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Research Article

Early Breastfeeding Practices Promote Effective Parenting: An Analytical Study in Countries exposed to Conflict in the Middle East

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ABSTRACT

Background: Breastfeeding is nurture and nutrition for every child, but the extent to which it influences parenting is controversial.

Aim: To examine the effect of early breastfeeding practices in relation to child discipline and childcare.

Methods: Global data from was examined from 52 provinces in four countries. The data included: early initiation of breastfeeding [EIBF] in the first hour and the first day, offering prelacteals, exclusive breastfeeding [EBF] and continued breastfeeding [CBF]. Parenting practices included exposure to psychological aggression and physical punishment and attitudes to physical punishment for rearing in children 1-14 years. Childcare indices included child left alone, with care of a child less than 10 years and with inadequate caregiver. Correlative studies and descriptive statistical analysis were done.

Results: EBI within the first hour of birth was significantly correlated with non-violent discipline [r0.5] P<0.05 and being left alone in the past week [r0.7] P<0.01 and inversely with psychological aggression [r-0.4] and minor physical punishment [r-0.4] at P>0.05. EBF inversely correlated with psychological [r-0.5] and minor physical punishment [r-0.4] and being left alone in the past week [r-0.5] at P<0.05. Longer duration of breastfeeding for 12 and 24 months correlated inversely with severe physical punishment [r-0.6 at P<0.01 and r-0.5 at P<0.05 respectively]. CBF for two years was also negatively correlated with being left alone [r0.5 at P>0.05]. Variations between countries in parenting styles and adequacy of childcare related to breastfeeding patterns.

Conclusions: Breastfeeding is protective against violent parenting styles and enhances adequacy of childcare. Exposure to operative delivery with anesthesia may interfere with EIBF and negatively influence parenting.

Introduction

In the mid-1900s the boom of industrialized milk feeding patterns in many countries, made breastfeeding appear as a replaceable option for infant feeding and child nurturing, on the assumption that breastfeeding was merely a process of nutrition and not rearing. The original bonding theory of Klaus and Kennell emphasized the importance of physical proximity and skin-to-skin contact for maternal bonding and later parenting [1]. Other workers supported breastfeeding as a tool for promoting maternal bonding and care [2, 3]. Still the role of breastfeeding in bonding and parenting practices is controversial as only few studies have directly tested the existence of a positive association between breastfeeding and bonding in humans and parenting styles with inconsistent results. There is growing interest in responsive parenting as it often requires infant led approach through on-demand feeding with breastfeeding [4].

Moreover, a longitudinal study, found that mothers who formula-fed their infants had a smaller increase in bonding feelings from one to 5

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months postpartum compared with women who breastfed [5]. On the other hand, the extent of bonding was shown to increase the duration of exclusive breastfeeding, up to 6 months [6]. However, other workers reported that the association between breastfeeding and bonding was weak at 4 months and nonexistent at 12 months of age [7]. Also, others reported no difference in maternal emotional behaviors towards 2-day-old newborns during either bottle- or breastfeeding. Hairston *et al.*, argue whether breastfeeding influences bonding as the symptoms of fatigue and depression were high in breastfeeding mothers [8]. This said, other workers report that personality disorders are common among women who do not breastfeed and impairs bonding [9]. Thus, it remains controversial whether breastfeeding practices actually contribute to parenting behavior or not.

There is much evidence supporting the effects of early initiation of breastfeeding [EIBF] through skin-to-skin care [SSC] in the first hour and day on reducing morbidity and mortality [9]. They reported that 16% of neonatal deaths could be saved if all infants were breastfed from day 1 and 22% if breastfeeding started within the first hour [9]. Early SSC was shown to influence maternal psychological status and child development [10]. However, the effect of EIBF, in the first hour and the first day, on the efficacy of parenting skills and reduction of violent discipline has not been proven by quantitative research. Several workers have proposed that culturally communities who separate the child from his mother in the early hours and days of life would make this child grow into a heartless warrior or a death machine with no mercy or care [11].

Cerebral oxytocin receptors become activated in the brain at birth when mother and newborn respond to one another through a series of responses leading to the first suckle as the first developmental milestone achieved by the child that determines and directs their cognitive and, socio-emotional development for a potentially successful relationship between the mother and the child. Good parenting relationships influence the stability of the child in face of the stresses of life and consequently protecting them against being susceptible to later psychological or psychiatric disorders. Hence it is presumed that the manner in which parents and caretakers discipline children can have long-term consequences for their physical and psychological development and well-being. However, this has not been adequately linked to early optimal breastfeeding practices [OBF].

Moreover, leaving children alone or only in the presence of other young children is known to increase the risk of accidents, abuse, and neglect is closely linked to the extent of bonding between mother and child. The increasing advent of operative deliveries and exposure to anesthesia may delay the mother-child interactions and bonding needed for enhancing parenting skills. The increasing rates of violent discipline and child neglect in regions exposed to conflict may create a vicious cycle of violence passing from parent to child and make children violent parents and violent individuals in their relationships. Hence the aim of this study is to examine the relationships between early breastfeeding and infant feeding practices in the first hours, days and months of life on the parenting and childcare practices. This is especially important for countries of Eastern Mediterranean region [EMR] that are living with ongoing conflict and chronic emergencies as in Syria and Somalia.

Methods

I Data Source

The data was assembled from the demographic health surveys [DHS] and Multiple Indicator Cluster Survey [MICS] and included data related to early breastfeeding initiation in the first hour [EIBF 1st hr] and EIBF within the first day i.e. < 0-23 hours of life [EIBF< 24hrs], feeding prelacteals, exclusive breastfeeding [up to six months] [EBF] and continued breastfeeding for one year [CBF 12-15 months] and for two years [CBF 21-24 months]. Data about parenting included child exposed to nonviolent discipline, child exposed to psychological aggression, child exposed to any or severe physical punishment and child exposed to any form of violent discipline. Data about childcare practices for children 1-14 years of age included child left alone, child left with another child under 10 years of age in past week and child left with inadequate care giver.

II Countries and Provinces

We studied four countries: Jordan [DHS, 2018], Sudan [MICS, 2015], Somalia [MICS, 2011] [North East and Somaliland] and Syria [MICS, 2006]. The provinces included 11 in Jordan, 18 in Sudan, 14 in Syria and 8 in Somalia totaling 52. The provinces included for each country were as follows:

In Jordan: Amman, Balqa, Zarqa, Madaba, Irbid, Mafraq, Jarash, Ajloun, Karak, Tafiela, Ma'an, Aqaba.

In Somalia: Maroodijeex/Saoxil, Awdal, Togheer, Sool, Sanaag, Bari, Nugal, Mudug.

In Sudan: Northern, River Nile, Red Sea, Kassala, Gadarif, Khartoum, Gezira, White Nile, Sinnar, Blue Nile, North Kordofan South Kordofan, West Kordofan, North Darfur, West Darfur, South Darfur, Central Darfur, East Darfur.

In Syria: Damascus, Aleppo, Rural-Dam, Homs, Hama Lattakia, Idleb, Hassake, Deir Ezzor, Tartous, Raqqa, Daraa, Sweida, Quneitra.

The 2017-18 JPFHS Household Questionnaire included a module developed by the UNICEF MICS programmed to investigate ways in which children are disciplined. The same module was also used in the recent Demographic health surveys. The module was completed for one randomly selected child age 1 to 14 in each household. The respondent to the Household Questionnaire (usually the household head) was asked a series of separate questions about disciplinary practices that the respondent or other household members may have used with the child during the month before the survey. In the 2017-18 JPFHS, mothers were asked questions to establish whether their youngest child under the age of 5 had been left alone during the week preceding the interview for 1 hour or more and whether the child had been left under the supervision of another child under the age 10 for 1 hour or more.

III Definitions

i Nonviolent Disciplinary Approaches

These include one or more of the following:

a) Taking away privileges, forbidding something the child likes, or not allowing the child to leave the house.

b) Explaining that the child's behavior was wrong.
c) Giving the child something else to do.

ii Psychological Aggression

These includes one or both of the following:
a) Shouting, yelling, or screaming at the child.
b) Calling the child dumb, lazy, or a similar term.

iii Physical Punishment

These includes one or more of the following:
a) Shaking the child.
b) Spanking, hitting, or slapping the child on the bottom with a bare hand.
c) Hitting the child on the bottom or another part of the body with a belt, hairbrush, stick, or other similar hard object.
d) Hitting or slapping the child on the hand, arm, or leg.
e) Hitting or slapping the child on the face, head, or ears.
f) Beating the child up, that is, hitting the child over and over as hard as one can.

iv Severe Physical Punishment

These includes one or both of the following:
a) Hitting or slapping the child on the face, head, or ears.
b) Beating the child up, that is, hitting the child over and over as hard as one can.

Inadequate care Number of children under age 5 left alone or in the care of another child younger than age 10 for more than 1 hour at least once in the last week.

v Statistical Analysis

Data was compiled in excel sheets of Microsoft word. They were analyzed using descriptive analysis for mean and standard deviation and Pearson correlation two-way analysis. It was done using the SSPS version [12]. The cut off for significance was P<0.05.

Table 1: Patterns of early breastfeeding practices, exclusive and continued breastfeeding of children aged under-five years of age in the provinces of Somalia, Sudan and Syria.

Country Provinces [mean±SDS]	Sudan [13]	Syria [14]	Somalia [8]
Offering prelacteals at birth	27.4±11.89	NA	46.6±4.45
EIBF one hour after birth	67.56±12.04	31.14±9.57	59.24±5.025
EIBF < 24 hours of birth	87.07±5.67	78.45±10.3	84.35±3.83
EBF	50.9±16.23	28.38±6.93	8.94±4.24
CBF 12-15mo.	83.56±21.0	61.27±11.53	39.14±15.89
CBF 21-24 mo.	43.76±18.51	17.33±10.07	12.56±13.85

EIBF: early initiation of breastfeeding, EBF: exclusive breastfeeding, CBF: continued breastfeeding.

Results

Tables 1 and 2 presents the Patterns of early breastfeeding practices of children aged under-five years of age in the provinces of Jordan, Somalia, Sudan and Syria. Immediate skin to skin contact [SSC] was only found in the recent DHS of Jordan [2018] and was 65.15±10.4. The mean feeding of prelacteals was highest in Somalia [46.6±4.45] and lowest in Sudan [27.4±11.89]. The mean EIBF in 1st hour and <24 hours were highest in Sudan [67.56±12.04, 87.07±5.67] and lowest in Syria [31.14±9.57, 78.45±10.3] respectively. The mean percent EBF was highest in Sudan [87.07±5.67] and lowest in Somalia [8.94±4.24]. Continued breastfeeding for one year and two years was highest in Sudan [83.56±21.0 and 43.76±18.51] and lowest in Somalia for first year [39.14±15.89 and 12.56±13.85] respectively. In Jordan the mean duration of EBF was 1.01±0.42 months and any breastfeeding were 9.38±0.94 months.

Table 2: Mean percentages of early breastfeeding practices exclusive and continued breastfeeding of children aged under-five years of age in the provinces in 11 provinces in Jordan.

Country Provinces	% Immediate Skin to skin contact at birth [mean±SDS]	Prelacteals	EIBF one hour after birth	EIBF < 24 hours of birth]	Mean duration of EBF	Predominant breastfeeding	Any breastfeeding
Mean	65.15	40.37	63.9	80.47	1.01	1.5	9.38
SDS	±10.4	±5.30	±7.84	±5.19	±0.42	±0.68	±0.94

EIBF: early initiation of breastfeeding, EBF: exclusive breastfeeding, CBF: continued breastfeeding.

Table 3 presents the parenting and childcare practices. Only nonviolent discipline was highest in Sudan [21.59±8.14] and lowest in Syria [8.69±5.84]. Psychological aggression was highest in Syria [81.02±8.27] and lowest in Sudan [50.56±15.54]. Any physical punishment was highest in Syria [70.78±9.05] and lowest in Sudan [47.22±11.19]. Severe physical punishment was highest in Somalia [30.43±4.85] and lowest in Sudan [13.62±5.93] and Jordan [14.36±4.79]. Any violent discipline method was mostly prevalent in Syria [85.64±7.49] followed by Jordan [82.65±5.30]. Data for childcare was not present for Sudan. However, the mean value for child being left alone in the past week was highest in

In Syria there were significant negative correlations between non-violent discipline and EIBF in the first day [r-0.6], EBF [-0.5], CBF for one year [r-0.8]. There was significant positive relationship between psychological aggression, any physical punishment [P<0.05] but not severe physical punishment and early infant feeding practices [P>0.05] (Figure 2). In Somalia there were significant negative correlations between EBFI in the 1st hour and < 24 hours and CBF for two years with psychological aggression. Also, any or severe physical punishment was significantly negatively correlated with EBF and CBF 24 months and EIBF <24 hours [P<0.05]. No disciplinary action correlated highly with EBF [r0.7 at P<0.05] (Figure 3). In Sudan nonviolent discipline correlated negatively with feeding prelacteals [r-0.7 at P<0.01] and psychological aggression correlated positively with intake of prelacteals [r0.7 at P<0.01] (Figure 4).

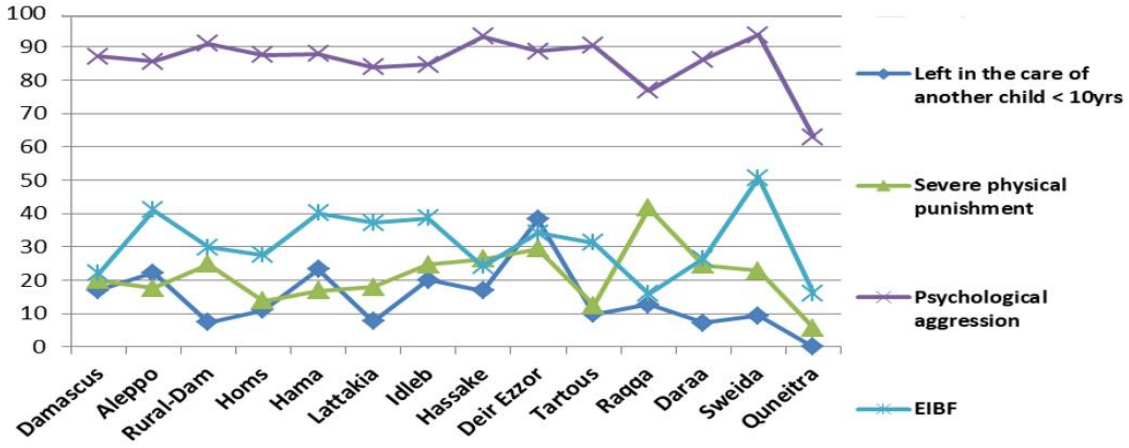

Figure 2: Relationship between child care and parenting with early breastfeeding practices Syrian governorates.

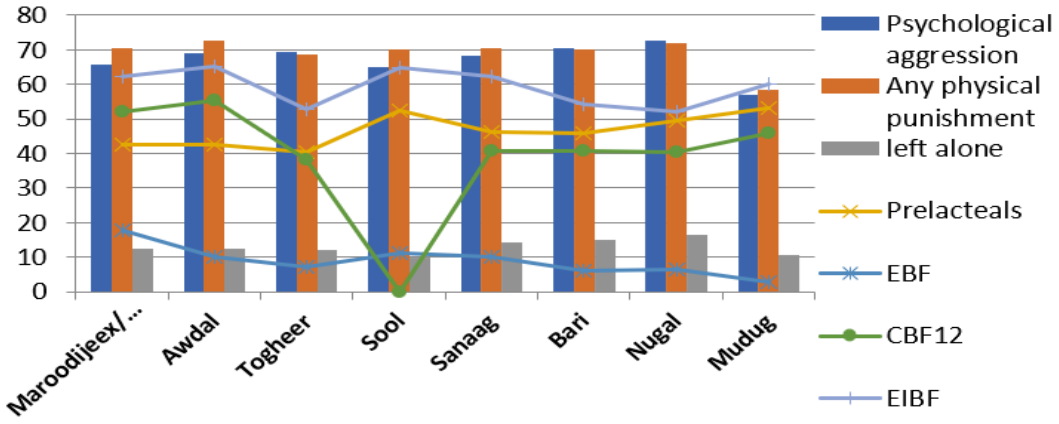

Figure 3: Relationship between child care, parenting and early feeding practices in Somalia provinces.

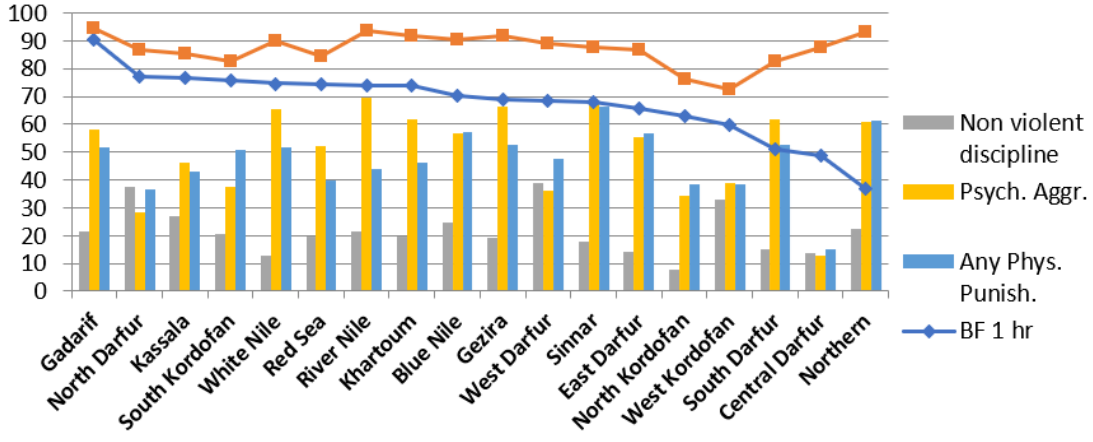

Figure 4: Relationship between child care, parenting and early feeding practices in Sudan.

Discussion

Much of the research on optimal breastfeeding practices focused on initiation in the first hour and before the first 24 hours of life, supplements given at birth and EBF. Research indicates that later initiation beyond 24 hours would ultimately harm babies, increasing mortality by significant levels [9]. Evidence based research [16] showed that early intake of colostrum would save lives, and that replacing colostrum by other food or drink [supplements], although providing nourishment, would expose children to harm. Moreover, the combination of early initiation of breastfeeding [EIBF] together with continued EBF have been proven beyond doubt to promote the intelligence of children in the future [17].

However, evidence supporting the negative effects of not practicing OBF on parenting and thereby child development, behavior, psychological and psychiatric build up later on it their life is controversial, whereas some studies support this, while others refute this [7-9]. Our study used large scale population studies representing 51 provinces from four countries in the EMR. They showed that OBF practices of EIBF, EBF and CBF correlated with effective parenting i.e. non-violent parenting.

Although there was a significant variation between countries, the overall trends of high OBF practices correlated with using less physical and psychological violence for disciplining children. Our findings are supported by a recent study in Japan that examined primiparous mothers' functioning and parenting stress using Postnatal Accumulated Fatigue Scale and Parenting Stress Short-Form Scale in relation to their feeding patterns. They showed that EBF infants required less time from infant's feeding to fall asleep than mixed or formula-feeding mothers. Mixed feeding mothers required more time for infant feeding and reported more severe fatigue and greater parenting stress than breastfeeding mothers at 1 and 2 months postpartum. While exclusively formula-feeding mothers required more time to get their infant back to sleep and reported greater parenting stress than the other groups at 6 months postpartum [14].

Our study shows that breastfeeding practices that promote responsive parenting include EIBF, EBF and CBF for up to two years. Such practices act through enhancing closeness, emotional indulgence and thus effecting communication between mother and child and thereby effective and more compassionate parenting [18-20]. Responsive parenting is defined as parenting that responds to the needs of children and accommodates their needs in a manner that that involves acceptance, empathy and understanding to assist child to become problem solvers and cognitive thinkers and thereby enhancing their intelligence [14]. This in contrast to parenting styles that use power and physical or emotional punishment to discipline the child and thereby suppress and oppress these children making them aggressive and violent individuals.

This was shown in the case of Somalia, in which it showed high correlations with the high OBF practices versus the low parenting styles with the low OBF styles that correlated with supplements given at birth. Our findings are supported by a study that explored the associations between early parenting behaviors and breastfeeding duration conducted on a sample of 580 mothers [9]. The study demonstrated that milk formula use at birth or short breastfeeding duration were significantly associated with low levels of nurturance, high levels of reported anxiety and increased maternal use of Parent-led routines. Conversely an infant-led approach characterized by responding to and following infant cues was associated with longer breastfeeding duration [9].

Although we were only able to assess the effect of SSC on parenting and childcare in the 12 provinces of one country [Jordan], yet the results showed an inverse correlation with non-violent parenting styles. This contradicts with the findings from other workers who reported significant effects of SSC during the first 24 hours post birth, on maternal sensitivity and responsiveness to infant's behavioral cues, in a dose-response effect [13, 21]. However, our findings agree with Moore and Anderson who showed that parenting confidence scores measured in a single study on 20 women [12]. The study showed no evidence of significant differences between groups at one-month post birth between mothers who held their infants SSC or swaddled. The differences may be attributed to other confounders as medicated deliveries, prelacteals that delay and interfere with prefeeding reflexes to emerge during SSC as this would influence the effectiveness of the first hour SSC [22]. Moreover, we could not adjust our results to other confounding factors as intake of supplements at birth and later feeding on formula which could have an effect on interfering with the effect of SSC.

With maternal love as the prototype for all types of love, Odent examined the short, but critical time just after birth which has long-term consequences for our future capacity to love. He extrapolated on love in a holistic manner, in terms of the hormones that affect different parts of the brain and help us understand the conflict between modernized medicine and also the natural physiological evolutions in our body that happen during the reproductive cycle [11]. When we respond to nature's course through natural childbirth, breastfeeding and responsive feeding, the development process moves smoothly from dependence to independence with minimal use of harsh disciplinary parenting methods. The manner in which mothers breastfeed and respond to their baby's needs in feeding reflects how they will respond to their baby's need to learn and grow. However, traditional factors intervene as over two thirds of the mothers in our study felt that children need to be punished in order to be disciplined.

Maternal bonding/attachment is influenced by early SSC as it may affect maternal attachment behaviors, which become stronger by dose-response relationships. Bystrova reported significant group differences on two of the eight subscales of the PCERA at 12 months post birth [23]. A study that examined the association between breastfeeding and bonding and whether breastfeeding may be protective against the negative consequences of mood and sleep disturbances showed that breastfeeding may not be a central factor in mother-infant bonding, nor is it protective against the negative impact of mood symptoms and bonding difficulties [8], on the contrary other workers showed that lack of breastfeeding was a potential risk for developing personality disorders [9]. Breastfeeding during SSC stimulates the secretion of hormones such as oxytocin and promote the development of brain receptors for oxytocin [the love hormone] that promote maternal attachment and prolactin which promotes lactation.

Moreover, a review of infant parent interaction in the newborn showed that these interactions are promoted by closeness, breastfeeding and SSC

which is the basis for the type of bonding that leads to smooth and effective parenting [23-25] .However, the use of anesthesia at birth can interfere with SSC and thereby decrease bonding and have negative consequences on child development and parenting skills. Cesarean section can have a negative influence on child outcome probably by effect of anesthesia that delay delays the process of bonding [14]. Early research reported differences in postpartum attachment behavior between breastfed and bottle-fed babies [26].

In our study we noticed that in countries as Somalia and Sudan, correlations between parenting styles and breastfeeding became evident when breastfeeding was continued for two years. Hence closeness of the child to the mother determines the extent to which parent lead styles of rearing and punishment may be influenced. Moreover, the strength of her relationship with her child will determine the extent of duration and continuity of breastfeeding [27]. Hence, closeness of the child to the mother determines the extent in which parent-lead styles of rearing and punishment may be influenced.

It is therefore important to advocate for extended maternity leaves for two years or more to allow mothers to respond to their child's needs at any time rather than to be limited by the non-working hours only. EBF for six months and CBF for two years or more is recommended by the World Health Organization and UNICEF. This recommendation will allow children to achieve their full potential for growth and development as well as to be protected from short- and long-term disease. Such practices are not only required for the physical and mental health of children [23, 24].

Such practices are not only required for the physical and mental health of children per se but enable women to fully complete their reproductive cycle by allowing their body to recover from pregnancy, childbirth by breastfeeding. Optimal breastfeeding meets the demands of effective parenting by promoting effective communication between the mother and her child and thereby reducing violent discipline that interferes with child's normal development. This was evident in the studies of child discipline and child development in Egypt [28, 29]. Promoting closeness especially among babies with special needs and preterm babies can increase tolerance of mothers to meet their special needs and assist in their parenting styles needed for such children [30].

In conclusion, our study showed that EIBF in the first hour, EBF and CBF for two years or more can have positive effects on parenting and thereby on children's potential to achieve optimal growth and development. There is a need to advocate for the Ten steps to successful breastfeeding through Baby-friendly hospitals that encourage natural childbirth by reducing operative interventions and encouraging immediate contact between mother and newborn even in operative delivery in order to allow for early breastfeeding [31-33].

Also, there is a need to enact laws for prolonging maternity leaves and limiting the working hours of women with young children, encouraging flexi-schedules and work from home for promoting mother-child interactions and communication for effective parenting and childcare. These interventions can help reduce the progression of conflicts and terrorist acts in the countries of EMR and be an economic drive for these countries through peaceful, loving and caring parenting.

Disclosure

None.

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