



Knowledge And Attitude Of the Father Towards Neonatal Care In England

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Abstract

The birth of a newborn baby is always a welcome and pleasant event for all parents. Neonates are the future spine of all families and countries. This study is to explore Knowledge And Attitude Of the Father Towards Neonatal Care In England. The results of the study revealed that the majority of fathers belonged to the Asian or Asian British ethnic group. Most of them were further educated and graduated and from the nuclear family. Worker, clerical and farmer were the occupational status in the majority of respondents followed by professionals (only 5.9%). The majority of fathers resided in the urban area. The major findings of this study indicated that major knowledgeable areas were general knowledge, breastfeeding, cleanliness and cord care and immunization. The least knowledgeable areas were kangaroo mother care and thermal regulation. The mean knowledge score was 12.4 (44.22%) with a standard deviation of 4.64. Similarly, the mean attitude score was 45.41 (60.54%) with a standard deviation of 8.72. Moreover, there was a significant association between knowledge and attitude with an ethnic group (p value < 0.05).

Key words: Knowledge, Attitude, Father, Neonatal Care Management.

INTRODUCTION

Pregnancy is an incredible time for a mother and her baby to bond, especially during the first pregnancy. There are no words to express how it feels to hear or feel a heartbeat for the first time. Watching her belly grow and grow as the months pass by, having ultrasounds to gain glimpses into the womb, and then the transformative power of labour and childbirth. Pregnancy is an amazing journey for both the mother and father, as he watches his unborn child/children inside the mother's belly grow, places his hand on her belly to feel a kick of the baby. At one moment, the baby is little more than a dream and, the next, the baby is here!

The birth of a new baby universally offers delight and enormous excitement to all anticipating families. Childbirth is a widely cherished celebration, marked by dancing, fireworks, flowers, and presents. Parental responsibilities, however, increase soon after the birth. The transition to parenthood is commonly perceived by society as one of the most welcoming events in a couple's life. However, the new parents face many changes, challenges, and responsibilities.

Neonates are the core of every family and their country. All families and nations' progress are dependent on the health and well-being of their young population. Due to their vulnerable state, they need extra and special care from their parents as this period is very crucial for them. Neonate care means, management of the neonate during the transition to extra-uterine life and subsequent period of stabilization into a new world. The neonatal phase, which lasts for the first 28 days of a child's existence, is the most crucial period for the survival of a baby (Gale Encyclopedia of Nursing and Allied Health, 2016). It is also known as a high dependency period in which the needs should be covered by their parent and family members.

A large number of neonatal deaths occur in underdeveloped nations with limited access to health care. Building solid health services, ensuring that every delivery is handled by experienced professionals, and making hospital care available for emergencies are all essential components of promoting child survival. It is very important to give early and exclusive breastfeeding. It's also crucial to provide adequate feeding, baby care, and immunization during this time, these all help in improving the chances of newborn survival and establishing the foundations for a healthy future (WHO, 2021). Children are most likely to die in their very first days of life, with an average global rate of 17 fatalities per 1,000 live births in 2019, down from 37 deaths per 1,000 in 1990. In 2019, the likelihood of dying after the very first month and just before reaching the age of one was predicted to be 11 deaths per 1,000, while the likelihood of dying after reaching the age of one and before reaching the age of five was assessed to be 10 deaths per 1,000 (UNICEF, 2020).

The father plays an important function in determining the health and survival rate of neonates as every child born on this planet has a set of genes that is come half from mothers and half from fathers. Both parents' involvement is critical in determining their child's well-being because their timely and proper action for newborns can mean the difference between life and death, or between a normal healthy life and one with a major disability. "A healthy start in life" leads to a healthy existence overall.

Kelly Winder (2020) noted in their article that both the mother and the neonate require immediate care after the delivery. At this point, the mother always expects that her life partner will lend a helping hand in the care of her newborn. Throughout the 42 weeks of pregnancy, she experiences multiple changes which include bodily changes such as increasing weight, growing belly, morning sickness, frequent urination, mood swings feeling pain, fatigue, sleep deprivation, depression, psychosis, blues, and restriction on eating and drinking (DC Dutta, 2015). Moreover, during childbirth, a mother experiences up to 57 units of pain, which is the equivalent of 20 shattered bones. But the human body can only tolerate up to 45 units of agony according to Africa Checks (2019).

Since women have entered the workforce or economic system to compensate for the male earning power lost during two world wars, the number of women in the workplace has increased dramatically during the previous 60 years. The feminist movement, equal opportunity legislation, the rise of the service sector and the information economy, and the ever-increasing cost of living have all contributed to this change as well as improved educational opportunities (Tricia Hind, 2015). This allows fathers to have more time to spend with their babies which makes fathers as competent as a mother in caregiving.

In the previous years, house chores and care of babies were only the responsibility of a mother. But, according to research, father's total house chores time has increased by almost an hour in the recent decade, while mothers have decreased by 36 minutes. Not only does the mother require the father's assistance with household work, but the baby also requires a close bond with him.

There are so many areas in which a father should help the mother like feeding, changing a diaper, bathing, putting to bed, reading stories, dressing, disciplining, housework, playing games, and calling the physician when the baby is sick.

Rationale of the study

No doubt the mother's role is significant in making house, family, and baby care but the father also plays an undeniable role in accomplishing these activities. In the past, there was not enough attention given to the role and needs of the father. Fathers' engagement helped in the quick recovery of their partners and babies. It helps reduce the mother's stress level, allowing her to

achieve optimal physical, mental, and emotional health, as well as ensuring that the family functions effectively. Fathers have a significant role in the baby's prosperity, growth, and development, as well as mental, social, and emotional health, from pregnancy through adolescence, according to the National Institute for Children's Health Quality (2021). Furthermore, there is no doubting the significance and beneficial impact that a father's active involvement has on the development of his child. The involvement of a father in nurturing the infant will depend on the bond between the father and child and will help in the acceptable socialization of the baby.

There are many policies, which indirectly affect neonatal health, but there are none that specifically target newborns. Neonatal health is often "included" with maternal health policies and goals, but it is not normally a high priority. In neonate care, some areas affect the health of the baby if not considered. These areas are breastfeeding, kangaroo mother care, thermal regulation, cleanliness, and umbilical cord care, and immunization. These areas of knowledge are important for the fathers for their baby's well-being.

In changing the context, according to the National Institute of Child Health and Human Development (NICHD), fathers are more involved in childcare than they have ever been. The reasons for this are numerous, including improved psychological awareness, coping skills, mental illness intervention, self-worth issues, marital intimacy, social connectedness, and better role modeling for children and most families are nuclear in which the women are also working. During this time, fathers are the only person who helps their partners in the rearing of their child because they have no family support.

According to recent research from life insurer Aviva (2011), fathers are the primary caregiver in one in seven (14%) UK households with dependent children. According to the report, at least 784,000* men in the UK now perform the role of "primary parent." For the well-being of neonates, a father should have proper knowledge regarding neonatal care. Despite, growing interest in the study of fathers, several aspects of paternal involvement have not still to be investigated. There has not been anything written or researched about fathers who devote a considerable amount of primary care to their newborns. There has been little recent quantitative research conducted to check the father's knowledge about neonatal care or the perception that "is it the only moms' role to care for the newborn baby."

Objectives

1. To explore the knowledge and attitude of fathers towards neonatal care.
2. To find out the association between the knowledge and attitude of fathers towards neonatal care with socio-demographic variables.
3. To develop and disseminate the Information Education and communication (IEC) resource to provide information regarding neonatal care.

Conceptual Framework

This conceptual framework was created to acquire a better understanding of the research. The topics are grouped based on how closely they relate to a common theme. It expresses the thought process so that others can understand the fundamental frame of reference for the study problem.

In this conceptual framework, the researcher is demonstrating the relationship between variables, which gives the researcher a perspective from which to look at the study topic. Education, occupation, ethnicity, family type, and type habitat are all regarded independent variables that influence paternal knowledge and attitudes towards caring for neonates. Each father of neonates should be knowledgeable about general neonatal care which includes breastfeeding, kangaroo mother care, thermal regulation, cleanliness, and cord care and immunization, as well as a positive attitude towards exclusive breastfeeding, kangaroo mother care, and accompany their partners for baby immunization. If the paternal have adequate knowledge and a positive attitude towards neonatal care, then they will undoubtedly participate in the care of neonates.

LITERATURE REVIEW

Contextual Background

One of the most significant tasks in the research process is to do a literature review. A literature review is "a systematic, explicit, and repeatable approach for recognizing, evaluating, and synthesizing the existing corpus of finished and recorded work created by researchers, scholars,

and practitioners," (Arlene F, 2005; Sarah S, 2012). While it is primarily focused on existing information, it also considers how it might be applied in the future.

Paternal engagement in baby care

It is an undisputed reality regarding the parents that they brought their child into this world (Ardita C, et al. 2016). It had seen that traditionally, the raising of children has been primarily the responsibility of mothers and mothers have done a fantastic job. But fathers are also just significant and equipped as a mother for to be an effective parent.

Cookston J. (2012) had stated that most fathers want to be more involved with their children, but many factors prevent them from doing so. These factors included lack of realistic role and expectation, limited paid leaves and flexitime, financial issues, manhood's armor, and habits, and lack of community support. Moreover, mothers, through a notion known as Maternal Gatekeeping, or child development service providers, generally known as a "Culture of Maternalization," can generate negative attitudes of dads' involvement (Naira S, et al., 2020). Even, some relatives like family, friends, and neighbours believed that fathers only have a breadwinner role for the babies and some fathers thought they were not fully equipped and have low self-confidence for childcare. They haven't been prepared for childcaring. In some ways, the "nurturant" fathers are paternal role models.

S Shefaly, A Lina, B Esther (2018) did research on Asian fathers' lived experience during the puerperium period. Almost 50 fathers were chosen from the postnatal ward, including both first-time and experienced fathers. The results explored that the early postnatal period was stressful for both first-time and experienced fathers. Moreover, fathers who wanted to be involved were restricted by various factors, for example, maternal gatekeeping, job responsibilities, and a lack of newborn care skills and expertise. It was also found that it is difficult for experienced fathers to acclimate their older children to the new environment.

Controlled clinical trial research had done by An HS and Bang KS (2014), to see how newborn care education affects first-time fathers' knowledge and confidence in newborn care after one month of delivery. 53 new fathers were divided into 2 groups like 27 in experimental and 26 in the

controlled group from Nursery of Municipal Hospital in Seoul. Before the discharge, a researcher had given the neonate care education to the experimental group by showing video, demos, procedures, and verbal education. The findings showed that infant care education is an effective strategy for increasing first-time fathers' knowledge and confidence in neonatal care.

Redshaw M, et.al., (2013) had researched on fathers' engagement in pregnancy and childbirth. England's national maternity survey inquired on maternal experiences with maternity and childcare, health, and well-being up to three months following delivery, and their partners' involvement in pregnancy, labour, and postpartum care. Data was collected from 4616 mothers in 2010. It revealed that during the postnatal period, almost three-quarters of fathers took paternity leave for helping their partner in neonatal care. Paternal involvement was higher among the partners of primigravida white women, those who lived in less affluent areas, and those who had a planned pregnancy. The first contact with health providers before 12 weeks of pregnancy was linked to higher levels of parental involvement.

Jones J, et.al., (2013) stated that a father's involvement in childrearing has a significantly positive effect on the child and their wellbeing in many areas. Researchers also assessed that fathers were performing daily routine care for their babies. For children under age 5, activities include: eating meals with or feeding the children, bathing, diapering, or dressing the children or helping the children bath, dress, or use the toilet themselves, playing with the children, and reading to them.

The father's new role as a nurturer

Louca EP, et.al., (2020) had written an article on the (neglected) role of the father in children's mental health which discovered that fathers play an important role in their children's development. Fathers are seen to be vital in the development of a child's autonomy, the moulding of gender identity, and the formation of a child's moral framework. He is typically the one who instils in the child a sense of safety. He is regarded as the family's guardian and defender. The father, according to Freud, is a symbol of stability, power, and authority for the child.

An article written by Vrouvas M (2017) had stated that the shifting role of fathers in modern society. The article also mentioned that fathers spent up to 7 hours a week on childcare and 10

hours a week on housework in 2011, data was taken from Pew Research Centre. These figures were much higher than in 1965 when fathers spent roughly 2.5 hours per week caring for children and 4 hours per week doing housework. But the main question in the article was can a father nurture? It is, according to multiple pieces of research were conducted during the last two decades. These studies suggest that when children are exposed to a positive male role model, they do better in school and adapt well to society. Whether he's a biological father, stepfather, or responsible adult living in the same house, this is true.

Father's knowledge and attitude for baby care

Gnyawali S and Lamsal A (2016) had researched on fathers' knowledge regarding the care of a first newborn baby in a tertiary care maternity hospital of Nepal. For the study, 60 fathers were targeted, and data were extracted by interviewed technique. Almost 60% of fathers were founded to be knowledgeable regarding newborn care. It also reported that those fathers were less educated and living in the extended-type family had less knowledge. But the father's knowledge of feeding, thermal regulation, drying, and immunization was found to be good.

A piece of research had been carried out on the knowledge and perception of first-time fathers towards neonate care by G Rekha (2017). The sample was collected by non-probability purposive method from Government Lady Goshen and Father Muller, Medical Hospital at Mangalore. About 100 first-time fathers had requested to fill the close-ended questionnaires and 5-point attitude scale was used for evaluated their knowledge and attitude. According to a survey, nearly three-quarters of first-time fathers were unaware of neonatal care and 80.57 percent of first-time fathers had a positive attitude toward newborn care and indicated that they were interested in neonatal care activities but lacked expertise. As a result, an Information booklet on sleep and rest, cleanliness, care, care of minor illness, baby care training, milestones, feeding, and general consideration in neonate care was prepared and directed.

The research did by Talley M Lynette (2017) on first-time fathers' attitudes towards pregnancy, birth, and fatherhood. One-on-one in-depth interviews from 12 individuals were conducted. All participants had expressed both positive and negative attitudes towards pregnancy and childbirth. According to all the participants, the transition to parenthood was rewarding and overall enjoyable.

However, several of them, stated that parenting was a far more difficult job than they anticipated. A few of the participants felt a stronger bond with the infant since the baby's birth; nonetheless, this bond was distinct from the mother's bond with the infant.

Amy B. and Ruth D. (2014) had researched the experience of UK fathers who support breastfeeding: barriers to breastfeeding promotion and education. With the help of an open-ended questionnaire, they collected the data from 117 fathers whose partners had given the birth within last two years. The questionnaire was regarding their experiences of breastfeeding and their suggestions help a researcher in educating and promotion breastfeeding targeted at fathers and families in the future time. The result was fathers promoting breastfeeding and the desire to be able to help their partners. Moreover, they believed that they had a lack of necessary knowledge, awareness, and ability to do so and requested more information and support to be focused on them rather than just their partners.

Qualitative research had been done by Rowena, et al. (2019) on father attitudes towards breastfeeding in South-West England. The aim was to explore the beliefs, attitudes, and behaviours of fathers towards breastfeeding. The data was collected through interviews and 18 fathers were targeted for this study in Wiltshire, England. They conclude that fathers were aware of healthy accepts of breastfeeding and wished to breastfeed their babies, although they were unclear of their role in the feeding process because they believed that it was not their body. While they were aware of the importance of mothers' milk for the neonates, fathers were less knowledgeable about the practicality of breastfeeding and the challenges they and their partners would face in effectively breastfeeding for the exclusive six months.

Lourdes G., et al. (2013) had conducted a study on fathers' attitudes and knowledge regarding breastfeeding. About 84 voluntary fathers were targeted for this study. Data was collected with the help of a survey. The result was approximately 88% of fathers want their partners to breastfeed their babies. Most of the fathers (56%) believe it is acceptable for a woman to breastfeed in public. Feeling jealous of breastfeeding (10%), believing that breastfeeding is bad for breasts (17%), breastfeeding makes breasts seem unattractive (26%), and breastfeeding removes the infant from

the father (26%), was among the negative opinions (7 percent). There were a few myths discovered regarding breastfeeding.

J Llamas and A Regal (2014) conducted cross-sectional research on fathers' lactation knowledge and attitudes. The study was placed at the University of Santo Tomas Hospital (USTH) in the Philippines, where 156 dads, along with their spouses and children, had been chosen. The Iowa Infant Feeding Attitude Scale (IIFAS) was utilized to find that fathers did not affect whether their babies were fed breast milk or formula milk. Nearly four-fifths of fathers agreed that breastfeeding was the best diet for newborn babies. Many fathers believed that newborns who had received breast milk were healthier than those who had received powder milk. More than half of them were unaware that their breast milk had iron deficiency. Approximately 80% agreed that it is easily digested, less than nine-tenths are aware of its cost-effectiveness, and less than three-fifths acknowledge its convenience. Breastfeeding support was highlighted when 55 percent of fathers would encourage mothers to breastfeed so that they would not miss out on the joys of parenthood, and practically every father would encourage mothers to breastfeed. Breastfeeding support was highlighted when 55 percent of men urged mothers to breastfeed so that they would not miss out on the joys of parenting, and practically every father agreed that breastfeeding improves mother-baby bonding. However, less than half of men support their wives' decision to switch to formula feeding when they return to work, and 42% just feel breastfeeding a baby in public is acceptable. However, less than half of dads support their wives' decision to switch to formula feeding when they return to work, 42% regard breastfeeding a baby in public as acceptable, and 57% refuse to allow breastfeeding from alcoholic moms.

A cross-sectional study was done on the fathers' breastfeeding knowledge and attitudes to improve breastfeeding practices. A total of 93 fathers were included in the study. Around seven out of ten fathers exclusively breastfed their babies between the ages of 4-6 months. Before a baby was born, 54 men (58.1%) knew how to feed, and 68 fathers were interested in learning more once the baby was born. 90 fathers (96.8%) thought they had gotten the knowledge that they needed. In contrast, only 34 (36.6%) had received training from healthcare providers. Most well-informed fathers were in support of breastfeeding (A. Abhinaya et al., 2016).

C Alexandrina, et al (2018) did a cross-sectional design study on Portuguese fathers' knowledge of breastfeeding during the pregnancy period. A study location was at Health Centres in a region of Northern Portugal. Investigator targeted 143 fathers by using the convenience sampling technique. The findings revealed that father instruction and reinforcement are critical factors in ensuring effective breastfeeding. The most difficult part is preparing men to assist breastfeeding mothers. However, fathers revealed a significant lack of knowledge on breastfeeding during pregnancy.

A cross-sectional survey was done by C Beatrice, et al. (2021), to examine paternal knowledge and attitudes about breastfeeding, as well as their possible relationship with breastfeeding rates at discharge. Around 200 fathers of healthy newborns were involved in the study and told them to score their level of extent of permission on a 5-point Likert scale for 12 items. Their answers yielded an all-out score. A significant piece of information revealed by fathers on the effectiveness of breastfeeding for maternal (85%) and neonate (98%), skin-to-skin (99.5%), staying in (79%), and vigorous feeding (67.5%); on the other hand, only 51% paternal were aware regarding the recommended confinement on use of pacifiers during the first month of birth. 79% of fathers stated that actively engaged with infants' feeding. 129 fathers (64.5%) thought breastfeeding would cause a problem in their daily lives, and 186 people (93%) said they would breastfeed in public.

G. Thilagavnthly and S. Samia (2017) conducted descriptive cross-sectional research on first-time expecting fathers' attitudes on breastfeeding at King Saud Bin Abdul Aziz University for Health Sciences in Saudi Arabia. 157 samples were chosen purposively from those attending antenatal clinics alongside low-risk term primigravida at tertiary care corporate maternity hospital, Cosmopolitan Bangalore city, Karnataka, India.

L Thais, C Jovanka, et al in 2019 had conducted research on fathers' experience with the Kangaroo Mother Care. An Integrative literature review online was used for the study and nearly 732 articles were reviewed but only 7 were included. It was found that the father experienced the kangaroo mother care method with satisfaction and pleasure. The study also found some gaps between father and infant, as well as some problems, concerns, and uncertainties related to the operating and life support machine that was utilized to ensure the endurance of premature babies.

A descriptive study was done by Blomqvist Y T, Rubertsson C, et al. (2011) on the experience of fathers giving Kangaroo Mother Care (KMC) to the premature baby. The researchers had interviewed the 7 fathers who had carried out the Kangaroo Mother Care in 2009. According to the findings, fathers who were involved in neonatal critical care had an opportunity to be close to their newborns. Kangaroo Mother Care enables them to feel positive and saving their baby's life, even baby care was demanding and stressful. It concluded that Kangaroo Mother Care provided an opportunity for fathers to achieve their paternal role and coping with the unpredicted situation.

Neha Gill, et al. (2021) did a piece of research on fathers' knowledge and readiness of pre-term babies for Kangaroo Mother Care (KMC). With the help of convenience sampling, approximately 60 fathers were selected and requested to fill the structured questionnaire and checklist both were used for assessing their knowledge and readiness for KMC. The finding revealed that 43 fathers had an average level of knowledge, followed by 8 had good, 8 had below-average level and only 1 had very good knowledge. Hence, it found that fathers must be educated on kangaroo mother care.

Quantitative experimental research was done by **B.Sonia and F.Barbara (2012) in Maternity Public Hospital in Portugal for examining how the experience of cutting the umbilical cord affects fathers' emotional attachment to their newborns. 150 subjects were targeted through a convenient method and the bonding scale was used for collecting the data. The results demonstrate that emotional involvement between baby and fathers increased during the initial days after baby birth and decreased when evaluated after one month. The findings imply that umbilical cord-cutting had improved the father's emotional involvement with the newborn, demonstrating the benefits of his involvement and empowerment during childbirth.**

Prosser, Petersen & Quinlivan (2016) did a cross-sectional survey on the attitude of Australian fathers towards newborn vaccination and to find the variables that may have an impact on these attitudes. Data was conducted from 407 Australian first-time expectant fathers and the result shows that the majority of participants (89%) had a positive attitude regarding baby vaccination, whereas 9% were neutral and only 2% had a negative attitude. Moreover, fathers who had a negative

attitude towards immunization had a high self-reported knowledge level and they were more likely to get information from the Internet rather than from medical personnel.

A research survey was done on the Turkish families (Kara S S, et al.,2018), to assess the parental knowledge and attitude towards childhood vaccination and their association with sociodemographic variables. The data was collected from the parents of children aged between 1 day and 120 months through the questionnaire method. The finding was out of 903 children, almost 97.6% of children were fully immunized by their age. It found that mean age, educational level, occupation of mother, father, average monthly household income, and experience of side effects with vaccination were strongly associated with elective childhood vaccination. Moreover, the father's educational level was associated with his knowledge about optional childhood immunizations.

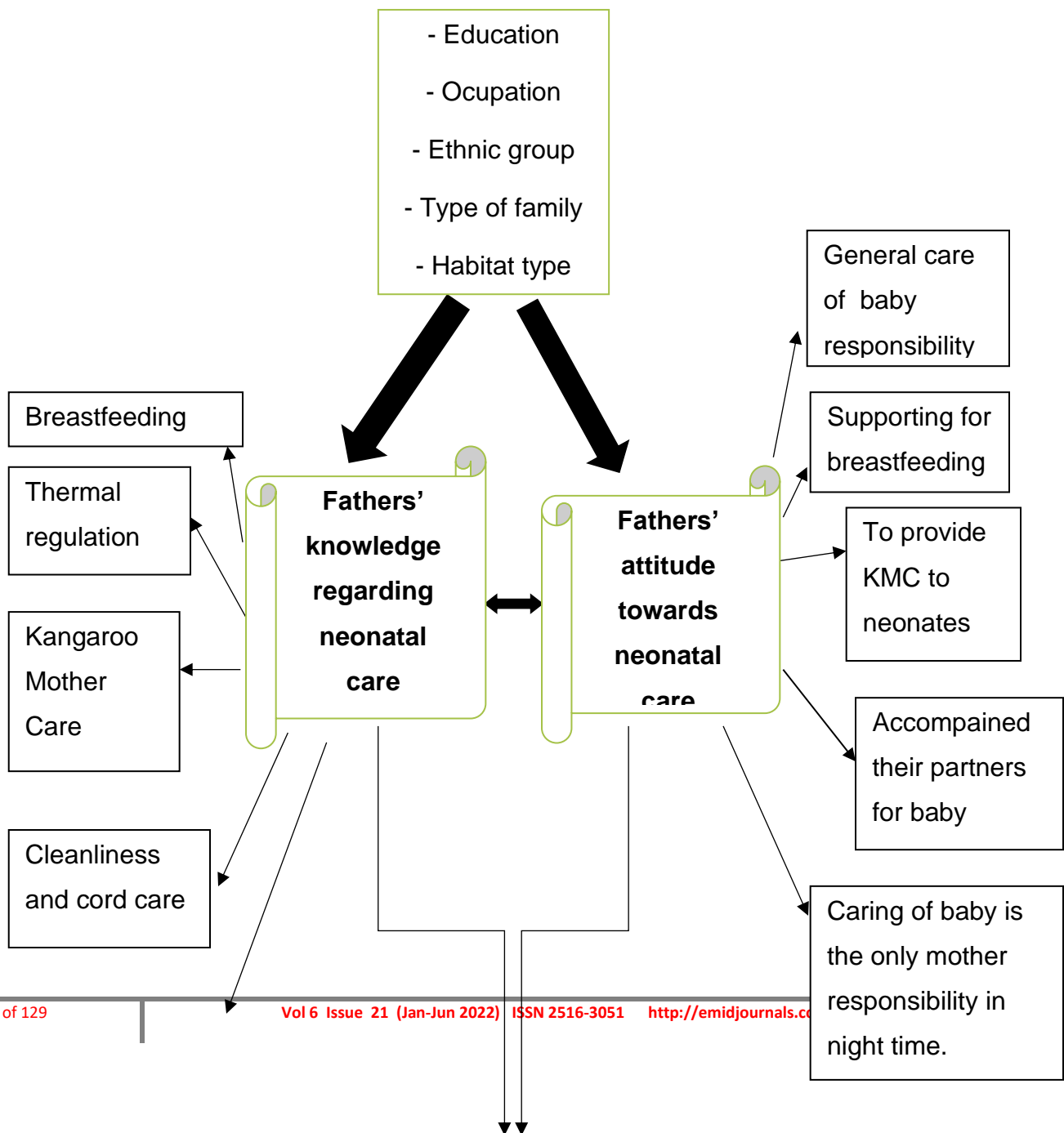
L H Marcewicz, et al. (2017) did research on the parental refusal of Vitamin K and neonatal preventive services: a need for surveillance. The result showed that about 3% of infants did not receive injectable Vitamin K at a hospital due to parental refusal and in the birth center, the rate was almost 31%. The most common reasons for parental refusal were unnecessary (53%) and desire for natural childbirth (36%). Moreover, around 66% of parents refused Vitamin K, newborn eye care with erythromycin, and the neonatal dose of hepatitis B vaccine.

In 2017, B Trushtikumar, et al. conducted cross-sectional community-based research, to assess the parent knowledge, attitude, and practice about child vaccination in Bangalore. Almost 110 parents from various rural areas of Bangalore were selected and found that 72.7% of a parent had a good knowledge followed by normal (21.8%) and less (5.4%), whereas 85.4% parents' positive attitude towards childhood vaccination. Hence, the parental knowledge, attitude, and practice regarding child vaccination were the significant variables of the immunization status of their child.

An article title to assess the knowledge regarding the assimilation of Routine Immunization (RI) was published in Annals of African Medicine Journal (2019). Data was collected from 276 fathers with the help of self-structured questionnaires. The result showed that 75.4% of infants had not received Bacillus Calmette-Guerin (BCG) vaccination at birth time and only 7.6% of infants were

fully vaccinated. It concluded that the father's knowledge regarding Routine Immunization (RI) was poor, and their reasons were also different. It's found that RI improves babies' wellbeing and those who got RI were safe against vaccine-preventable diseases (VPD). Moreover, fathers should be educated on the RI schedule to make sure that children receive all vaccines at right time.

CONCEPTUAL FRAMEWORK FOR THE STUDY



Immunization

Involvement of fathers in
neonatal care

METHODOLOGY

The non-experimental descriptive research design was used to plan and organize the current study. Designing a research study involved the development of a plan or strategy that will guide the analysis of data. The method was appropriate because it was less expensive and less time-consuming. This step was critical at the precise moment when the sample test set needed to be simplified.

A quantitative approach was used to collect the numerical data to assess the knowledge and attitude of fathers towards neonatal care. This method enabled the researcher to get a series of data that were highly desirable within particular demographic variables. It is an easy and less-time taking method when researchers want to analyze many items.

The present study was conducted in Hayes town of England within 10-mile of geographical area. The purpose of selecting this field for the study was investigator convenience, feasibility, proximity, familiarity, pandemic situation, and expected cooperation from the fathers in getting permission and conduction the study.

Sample Variables

- **Demographic variables**

Educational status, occupation, ethnic group, type of family, and habitat.

- **Research variables**

The research variable of the study was the knowledge and attitude of fathers towards neonatal care. The research study's main goal was to gather important information from fathers who were residents of England.

Sample and sampling technique

As the researcher had distributed about 50 questionnaires but then only 34 had shown interest and due to the pandemic, the researcher was unable to find more samples. The sample was about 34 and for the collection of data, the researcher had adopted the purposive and convenient technique. The information gathered in a study does not answer the research questions or test research hypotheses on its own. Data must be thoroughly evaluated to find trends and patterns. Hence, this chapter deals with analysis, interpretation, and discussion of data obtained from fathers regarding neonatal care in Hayes, England by using descriptive and inferential statistics.

Polit, D.F. and Beck, C.T. (2018) defined analysis as the process of organizing and synthesizing data to answer research questions and test hypotheses. The purpose of data analysis is to organize, provide structure to and elicit meaning from research data. The data was collected from 34 subjects i.e., fathers through the self-report (pen and pencil method) method to assess the knowledge and attitude regarding neonatal care using the purposive technique. Analysis and interpretation of data are based on the objectives of the study.

DISCUSSION AND RESULTS

Organization of data analysis

Section 1 (a): Socio-demographic profile of fathers.

Section 2 (a): Level of knowledge and attitude of fathers towards neonatal care.

(b): Mean score of level of knowledge as per categories of the tool.

Section 3: Association between knowledge and attitude of fathers regarding neonatal care with selected socio-demographic variables.

Section 4: Information Education and Commutation resource on neonatal care.

Table 1: Frequency distribution of expecting fathers as per their sociodemographic variables

N=34

Socio-demographic variables	F	f (%)
Educational status		
Secondary or lower	11	32.4
Further and graduate	17	50.0
Professional degree	6	17.6
Occupational status		
Unemployed	5	14.7
Worker, clerical, farmer	21	61.8
Businessman	6	17.6
Professional(white-collar)	2	5.9
Ethnic group		
White and mixed or multiple ethnic groups	7	20.6
Asian and Asian British	22	64.7
Black, African, Caribbean, or Black British	5	14.7
Type of family		
Nuclear	20	58.8
Joint	14	41.2
Type of habitat		
Urban	21	61.8
Rural	13	38.2

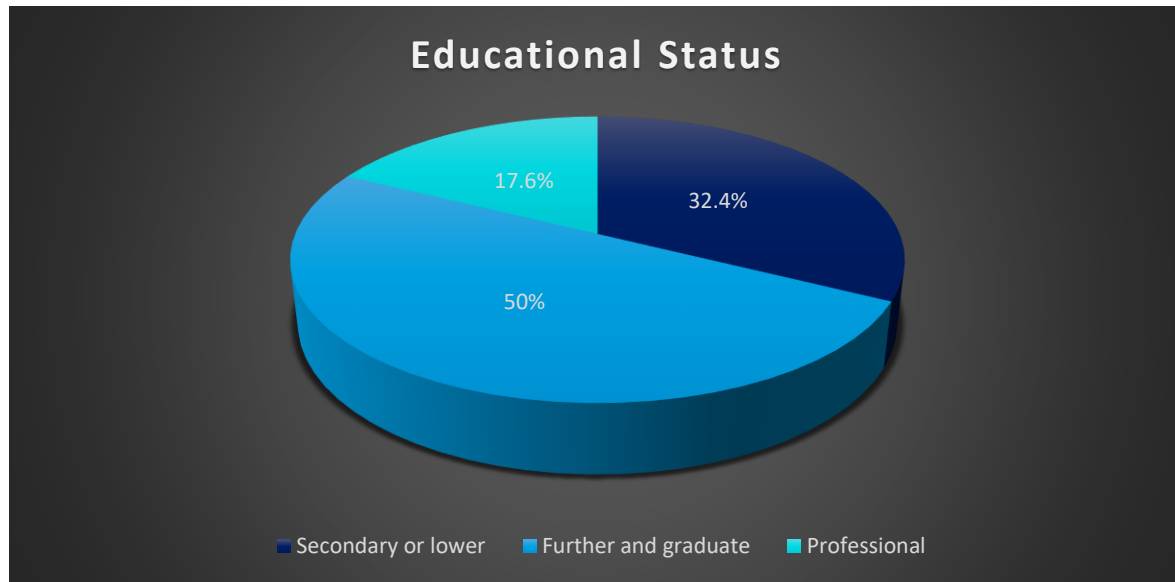


Figure 2: Percentage distribution of the fathers according to educational status

Table 1 and figure 2 depict the socio-demographic characteristics of fathers.

A microscopic view of data illustrated that out of 34 fathers i.e., approximately half of the fathers had further education and graduated i.e., 17 (50%) followed by secondary or lower and professional degree holders i.e., 11 (32.4%) and 6 (17.6%) respectively.

According to occupation, majority of fathers were worker, clerical, farmer i.e., 21 (61.8%), followed by businessman, unemployed i.e., 6 (17.6%) and 5 (14.7%) respectively. Moreover, only about 2 (5.9 %) fathers were from professional occupations.

According to the ethnicity group, more than half of fathers around 22 (64.7%) were Asian or Asian British and 7 (20.6%) were from white, mixed, or multiple ethnic groups. Furthermore, almost 5 (14.7%) were Black, African, Caribbean, or Black British.

Apart from this, most of the fathers were from nuclear family i.e., 20 (58.8%) and only 14 (41.2%) fathers were from joint families.

Based on the type of habitat, the number of fathers in urban areas was 21 (61.8%), and in rural areas, there were about 13 (38.2%).

In conclusion, it was found that out of 34 fathers more than half of fathers had further education and graduated. Findings revealed that most fathers were workers, clerical, farmers and belonged to Asian and Asian British groups. Moreover, they were from nuclear families and residing in an urban area.

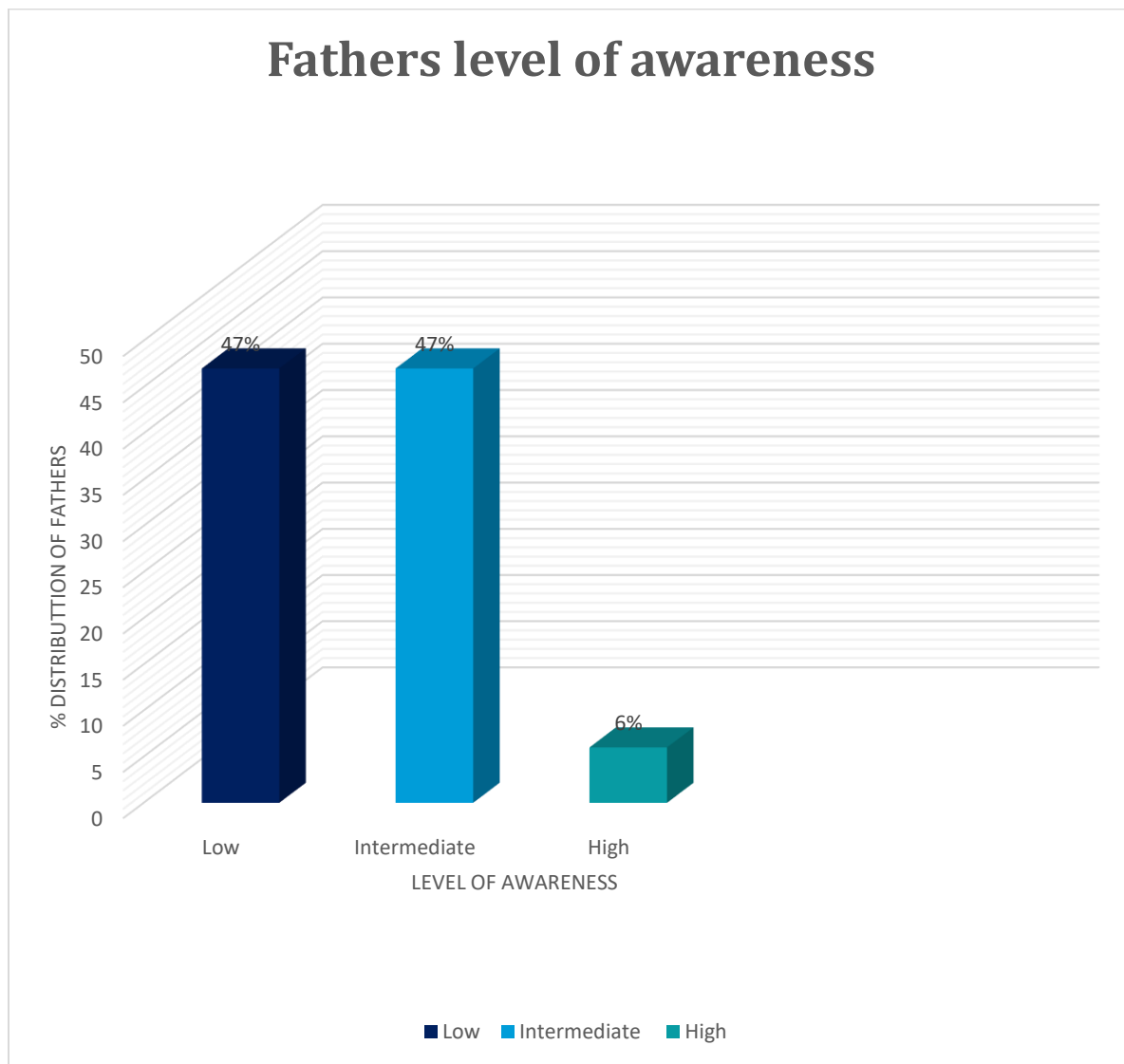


Figure 3: Distribution of fathers as per their level of awareness regarding neonatal care

Figure 3 depicts the fathers' prior level of awareness regarding neonatal care in which almost half of the fathers had both low and intermediate level awareness i.e.,16(47%) and 16(47%)

respectively. Whereas very few fathers had a high-level awareness regarding neonatal care i.e., 2(6%).

Objective 1:- To assess the knowledge and attitude of the fathers regarding neonatal care.

Table 2: Distribution of fathers as per their level of knowledge regarding neonatal care.

Level of knowledge	Criteria	f (%)	Mean ± SD	Mean%
Good	21-28	0	12.4± 4.64	44.22
Average	15-20	44		
Below average	8-14	41		
Poor	0-7	15		

Maximum Knowledge Score – 28

Minimum Knowledge Score – 0

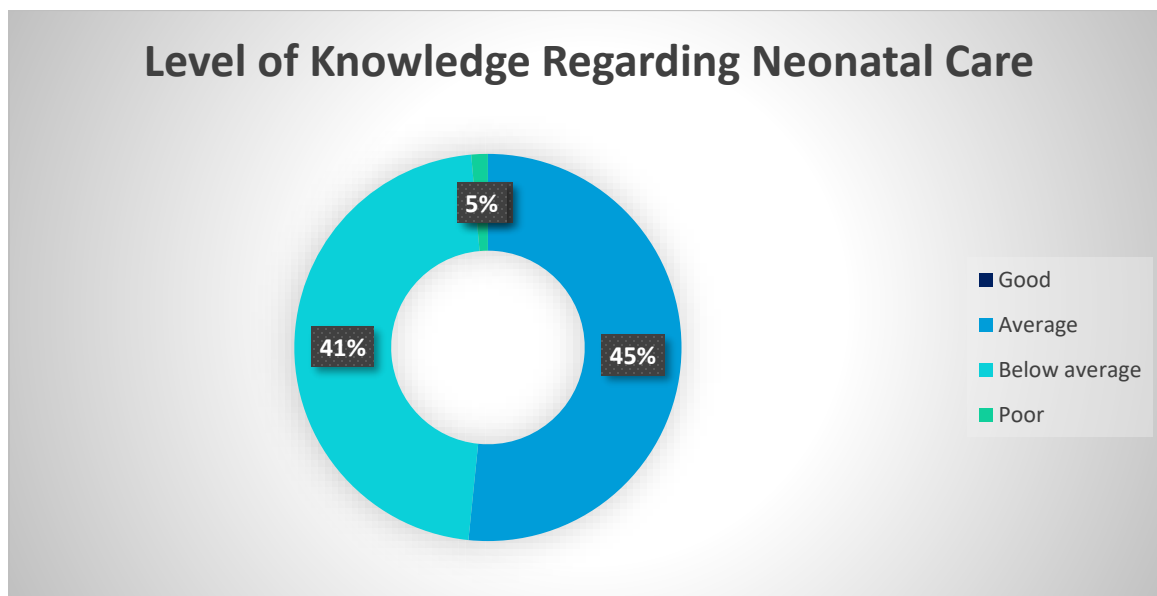


Figure 3: Percentage distribution of fathers according to their level of knowledge regarding neonatal care

Table 2 and figure number 3 describe the distribution of fathers as per the level of knowledge. The mass of fathers i.e., 45% had average knowledge regarding neonatal care followed by 41% of fathers had below-average knowledge, 5% had a piece of poor knowledge, and around nil father had good knowledge regarding neonatal care.

Hence, it was found that nine-tenths of fathers had average knowledge regarding neonatal care.

Table 3: Mean score of level of knowledge among fathers regarding neonatal care as per categories of tool N=34

Categories of tool	The maximum score of each category	Mean ± SD	Mean%
General knowledge	3	1.35±0.917	45.1
Breastfeeding	9	4.52 ±2.092	50.2
Kangaroo mother care	3	1.17 ±0.968	39.2
Thermal regulation	3	1.20±0.978	40.2
Cleanliness and cord care	6	2.50 ±1.134	41.6
Immunization	4	1.58±1.104	39.7

Table 3. indicates the mean score value of the level of knowledge of fathers regarding neonatal care as per categories of the tool. The level of knowledge was found to be more in the category of breastfeeding (4.52±2.092) followed by cleanliness and cord care (2.50±1.134) and Immunization (1.58±1.104). In the general knowledge category, the father's mean score was about 1.35±0.917, and the least knowledge area was found in thermal regulation and kangaroo mother care in neonatal essential care.

Hence, it could be concluded that fathers had more knowledge in the breastfeeding category and the least knowledge was found in the thermal regulation and kangaroo mother care.

Table 4: Distribution of fathers as per their attitude towards neonatal care

N=34

Attitude towards Neonatal care	Criteria	f (%)	Mean ± SD	Mean%
Positive	≥ 38	76	45.41 ± 8.72	60.54
Negative	≤ 38	24		

Maximum Attitude Score – 75

Minimum Attitude Score – 15

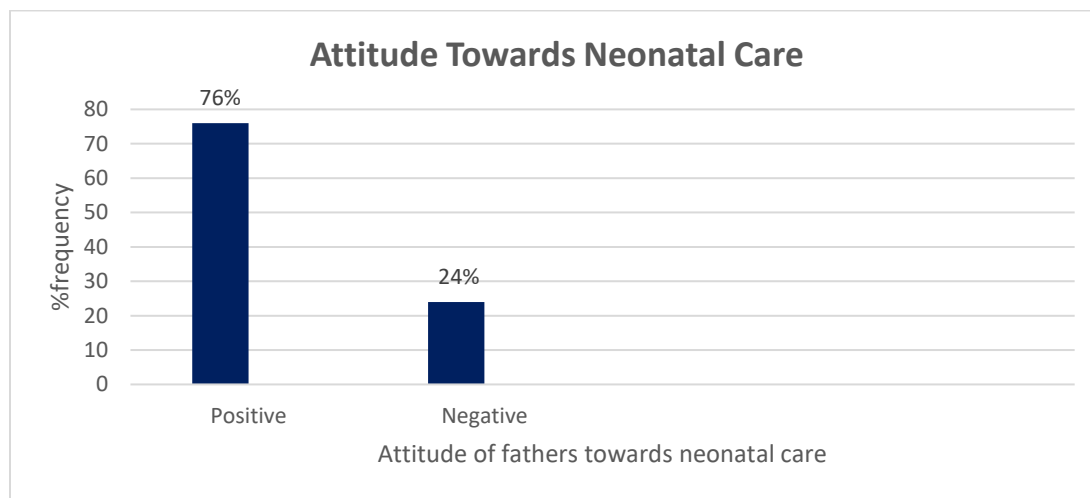


Figure 4: Column diagram showing the attitude of fathers towards neonatal care

Table 4 and figure 4 reveals the distribution of fathers as per their attitude towards neonatal care, 76% of fathers had a positive attitude towards neonatal care. And only a few i.e., 24% had a negative attitude.

Objective 2:-To find out the association of knowledge and attitude of fathers towards neonatal care with selected socio-demographic variables

Table 5: Association of knowledge and attitude of fathers towards neonatal care with socio-demographic variables **N=34**

Variables	Knowledge		F/t value (p value)	Attitude		F/t value (p value)
	F	Mean ± SD		f	Mean ± SD	
Educational status						
Secondary or lower	11	11.91±5.18	F=0.376 P=0.690 ^{NS}	11	44.73±9.34	F=0.595 P=0.558 ^{NS}
Further and graduate	17	13.06±4.14		17	46.88±8.56	
Professional degree	06	11.33±5.50		06	42.50±8.40	
Occupational status						
Unemployed	05	16.00±0.70	F=1.629 P=0.203 ^{NS}	05	40.60±9.34	F=1.629 P=0.211 ^{NS}
Worker, clerical, farmer	21	11.95±4.81		21	45.29±9.05	
Businessman	06	10.33±1.41		06	51.17±5.19	
Professional(white-collar)	02	14.00±1.41		02	41.50±6.36	
Ethnic group						
White and mixed or multiple ethnic groups	07	8.86±3.02	F=4.800 P=0.015*	07	52.43±4.07	F=4.800 P=0.018*
Asian and Asian British	22	14.00±0.89		22	42.50±8.19	
Black, African, Caribbean, or Black British	05	10.20±5.45		05	48.40±10.31	

Type of family						
Nuclear	20	12.50±5.02	F=0.030	20	45.80±8.84	F=0.094
Joint	14	12.21±4.22	P=0.863 ^{NS}	14	44.86±8.84	P=0.762 ^{NS}
Type of habitat						
Urban	13	11.46±5.81	F=0.823	13	44.00±7.16	F=0.544
Rural	21	12.95±3.80	P=0.371 ^{NS}	21	46.29±9.62	P=0.466 ^{NS}
Level of awareness						
Low	16	11.93±4.86	F=0.324	16	45.75±9.94	F=0.005
Intermediate	16	12.68±4.79	P=0.572 ^{NS}	16	44.87±7.37	P=0.942 ^{NS}
High	02	13.50±2.12		02	47.00±14.14	

*= Significant

NS= Non-significant

Table 5. describes the association of knowledge and attitude with socio-demographic variables.

Based on educational status, the mean knowledge score was higher in further educated or graduated fathers i.e., 13.06±4.14 followed by secondary or lower i.e., 11.91±5.18 with a lesser difference of mean knowledge score of fathers who had a professional degree (11.33±5.50). With association of attitude mean score with education, the further and graduated fathers had the highest attitude mean score (46.88±8.56), followed by father with secondary or lower level had attitude mean score of 44.73±9.34 and least was of fathers had professional degree had taken i.e., 42.50±8.40, association were found to be statistically non-significant at 0.05 level of significance.

In the case of occupational status, the mean knowledge score was higher of an unemployed father (16.00±0.70) followed by professionals (14.00±1.41), worker, clerical, farmer had about 11.95±4.81 and for businessman, it was almost 10.33±1.41. Attitude mean score was higher in fathers who were businessmen 57.17±5.19 followed as a worker, clerical, farmer and professional i.e., 45.29±9.05 and 41.50±6.36 respectively. Whereas the attitude means score for unemployed fathers had the least value (40.60±9.34). The association of knowledge and attitude based on occupational status was found to be statistically non-significant.

According to knowledge, Asian or Asian British fathers had the highest mean knowledge score (14.00 ± 0.89) than Black, African, Caribbean, or Black British fathers (10.20 ± 5.45) and white, mixed, and multiple ethnic group fathers (8.86 ± 3.02). But the attitude means the score was more in white, mixed, and multiple ethnic groups i.e., 52.43 ± 4.07 rather than Black, African, Caribbean, or Black British fathers and Asian or Asian British fathers i.e., 48.40 ± 10.31 and 42.50 ± 8.19 consecutively. The association of knowledge and attitude based on ethnicity was found to be statistically significant at a 0.05 level of significance.

According to a type of family, fathers living in the nuclear family had more mean knowledge and mean attitude score regarding neonatal care i.e., 12.50 ± 5.02 and 45.80 ± 8.84 respectively. Apart from this, fathers who live in the joint family have less knowledge and attitude mean score i.e., 12.21 ± 4.22 and 44.86 ± 8.84 respectively, which was found to be statistically non-significant.

On basis of habitat, fathers who residing in the rural habitat had more knowledge regarding neonatal care (12.95 ± 3.80) than fathers who were residing in the urban habitat i.e., 46.29 ± 9.62 . The attitude means the score was also found higher (46.29 ± 9.62) in fathers who were residing in the rural area than fathers who were living in the urban habitat i.e., 44.00 ± 7.16 . Moreover, an association of knowledge and attitude based on habitat was found to be statistically non-significant.

As per the level of awareness, it was found that fathers who told they had a high level of awareness regarding neonatal care also had high mean knowledge and attitude scores i.e., 13.50 ± 2.12 and 47.00 ± 14.14 respectively. Instead of those, fathers who told that they had an intermediate and low level of awareness their mean knowledge score was 12.68 ± 4.79 and 11.93 ± 4.86 respectively. But the attitude score was more in fathers who had low-level awareness regarding neonatal care (45.75 ± 9.94) than who had intermediate level i.e., 44.87 ± 7.37 . The association of knowledge and attitude based on fathers' level of awareness towards neonatal care was found to be statistically non-significant.

Hence, it can be concluded that the association of mean knowledge and attitude score was found to be statistically non-significant with all selected socio-demographic variables except the ethnicity of fathers was found to be statistically significant at ($p \leq 0.05$) level of significance.

Objective 3:- To develop and disseminate the IEC material to provide information regarding neonatal care.

According to Dc Dutta's book, neonate care is a care which neonates getting after their birth to 28 days or up to 1 month. It includes essential areas for neonatal well-being and these are breastfeeding, Kangaroo Mother care, thermal regulation, cleanliness and cord care, and immunization. By taking these essential care areas in mind, a researcher had developed an information booklet regarding neonatal care for fathers to get essential knowledge regarding newborn care that booklet is added in the appendix.

DISCUSSION

According to Bliss, every year in the United Kingdom, over 1,00,000 babies are born prematurely or sickly and needed essential neonatal care. That equates to one out of every seven babies, or over 300 babies per day. As the number of neonatal morbidities is raising day by day which leads to more hospitalization of neonates. When a baby is hospitalized, it can trigger a wide range of emotions, some of which can be difficult to confront for mother and father. It may be concern from the parents about why their baby was unwell, or about the care they may be receiving. To help lower the chances of the baby's hospitalization, the father, and mother both should have to take responsibility for the baby. If both will not take care of their baby then the baby needs hospitalization because for the clap, needs two hands, one hand never gives you noise same in baby care also.

In the UK in 2000, a survey was conducted, which evidenced that almost 33% of fathers attended antenatal classes with their wives and learned about baby care. Getting knowledge regarding neonatal care will help the fathers to spend more time with their babies and reduce financial stress also. For this, fathers must know about normal essential neonatal care for neonates. Because this

period is very crucial for babies as a baby comes from the mother's womb to the external environment, he/she needs to adapt to that world. This baby needs breastfeeding, skin-to-skin contact, thermal regulation, cleanliness and cord care, and immunization. It is home health care nursing's responsibility to care and teach the fathers and mothers about these important needed health factors and to minimizing the risk of infections and other complications to newborns.

So, researchers have done a descriptive study to assess the knowledge and attitude of fathers towards neonatal care to developing an Information Education and Communication (IEC) resource on neonatal care in Hayes, England.

The analysis of the present study revealed that the majority of fathers were further educated and graduated (50%) and more than half (68.1%) were workers, clericals, farmers. Most (64.7%) of the fathers were from Asian or Asian British ethnic groups and they were belonged to a nuclear family (58.8%) and residing in an urban area (61.8%). Hence, a population of fathers had average knowledge and a positive attitude towards neonatal care. Moreover, they had more knowledge regarding the breastfeeding category rather than others.

Objective 1- To assess the knowledge and attitude of fathers towards neonatal care.

The findings of the present study revealed that the level of knowledge regarding neonatal care is average i.e., 44% and positive attitude which is supported by another study conducted by TS Arunprasath, LN Padmasni (2016) to assess the father's knowledge and attitude towards breastfeeding for the success of breastfeeding practices. It was conducted on 93 fathers of which 96.8% felt that they got the required information but only 36.6% had received education from healthcare providers. It was concluded that most of the fathers with good knowledge had a positive attitude towards breastfeeding.

Well research done by Ted Cohen, the result was “modern fathers want to be more engaged with their babies and want to help their partner in rearing and routine baby care like changing clothes, diapering, feeding, and playing. They had also given priority to their family rather than their career”. Even, the researcher found that almost 33% of fathers attended the antenatal classes with their wives and learned about baby care.

On contrary findings, A Lamsal and Gnyawalis (2016) conducted a study on knowledge regarding care of first newborn baby among fathers attending a tertiary level maternity hospital of Nepal. A total of 60 fathers were included in the study. The involvements of fathers in newborn care were found poor and fathers' level of education was low, and family was extended.

Objective 2- To find the association of knowledge and attitude of fathers towards neonatal care with selected socio-demographic variables

The findings of the present study revealed that the mean knowledge and attitude score regarding neonatal care among fathers was 12.4 and 45.41. The study also revealed that there was a significant association between knowledge and attitude of fathers towards neonatal care with selected sociodemographic variables especially in ethnicity (p -value =0.015 and 0.018). A similar exploratory study for finding the association between knowledge and attitude was conducted by Roshni MS. (2013) by involving 200 fathers for assessing their knowledge and attitude regarding their role of childcare in Mangalore. The study revealed that there was a significant association between knowledge and attitude of fathers towards their role in childcare with the sociodemographic variable as calculated p was 0.000 which is less than tabulated p -value i.e., 0.05.

Rekha SG (2017) had a study on the first-time expectant father's knowledge and attitude towards neonatal care in Melbourne, Australia. In this study, researchers took 100 first-time expectant fathers randomly from the population through purposively technique and finding of the research, there was a significant correlation and association ($r=0.05$, $p<0.05$) between knowledge and attitude of fathers with selected Scio-demographic variables.

RECOMMENDATIONS

Socio-demographic Characteristic of the Respondents:-

- Out of 34 respondents, the majority of fathers (50%) were educated and graduated.
- Occupation-wise, 61.8% of the respondents were workers, clerical and farmers.

- Regarding ethnicity, the majority of the respondents i.e., (64.7%) belonged to the Asian group.
- 58.8% of them had a nuclear family.
- The majority of respondents (61.8%) were from urban areas.

Paternal Knowledge about Neonatal Care:-

- A majority (44%) of fathers had an average level of knowledge regarding neonatal care.
- The most knowledgeable area was found breastfeeding i.e., 50.2%.

Paternal attitude towards neonatal care:-

The “Likert Scale” consisting of 15 statements was used to assessing the father's attitude towards Neonatal Care. The findings of this attitude scale revealed that

- Most (76%) fathers had a positive attitude towards neonatal care.
- Only 24% of respondents had a negative attitude.

Association of knowledge and attitude of fathers towards neonatal care with socio-demographic variables

- According to educational status, further educated and graduated fathers had more mean knowledge scores (13.06) and more attitude scores (46.88).
- Occupation status-wise, unemployed fathers had the highest mean knowledge scores (16.00), but the mean attitude scores were higher in businessmen (51.17).
- Regarding ethnic groups, Asians had more mean knowledge scores (14.00) but the white and mixed or multiple ethnic groups had more mean attitude scores i.e., 52.43.
- Respondents living in nuclear families their mean knowledge and attitude scores were higher i.e., 12.50 and 45.80 respectively.

- Those residing were in a rural area, their also mean knowledge and attitude scores were higher.

CONCLUSION

A small-scale descriptive study was undertaken to explore the existing knowledge and attitude of fathers towards neonatal care in Hayes, the United Kingdom during 3 months timeframe. A non-probability purposive and convenient technique was used for selecting the population of the study. Data was collected by a closed-ended self-structured questionnaire and attitude scale (based on the Likert scale). The reliability of the tool was maintained. Ethical consideration also was used throughout the study. Obtained data were analyzed and interpreted in descriptive and inferential statistics and then presented in tables, pie charts, bar diagrams, and column charts.

The study's findings led to the following significant conclusions: the majority of respondents (50%) were further educated or graduated. Occupation-wise, most of them (61.8%) were clerical, workers, farmers followed by about 5.9% were professionals as white-collar. 64.7% of them were from Asian or Asian British ethnic group followed by 14.1% were Black, African, Caribbean, or Black British. The majority of respondents (68.8%) were from the urban area and (58.8%) were living in the nuclear family.

Furthermore, the studies found that more knowledgeable areas were breastfeeding, general questions, cleanliness, and cord care. The least knowledgeable areas were thermal regulation and kangaroo mother care.

The study also proved that fathers' mean knowledge score was 12.4 and the mean attitude score was 45.41 regarding neonatal care. The relationship between dependent and independent variables was analyzed and according to the mean knowledge score and attitude score. It showed that there was a significant association between knowledge and attitude with an ethnic group.

It is concluded that the majority of fathers have average knowledge and positive attitude towards neonatal care, and it is also concluded that education, occupation, type of family, and habitat are not great factors for better knowledge and positive attitude except ethnic group.



The findings of the study also imply that by raising awareness and motivation about newborn care, fathers' knowledge and attitudes about newborn care may be put into practice, and their involvement in neonatal care can be increased.

For future researchers:

- Similar research can be carried out with a large sample size to allow for validation and generalization of its findings.
- It would be possible to do a comparison study of literate and illiterate fathers, experienced and non-experienced fathers, urban and rural fathers, and fathers and mothers.
- A similar study can be conducted in a different setting.
- A study on fathers' newborn care practices could be conducted.
- On this subject, an interventional study can be undertaken to assess the effectiveness of the IEC booklet on the level of knowledge and practices in providing neonatal care.

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