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RELIGIOUS LEADERS AS ADVOCATES FOR PROMOTING EXCLUSIVE BREASTFEEDING IN EAST AFRICA

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Abstract

Exclusive breastfeeding (EBF) during a baby's first six months of life is still a vital worldwide public health approach that UNICEF and the World Health Organization (WHO) support. The numerous advantages of early brain feeding (EBF) include decreased rates of morbidity and mortality in children, healthcare cost savings, improved mother-child bonding, and decreased risks of a variety of childhood illnesses. Nevertheless, the global incidence of EBF is below desired levels, especially in East Africa, despite these well-established benefits. The present publication provides a complete review of exclusive breastfeeding practices in East Africa, focusing on mom knowledge, attitudes, and practices. Research indicates notable deficiencies in mothers' comprehension and compliance with EBF guidelines within the area. While there are several obstacles to optimum breastfeeding practices, including cultural views, HIV worries, a lack of awareness, and societal influences, interventions such as counseling and educational campaigns have not demonstrated much success, especially when it comes to young moms. The article also investigates the possible function of religious authorities as powerful proponents of exclusive breastfeeding. Considering the significant impact that religious leaders have on East African communities, enlisting their support seems to be a viable way to improve EBF practices and close current gaps. Using the power of religious leaders in conjunction with current initiatives may be a crucial way to promote and maintain the best possible breastfeeding practices, which would eventually improve the health and well-being of infants in the area.

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Introduction:-

Exclusive breastfeeding means giving newborns only breast milk throughout the first six months of life, without the addition of any other food, drink, or medication [1, 2]. In addition to receiving enough complementary foods, WHO and the United Nations Children's Fund (UNICEF) recommend that nursing should start as soon as the infant is born, that it be the only food the baby receives for the first six months of life, and that it be continued for at least two years after that [3]. EBF is an essential public health approach for improving the health of mothers and children since it reduces child morbidity and death and helps manage healthcare costs in society [4]. Moreover, EBF is a primary strategy behind the most well-known and effective intervention for preventing early childhood fatalities. Approximately 1.4 million fatalities among children under five can be avoided globally each year by following optimal breastfeeding techniques [5]. In addition to its good effects on the mother-child bond, breastfeeding lowers the risk of many childhood illnesses, including diabetes mellitus, pneumonia, chest infections, and SIDS [6]. In the first half-year of life, nursing exclusively strengthens a baby's immune system and shields them from severe respiratory infections and diarrhea [7]. Additionally, breastfeeding promotes normal brain development and is linked to children's and adolescents' superior scores on intelligence tests [3]. Breastfeeding has been demonstrated to help mothers lose weight and reduce their risk of hemorrhaging, postpartum depression, and breast, ovarian, and endometrial cancers [6, 8]. One major option for postpartum family planning is the breastfeeding amenorrhea approach [9].

A global goal has been established by the World Health Assembly (WHA) to raise the rate of EBF for infants 0–6 months old to at least 50% between 2012 and 2025 [1]. Only 38% of babies are breastfed exclusively for the first six months of their lives, despite variations in adherence to these standards around the globe [1]. Breastfeeding duration is shorter in high-income countries like the US, UK, and Australia. However, only 37% of newborns under six months are exclusively breastfed, even in low- and middle-income countries [10, 11]. Over 95% of babies in Africa are breastfed; nevertheless, feeding protocols are sometimes insufficient, and it is common practice to give breastfed infants water or other liquids [12]. Only 53.5% of newborns in East African countries had EBF for six months, according to a health survey to determine the prevalence of key breastfeeding indicators in 29 sub-Saharan African countries [13]. This is far less than the WHO aim of 90% [1]. Cultural attitudes, education, and access to healthcare are among the hurdles to breastfeeding in low-income countries, according to a secondary review of WHO Global [14]. A mother's positive outlook and level of knowledge are crucial to the nursing process [15]. Higher levels of breastfeeding knowledge, attitude, and practice control were linked to a higher prevalence of exclusive breastfeeding as reported by Zhang et al. [16]. Similarly, Mogre et al. [17] found that mothers who knew more about EBF were 5.9 times more likely to practice EBF than their peers. The knowledge, attitudes, and practices of EBF in East African nations have been the subject of numerous research, the results of which are unsatisfactory. Mothers' knowledge of EBF in Southwest Ethiopia accounts for about 34.7% [18]. In their study to ascertain mothers' knowledge regarding exclusive breastfeeding in Northwest Ethiopia, Alamirew et al. [19] found that less than three-fourths of mothers had low knowledge of EBF.

Maternal Knowledge of Exclusive Breastfeeding in East Africa

According to a systematic review conducted by Dukuzumuremyi et al. [20], mothers in East Africa vary in their understanding of exclusive breastfeeding practices, attitudes, and knowledge of EBF, with knowledge ranging from 40.1 to 97.6%. Although there were some obvious gaps found, the moms' knowledge of EBF was generally fair. A knowledge score of $\leq 70\%$ indicates the urgency of nutrition intervention, according to Food Agricultural and Organization (FAO) standards criteria indicated of nutrition intervention. Mothers were classified as having a high level of knowledge if they scored above 70% on the knowledge test, and as having a low level of knowledge if they scored below 70% [21]. Unfortunately, compared to similar studies conducted in developed countries like China [15], and Italy [22], most mothers in East Africa also lacked knowledge about the duration of feeding, colostrum, breastfeeding on-demand, benefits to mothers and babies, and the dangers of bottle-feeding. This was in addition to the low knowledge of EBF among mothers. Thus, it is important to close these information gaps among moms and launch a comprehensive education campaign emphasizing the dangers of bottle-feeding, as well as the advantages of breast milk, exclusive breastfeeding, and starting colostrum as soon as possible after giving birth.

Maternal Attitude of Exclusive Breastfeeding in East Africa

Longer breastfeeding duration and a higher likelihood of successful breastfeeding are linked to maternal attitudes regarding breastfeeding. Additionally, women who had a favorable attitude toward nursing were more likely to feed their babies only breast milk. A nutrition intervention is deemed urgent when an attitude score of $\leq 70\%$ is met, following FAO standards suggesting thresholds. Mothers who scored more than 70% on the attitude test were

deemed to have a good attitude, whereas those who scored less than 70% were deemed to have a less positive attitude [21]. Few mothers in East Africa showed a favorable attitude toward exclusive nursing, according to Dukuzumuremyi et al. [20] systematic analysis of mothers' attitudes about breastfeeding. These results were in line with research from China [15], Mexico [23], and India [24]. This result was supported by earlier research carried out in East Africa by Maonga et al. [25], who identified cultural beliefs as one of the causes of the unfavorable attitude toward EBF. They must adopt a more positive outlook and stop being negative. Therefore, initiatives to promote breastfeeding should focus on enhancing maternal attitudes and understanding as well as increasing mother support in East Africa.

East African Mothers' Exclusive Breastfeeding Practices

Some of the factors affecting the implementation of the WHO breastfeeding recommendations in Tanzania and Kenya (both in East Africa) include HIV and unintended pregnancies, the notion that mothers' breast milk is insufficient for a child's growth, the need to introduce herbal medicine for cultural reasons, early and single motherhood, a lack of social and professional support, commercial sex work, a lack of knowledge, myths, and misconceptions [25–27]. HIV transfer from mother to child through breastfeeding is one of the seamless routes of HIV infection transmission [28-30]. Thus, HIV-positive mothers display reluctance to breastfeed their newborns. Regrettably, HIV prevalence is high in Africa and women of childbearing age are the most affected group [31, 32]. Only 55.9% of mothers in East Africa who participated in a comprehensive survey to learn more about the attitudes of mothers toward breastfeeding were able to nurse their babies exclusively for the first half year, even though the majority of mothers were aware of exclusive breastfeeding and thought it was crucial for both the mother and the child's health [20]. The WHO's recommended EBF of 90% [14] is higher than the WHA's global aim of 50% [1]. As poor feeding habits can hurt a child's physical and mental development and predispose them to childhood unfavorable indicators, including anemia, good feeding practices are essential for mothers as well as for the health and nutritional condition of their children [33–35]. Interestingly, numerous evidence suggests that adequate consumption of fruits and green leafy vegetables during pregnancy can supply mothers with ample nutrients [36–42]. However, the importance of antenatal care and micronutrient supplements cannot be ruled out. Early breastfeeding encourages the release of prolactin, which promotes milk production, and oxytocin, which is responsible for milk ejection. In addition, it lessens postpartum bleeding and increases uterine contraction following labor [43]. With all of these enormous advantages of EBF, everyone needs to be working hard to promote it.

Role of Religious leaders in promoting Exclusive breastfeeding

To encourage breastfeeding start, length, and exclusivity, a wide number of interventions and programs have been put into place in different settings, with differing degrees of effectiveness. Strategies like peer counseling, professional counseling, phone support, online support, multimedia approaches, antenatal breastfeeding education, motivational interviewing, breastfeeding-friendly workplaces, breastfeeding-friendly hospitals, and parental leave policies have all been used as interventions [44, 45]. Even with the current body of data, the EBF rate is still quite low, particularly for young mothers. With an emphasis on young moms, more intervention strategies need to be investigated. Faith-based organizations have a major role in both rural and urban daily life in East Africa. In these communities, religious leaders have a significant influence and serve as relationship counselors as well [46]. According to Mtenga et al. [47], religious leaders have played a significant role in promoting a variety of health-related behaviors, including initiatives to combat the HIV epidemic [48]. A hint of faith-based organizations' possible contribution to the advancement of EBF practice comes from their impact on earlier biomedical therapies. A few attempts have been made to include spirituality in theories and models about health [49]. Given their proximity to community members, particularly women, religious leaders have a critical need to increase their EBF advocacy and make use of their elevated social positions. Young et al. [50] recent study examined the influence of religious leaders on the decisions made by nursing and pregnant women. The study's conclusions show that religious leaders believed they were promoting the health of expectant and nursing mothers as well as the well-being of their young charges.

Conclusion:-

Human milk is the best food for an infant's survival, growth, and development. However, breast milk substitutes come with a high risk of infection and can be lethal for infants, especially in unsanitary environments. All the nutrients a baby needs in their first six months of life are found in breast milk. For the first six months of life, the WHO advises exclusive breastfeeding, and for up to two years after that, it is encouraged to supplement breast milk with enough safe foods. East Africa has a low rate of exclusive breastfeeding when compared to the most recent WHO guidelines. Furthermore, compared to the FAO criteria, there are comparatively low levels of EBF

knowledge, attitude, and practice. Therefore, quick actions are needed to close the gap in EBF practice. Interventions like peer counseling, professional counseling, and multimedia approaches have been used to improve the EBF rate, but the rate remains low, especially for young mothers. Considering the positive impact of religious leaders in promoting healthy practices, the inclusion of religious leaders as agents of massive EBF promotion in East Africa is essential.

References:-

1. WHO.WHA Global Nutrition Targets 2025: Breastfeeding Policy Brief 2014. http://www.who.int/nutrition/topics/globaltargets_breastfeeding_policybrief.pdf.
2. Mbina SA, Magaji G, Fanuel A, Pius T, Gorret A, Mavine AN, et al. Breastfeeding Practices Among Infants and Young Children in Bushenyi, Uganda: Influence of Maternal Knowledge and Occupation. *Journal of Family Medicine and Health Care*. 2021;7(4), 90-97.
3. UNICEF. Breastfeeding: A Mother's Gift, for Every Child .2018.UNICEF: United Nations Children's Fund. https://www.unicef.org/publications/index_102824.html.
4. Ogomaka IA, Obeagu EI. Methods of Breast Feeding as Determinants of Malaria Infections among Babies in IMO State, Nigeria. *Breast*. 2019; 2(01), 17-24.
5. Sinshaw Y, Ketema K, Tesfa M. Exclusive breastfeeding practice and associated factors among mothers in Debre Markos town and Gozamen district, east Gojjam zone, north West Ethiopia. *Journal of Food and Nutrition Sciences*. 2015;3(5):174–9.
6. Holtzman O, Usherwood T. Australian general practitioners' knowledge, attitudes, and practices towards breastfeeding. *PLoS One*. 2018;13(2):e0191854.
7. Alum EU, Uti DE, Agah VM, Orji OU, Ezeani NN, Ugwu OP, et al. Physico-chemical and Bacteriological Analysis of Water used for Drinking and other Domestic Purposes in AmaozaraOzizza, Afikpo North, Ebonyi State, Nigeria. *Nigerian Journal of Biochemistry and Molecular Biology*. 2023; 38(1), 1-8. <https://doi.org/10.2659/njbmb.2023.151>.
8. Obeagu EI, Ahmed YA, Obeagu GU, Bunu UO, Ugwu OPC, Alum EU. Biomarkers of breast cancer: Overview. *Int. J. Curr. Res. Biol. Med.*, 2023; (1): 8-16. DOI:10.22192/ijcrbm.2023.08.01.002
9. Idris SM, Tafang AGO, Elgorashi A. Factors influencing exclusive breastfeeding among mother with infant age 0-6 months. *International Journal of Science and Research*. 2015;4(8):28–33.
10. Skouteris H, Nagle C, Fowler M, Kent B, Sahota P, Morris H. Interventions designed to promote exclusive breastfeeding in high-income countries: a systematic review. *Breastfeed Med*. 2014;9(3):113–27.
11. Victora CG, Bahl R, Barros AJD, França GVA, Horton S, Krasevec J, et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *Lancet*. 2016;387:475–90.
12. Heymann J, Raub A, Earle A. "Breastfeeding policy: a globally comparative analysis," *Bulletin of the World Health Organization*. 2013; 91(6): 398–406.
13. Issaka AI, Agho KE, Renzaho AMN. Prevalence of key breastfeeding indicators in 29 sub-Saharan African countries: a meta-analysis of demographic and health surveys (2010-2015). *BMJ Open*. 2017, 7:e014145.
14. Takahashi K, Ganchimeg T, Ota E, Vogel JP, Souza JP, Laopaiboon M, et al. Prevalence of early initiation of breastfeeding and determinants of delayed initiation of breastfeeding: secondary analysis of the WHO global survey. *Sci Rep*. 2017;7:44868.
15. Hamze L, Mao J, Reifsnider E. Knowledge and attitudes towards breastfeeding practices: a cross-sectional survey of postnatal mothers in China. *Midwifery*. 2019;74:68–75.
16. Zhang Z, Zhu Y, Zhang L, Wan H. What factors influence exclusive breastfeeding based on the theory of planned behaviour. *Midwifery*. 2018;62:177–82.
17. Mogre V, Dery M, Gaa PK. Knowledge, attitudes, and determinants of exclusive breastfeeding practice among Ghanaian rural lactating mothers. *Int Breastfeed J*. 2016;11:12.
18. Tadele N, Habta F. "Knowledge, Attitude and Practice towards Exclusive Breastfeeding among Lactating Mothers, Mizan Aman Town, Southwestern Ethiopia: Descriptive Cross Sectional Study," *Journal of Health Education Research & Development*. 2015; 03(03), 2015.
19. Alamirew MW, Bayu NH, Birhan Tebeje N, Kassa SF. Knowledge and Attitude towards Exclusive Breast Feeding among Mothers Attending Antenatal and Immunization Clinic at Dabat Health Center, Northwest Ethiopia: A Cross-Sectional Institution Based Study. *Nurs Res Pract*. 2017;2017:6561028. doi: 10.1155/2017/6561028. Epub 2017 Sep 18. PMID: 29312785; PMCID: PMC5624135.
20. Dukuzumuremyi JPC, Acheampong K, Abesig J., et al. Knowledge, attitude, and practice of exclusive breastfeeding among mothers in East Africa: a systematic review. *Int Breastfeed J* 15, 70 (2020). <https://doi.org/10.1186/s13006-020-00313-9>

21. Macías YF, Glasauer P. Guidelines for assessing nutrition related knowledge, attitudes, and practices: food and agricultural organisation of the United Nations; Rome; 2014.
22. Cascone D, Tomassoni D, Napolitano F, Giuseppe GD. Evaluation of knowledge, attitudes, and practices about exclusive breastfeeding among women in Italy. *Int J Environ Res Public Health*. 2019;16:2118.
23. Swigart TM, BonvecchioA, Theodore FL, ZamudioHaas S, Villanueva-Borbolla MA, thrasher JF. Breastfeeding practices, beliefs, and social norms in low-resource communities in Mexico: insights for how to improve future promotion strategies. *PLoS One*. 2017;12:e0180185.
24. Singh J, BhardwarV, Kumra A. Knowledge, attitude, and practice towards exclusive breastfeeding among lactating mothers: Descriptive cross-sectional study. *International Journal of Medical and Dental Sciences* 2018, 7(1):1586.
25. Maonga AR, Mahande MJ, Damian JD, Msuya SE. Factors affecting exclusive breastfeeding among women in Muheza district Tanga northeastern Tanzania: a mixed method community based study. *Matern Child Health J*. 2016;20:77–87.
26. Mututho LN, Kiboi WK, Mucheru PK. Factors associated with exclusive breastfeeding in Kenya: a systematic review. *International Journal of Community Medicine and Public Health*. 2017;4(12):4358–62.
27. Kimani-Murage EW, Wekesah F, Wanjohi M, Kyobutungi C, Ezeh AC, Musoke RN, et al. Factors affecting actualisation of the WHO breastfeeding recommendations in urban poor settings in Kenya. *Matern Child Nutr*. 2015;11:314–32.
28. Alum EU, Obeagu EI, Ugwu OPC, Aja PM, Okon MB. HIV Infection and Cardiovascular diseases: The obnoxious Duos. *Newport International Journal of Research in Medical Sciences (NIJRMS)*, 2023; 3(2): 95-99. <https://nijournals.org/wp-content/uploads/2023/07/NIJRMS-3-295-99-2023.pdf>.
29. Alum EU, Obeagu EI, Ugwu OPC, Samson AO, Adepoju AO, Amusa MO. Inclusion of nutritional counseling and mental health services in HIV/AIDS management: A paradigm shift. *Medicine*. 2023;102:41(e35673). <http://dx.doi.org/10.1097/MD.00000000000035673>. PMID: 37832059; PMCID: PMC10578718.
30. Obeagu EI, Alum EU, Obeagu GU. Factors Associated with Prevalence of HIV Among Youths: A Review of Africa Perspective. *Madonna University Journal of Medicine and Health Sciences*, 2023; 3(1): 13-18. <https://madonnauniversity.edu.ng/journals/index.php/medicine>
31. Alum EU, Ugwu OPC, Obeagu EI, Aja PM, Okon MB, Uti DE. Reducing HIV Infection Rate in Women: A Catalyst to reducing HIV Infection pervasiveness in Africa. *International Journal of Innovative and Applied Research*. 2023; 11(10):01-06. DOI: 10.58538/IJAR/2048. <http://dx.doi.org/10.58538/IJAR/2048>
32. Obeagu EI, Nwosu DC, Ugwu OPC, Alum EU. Adverse Drug Reactions in HIV/AIDS Patients on Highly Active Antiretro Viral Therapy: A Review of Prevalence. *Newport International Journal of Scientific and Experimental Sciences (NIJSES)*. 2023; 4(1):43-47. <https://doi.org/10.59298/NIJSES/2023/10.6.1000>
33. Obeagu EI, Bot YS, Obeagu GU, Alum EU, Ugwu OPC. Anaemia and risk factors in lactating mothers: a concern in Africa. *International Journal of Innovative and Applied Research*. 2023; 11(02): 15-17. Article DOI: 10.58538/IJAR/2012 DOI URL: <http://dx.doi.org/10.58538/IJAR/2012>.
34. Obeagu EI, Obeagu GU, Ezeonwumelu JOC, Alum EU, Ugwu OPC. Antioxidants and Pregnancy: Impact on Maternal and Fetal Health. *Newport International Journal of Biological and Applied Sciences*. 2023; 4 (1):17-25. <https://doi.org/10.59298/NIJBAS/2023/1.3.11111>.
35. Obeagu EI, Nimo OM, Bunu UM, Ugwu OPC, Alum EU. Anaemia in children under five years: African perspectives. *Int. J. Curr. Res. Biol. Med.* 2023; (1): 1-7. DOI: <http://dx.doi.org/10.22192/ijcrbm.2023.08.01.001>.
36. Alum EU, Oyika MT, Ugwu OPC, Aja PM, Obeagu EI, Egbu CO, Okon MB. Comparative analysis of mineral constituents of ethanol leaf and seed extracts of *Datura stramonium*. *IDOSR JOURNAL OF APPLIED SCIENCES*. 2023d; 8(1):143-151. <https://doi.org/10.59298/IDOSR/2023/12.1.7906>.
37. Aja PM, Ugwu OPC, Ekpono EU, Mbam ML, Alum EU, Ibere JB. Proximate and Mineral Compositions of *Phoenix dactylifera* (Fruit Sold in Hausa Quarter Abakaliki, Ebonyi State, Nigeria). *IDOSR Journal of Scientific Research*. 2017; 2(1): 53-65.
38. Offor CE, Uche SO, Alum EU, Ezeani NN, Nwangwu SC. Determination of Mineral Contents of *Blighia unijugata* Leaves. *Journal of Research in Pharmaceutical Science*, 2015; 2 (10): 01-03.
39. Alum EU, Aja W, Ugwu OPC, Obeagu EI, Okon MB. Assessment of vitamin composition of ethanol leaf and seed extracts of *Datura stramonium*. *Avicenna J Med Biochem*. 2023; 11(1):92-97. doi:10.34172/ajmb.2023.2421.
40. Ibiam UA, Alum EU, Aja PM, Orji OU, Nwamaka NN, Ugwu OPC. Comparative analysis of chemical composition of *Buchholzia coriacea* ethanol leaf-extract, aqueous and ethylacetate fractions. *Indo Am J Pharm Sci*. 2018; 5(7):6358- 69. doi: 10.5281/zenodo.1311171.

41. Offor CE, Ugwu Okechukwu PU, Alum Esther U. Determination of ascorbic acid contents of fruits and vegetables. *Int J Pharm Med Sci.* 2015;5(1):1-3. doi: 10.5829/idosi.ijpms.2015.5.1.1105.
42. Aja PM, Uzuegbu UE, Opajobi AO, Udeh SM, Alum EU, Ominyi MC, et al. Amino acid profile, vitamin and reducing sugar compositions of ethanol fruit-extract of *Phoenix dactylifera* (date fruit) sold in Abakaliki, Ebonyi state, Nigeria. *Int J Biol Pharm Allied Sci.* 2017;6(2):349-62.
43. HailemariamTW, Adeba E, Sufa A. Predictors of early breastfeeding initiation among mothers of children under 24 months of age in rural part of West Ethiopia. *BMC Public Health* 2015, 15:1076.
44. Balogun OO, O'Sullivan EJ, McFadden A, Ota E, Gavine A, Garner CD, et al. Interventions for promoting the initiation of breastfeeding. *Cochrane Database Syst Rev.* 2016;11:CD001688.
45. Scott S, Pritchard C, Szatkowski L. The impact of breastfeeding peer support for mothers aged under 25: a time series analysis. *Matern Child Nutr.* 2017;13(1):e12241.
46. Vigliotti V, Taggart T, Walker M, Kusmastuti S, and Ransome Y. 2020. "Religion, Faith, and Spirituality Influences on HIV Prevention Activities: A Scoping Review." *PLoS One* 15 (6): e0234720.
47. Mtenga S, Kimweri A, Romore I, Ali A, Exavery A, Sicuri E, Tanner M, Abdulla S, Lusingu J, and Kafuruki S. 2016. "Stakeholders' Opinions and Questions Regarding the Anticipated Malaria Vaccine in Tanzania." *Malaria Journal* 15 (1): 189.
48. Alum EU, Ugwu OPC, Obeagu EI, Okon MB. Curtailing HIV/AIDS Spread: Impact of Religious Leaders. *Newport International Journal of Research in Medical Sciences (NIJRMS)*, 2023; 3(2): 28-31. <https://nijournals.org/wp-content/uploads/2023/06/NIJRMS-32-28-31-2023-rm.pdf>
49. Saad M, de Medeiros R, and Mosini A. 2017. "Are We Ready for a True Biopsychosocial-Spiritual Model? The Many Meanings of "Spiritual"." *Medicines* 4 (4): 79.
50. Young A, Ryan J, Reddy K, Palanee-Phillips T, Chitukuta M, Mwenda W, Kemigisha D, Musara P, van der Straten A; MTN-041/MAMMA Study Team. Religious leaders' role in pregnant and breastfeeding women's decision making and willingness to use biomedical HIV prevention strategies: a multi-country analysis. *Cult Health Sex.* 2022 May;24(5):612-626. doi: 10.1080/13691058.2021.1874054.