The process of lactation has been understood and accepted as part of the healthy function of the postnatal female body that nutritionally and physiologically benefits both the woman and child. Human milk is evolutionarily adapted to what the child expects after birth. The benefits to both mother and child are so extensive that the promotion and support for breastfeeding has been recognized as a global public health activity in all countries advocated by both the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF) organizations (UNICEF, 2008; WHO, n.d.).

In today’s context of global health, breastfeeding continues to be a blend of both cultural constructs and biology that vary in geography, language, religion, and history (Blum, 1999; Small, 1999). Breastfeeding knowledge and habits continue to be passed down to each generation in the form of practices, behaviors, and beliefs. Some of these beliefs, habits, and practices have posed either a constraint or a successful motivating factor to healthy breastfeeding attitudes and techniques (Daglas & Antoniou, 2012; Eidelman, 2006; Ergenekon-Ozelci, Elmaci, Ertem, & Saka, 2001; Jessri, Farmer, & Olson, 2013; Laroia & Sharma, 2006; Musaiger, 1996; Osman, 1999; Small, 1999).
In Egypt, breastfeeding has been the preferred method of infant nutrition since Pharaonic times. Such cultural beliefs and factors in Egypt continue to promote the practice of breastfeeding. Since ancient times, Egyptian women nursed their children for long periods until they reached 3 years of age. Such practices were so strongly advocated that ancient papyri contained breastfeeding prescriptions designed to aid the nursing mother. Children of ancient Egypt were portrayed on the walls of tombs and temples being nursed by goddesses. Greek chroniclers also remarked on the strongly advocated nature of breastfeeding in Egypt (Ragheb & Smith, 1979; Yurdakok, 2010).

With the advent of Islam in Egypt, Egyptians adopted the view that for the first two years of age, breastfeeding was the birthright of every infant based on teachings from the Quran (Islamic book of divine revelation). These traditional beliefs have stemmed as far back as ancient times and continue to perpetuate the importance of breastfeeding as the most prevalent method of infant nutrition in Egypt (Ragheb & Smith, 1979). Previous studies that assessed maternal knowledge, attitudes, practices, and beliefs have revealed that the majority of custom-based beliefs are harmless and promote a healthy mother-infant interaction (Abul-Fadl, Shawky, El-Taweel, Cadwell, & Turner-Maffei, 2012; Ahmed, 2008; Harrison, Zaghloul, Galal, & Gabr, 1993; Ragheb & Smith, 1979).

Because of their opportunities for incorporating cultural competency in health education interventions, public health practitioners can play a crucial role in encouraging breastfeeding habits by supporting the use of Moghat, which is customary in Egypt. To do this, public health educators should be made aware of the beliefs and practices common in Egyptian households as it relates to breastfeeding. Public health educators must also understand the strength of customary beliefs and superstitions that have been a part of Egyptian culture since antiquities. The aim of this brief narrative review is to identify the cultural implications and beliefs of postpartum lactating women in Egypt as it relates to the customary use of the Egyptian tonic, Moghat (Glossostemon bruguieri), and to support public health professionals to regard culturally competent communication as part of any health education intervention for postpartum breastfeeding women in Egypt and the Arab world.

**Methods**

A bibliographic review of the literature was carried out by applying search strategies to four biomedical electronic databases: PubMed, Scopus, ScienceDirect, and EBSCO between the years of 1963-2013, using the search terms of ‘Moghat,’ or ‘Glossostemon bruguieri.’ The results generated by the search were limited to the English and Arabic language. Publications were reviewed for relevance to the topic, and references from retrieved articles were reviewed to identify additional applicable publications.

**Discussion**

*Glossostemon bruguieri* (Desf.) family Sterculiaceae, commonly known as Moghat in Egypt, has been frequently used in Egyptian folk medicine as a tonic for the purpose of increasing body weight and to promote lactation. It is a shrub that produces long, thick, tapering, dark colored roots between 27 - 40 inches in length and 1 - 3 inches in width (Fouad, 1989; Purseglove, 1974). Briefly mentioned in Avicenna’s *The Cannon of Medicine*, the plant grows wild in Iran and Iraq, having been introduced to and acclimatized in Egypt since 1932. The roots are sundried, powdered, and made into a hot beverage and given to postpartum women as a nutritive and demulcent drink to stimulate lactation in nursing mothers (El-Gengaihi, Turkey, Shalaby, & Ibrahim, 1995; Meselhy, 2003). The powdered roots are cooked in butter or margarine, and sugars and boiled water are...
added and continuously stirred and are often topped with spices, nuts, coconut, or other flavoring agents. A recent study indicated that at least 23% of Egyptians use medicinal plants as a remedy or as a functional food (AbouZid & Mohamed, 2011). The pharmacognosy of Moghat has been studied extensively since the 1960s (Amin & Olfat, 1968; Amin, Olfat, Abd El-Sanad, & Iskander, 1969).

The plant powder has been reported to exert acaricidal activity and found to contain 35% mucilage, proteins, free amino acids, and the coumarin scopoletin and aesculetin. Studies identified a wide range of phytochemical flavonoids, such as takakin 8-O-glucoside, bucegin 7-O-glucoside, sesamin, emodin, and isoscutellarien. In addition, methoxsalen and the estrogenic compound estrone was isolated in Moghat roots. The root mucilages were found to have remarkable hypoglycemic activity, and decreased the blood glucose level in diabetic rats by 54.5% within 15 days (El-Gengaihi, Ibrahim, & Amer, 1999; El-Sayed, Awaad, & Mabry, 2004; Fouad, 1989; Hebeish, Ragheb, Haggag, & Abd El-Rahman, 1997; Ibrahim, El-Eraky, El-Gengaihi, & Shalaby, 1997; Karawya, Balbaa, & Afifi, 1971; Sharaf, El-Ansari, & Saleh, 1998).

One study exploring the pharmaceutical effects of some medicinal plants used in the treatment of livestock ailments found that Moghat could be used in treating some gastrointestinal disorders, such as diarrhea in camels, sheep, cows, and goats (Sher & Alyemeni, 2011). One recent study evaluating Moghat as a potential functional food drink found significant amounts of non-starch polysaccharides, including dietary fiber, pectin, and mucilages; major minerals calcium, magnesium, and iron, minor minerals zinc, manganese, and copper, as well as high amount of oleic and linolenic acids, represented up to 80% of the total fatty acids (Gamel, Abd El-Razek, & Damir, 2010).

**Conclusion & Implications**

Breast milk is the most preferred diet for infants and is recommended to be provided exclusively during the first 6 months of life (Elalfy, Hamdy, Maksoud, & Megeed, 2012). Prolonged breastfeeding is highly encouraged in Egypt, especially among women from rural backgrounds. Egyptian women often depend on breastfeeding as the primary source of infant feeding (Shaaban & Glasier, 2008). Many infants in Egypt today still do not receive the full benefits of breastfeeding, thus leaving many at risk of illness and death.

Many of the beliefs and superstitions related to Moghat are deeply rooted in the Egyptian culture, possibly from Pharaonic times. Currently, Egyptians still depend on medicinal plants as a treatment or as a functional food. Previous studies on Moghat have indicated some level of nutritional value. The literature supports Moghat as a potential functional food that is rich in dietary fiber, minerals, unsaturated fatty acids, and biologically-active compounds. Though previous studies have indicated Moghat as a nutritive tonic that provides nutritional value, future studies may warrant attempts to evaluate the therapeutic merits of Moghat in relation to breastfeeding among Egyptian mothers. Furthermore, public health strategies to improve breastfeeding education in target populations continue to be warranted in Egypt (Abdel Aziz, & Hegazyb, 2012; Ahmed & Guindy, 2011; Ghawass & Ahmed, 2011; Kotb, Mohamed, Mohamed, & Khalek, 2012; Sallam, Babrs, Sadek, & Mostafa, 2013; ). Considering that such beliefs of traditional folk medicine have exerted and will continue to exert a strong influence among the Egyptian population, culturally sensitive approaches regarding breastfeeding education should display an in-depth understanding of ethnobotanical knowledge of Moghat consumption and other traditional beliefs pertaining to post-partum breastfeeding practices in Egypt.

As in all cultures, the Egyptian nursing mother equates ‘good nutrition’ to good lactation. Whether or not these beliefs stemmed from ancient times, Egyptian customs and beliefs
pertaining to Moghat have been known in both the cities and villages of Egypt for thousands of years and continue to play a part in breastfeeding beliefs adhered to by Egyptian women of all social classes. The culture, religion, and history of the Egyptian people continue to perpetuate the beliefs associated with Moghat use and lactation, even though no study has yet to support or disprove this culturally-based anecdote. Nevertheless, public health educators and healthcare professionals should continue to support and reinforce harmless and potentially healthy custom-based practices such as Moghat consumption. Such supportive environments would also serve to educate postpartum breastfeeding Egyptian women about other beneficial evidence-based practices relating to breastfeeding. Healthcare professionals who continue to immerse themselves about the central role of culture in breastfeeding will be able to provide culturally sensitive support, education, and information to mothers of various cultural heritages.

**Limitations**

There are some limitations to this narrative review. Though the author searched several biomedical databases using various search terms, relevant citations may have been missed. Methodologies involving narrative reviews are often less strict and more subjective than that of systematic reviews or meta-analyses. Narrative reviews that do not employ methodologically solid methods, such as inclusion criteria, may be prone to bias and confounding. Narrative reviews have a high potential for low methodological quality. For the most part, narrative reviews serve to discuss an issue rather than present an accurate summary of the literature, and therefore careful consideration must be accounted for when drawing conclusions.

**References**


yield parameters and mucilage and fat contents in roots of Moghat (Glossostemon bruguieri Desf.). *Plant Foods for Human Nutrition*, 47, 239-244. doi:10.1007/BF01088332


