P: Pearson χ² test. *P<0.05 (significant)
Table 3: Participants reported practice and services perception regarding well-baby clinic, Abha City, Saudi Arabia

| Participants practice regarding WBC | No  | %    |
|------------------------------------|-----|------|
| **What to do on child vaccination time** |     |      |
| Use the application to have an appointment | 523 | 32.8% |
| Go to the nearest governmental health office | 910 | 57.1% |
| Go to the nearest private health care facility | 107 | 6.7%  |
| Delay for another time | 53  | 3.3%  |
| **Who deals with you at WBC** |     |      |
| At reception | 879 | 55.2% |
| Clinic nurse | 734 | 46.1% |
| General Practitioner | 621 | 39.0% |
| Family medicine specialist | 430 | 27.0% |
| Family medicine consultant | 432 | 27.1% |
| **Services provided by WBC physician** |     |      |
| Not meeting the physician | 103 | 6.5%  |
| Give analgesics after vaccination | 866 | 54.4% |
| Taking the child medical history | 1050| 65.9% |
| Doing physical examination for the child | 820 | 51.5% |
| Greeting and give appropriate consultation and HE | 970 | 60.9% |
| **Services provided by a nurse at vaccination clinic** |     |      |
| Calm the child fear | 881 | 55.3% |
| Help mother to make child calm | 905 | 56.8% |
| Register child vaccination | 1054| 66.2% |
| Ask the mother to wait for 30 min after vaccination | 347 | 21.8% |
| Provide HE for mothers regarding breastfeeding | 510 | 32.0% |
| **Instruments at WBC** |     |      |
| Weight, temperature, length instrument | 1255| 78.8% |
| Childbed | 1134| 71.2% |
| Manual or electronic child file | 966 | 60.6% |
| HE posters | 942 | 59.1% |
| **WBC informing you of your child coming vaccination date** |     |      |
| Never | 497 | 31.2% |
| Sometimes | 505 | 31.7% |
| Usually | 591 | 37.1% |
| **Child hospital referral by WBC for a health problem** |     |      |
| Yes | 241 | 15.1% |
| No | 1352| 84.9% |

milestones. In this study, mothers and children caregivers had adequate awareness and acceptable attitude towards WBCs and provided services. Some barriers were declared including the lack of available WBCs within the residence range, not all WBCs usually working, and some information that should be provided (especially for vaccination) may be ignored. Proper WBCs services promote healthy and safe surroundings for the child and provide sufficient health care for the child’s psycho-social care and emotional support.

**Ethical considerations**

The study was conducted in accordance with the Declaration of Helsinki, and the Ethics and Research Committee of the College of Medicine of King Khalid University approved the protocol.

**Financial support and sponsorship**

Nil.

**Conflicts of interest**

There are no conflicts of interest.

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