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NEFTNI QAYTA ISHLASH ZAVODI HUDUDIDA YASHOVCHI AHOLINING SALOMATLIK KO'RSATKICHLARINI BAHOLASH

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Annotatsiya: *Havoning ifloslanishi jamoalarning sog'lig'iga salbiy ta'sir ko'rsatishi va turli simptomlar ko'rinishida namoyon bo'lishi mumkin. Ushbu tadqiqot O'zbekiston Respublikasi hududida joylashgan neftni qayta ishlash zavodi yaqinida yashovchi aholining salomatligini baholashga qaratilgan.*

Kalit so'zlar: *Mehnat gigiyenasi, salomatlik, neftni qayta ishlash zavodi, teri kasalliklari*

ОЦЕНКА САНИТАРНО-ГИГИЕНИЧЕСКИХ ПОКАЗАТЕЛЕЙ ЗДОРОВЬЯ НАСЕЛЕНИЯ, ПРОЖИВАЮЩЕГО В РАЙОНЕ НЕФТЕПЕРЕРАБАТЫВАЮЩЕГО ЗАВОДА

Аннотация: *Загрязнение воздуха может негативно влиять на здоровье населения и проявляться в виде различных симптомов. Данное исследование направлено на оценку симптомов здоровья населения, проживающего вблизи нефтеперерабатывающего завода в Узбекистане.*

Ключевые слова: *показатели здоровья, нефтеперерабатывающий завод, кожные заболевания.*

HYGIENIC ASSESSMENT OF HEALTH INDICATORS OF THE POPULATION LIVING IN THE AREA OF AN OIL REFINERY

Abstract: *Air pollution can negatively affect the health of the population and manifest itself in various symptoms. This study aims to assess health symptoms of the population living near an oil refinery in Uzbekistan.*

Keywords: *health indicators, oil refinery, skin diseases.*

KIRISH:

Neftni qayta ishlash faoliyati doimiy ravishda havoga ifloslantiruvchi moddalarni chiqarib, salomatlikka o`zining salbiy ta'sirini ko'rsatadi. Italiyada o'tkazilgan tadqiqotlarga ko'ra, neftni qayta ishlash zavodlaridan chiqadigan oltingugurt dioksidi (SO2) o'pka funksiyasining pasayishi va yuqori nafas yo'llarining yallig'lanishi bilan

bog'liq. Oltingugurt dioksidi bolalar orasida o`tkir va surunkali astma ko`payishiga ham ta’sir ko`rsatadi. Boshqa tadqiqotlar natijasida, bu yerda yashash, homiladorlik natijalariga ham salbiy ta'sir ko'rsatishi aniqlandi. Sharqiy O'rta yer dengizi mamlakatlarida, turli ichki va tashqi havo ifloslantiruvchi moddalarga bog'liq salbiy salomatlik natijalari mavjud. Buxoroda havo ifloslanishi homiladorlik natijalariga salbiy ta'sir ko'rsatishi aniqlangan.

Yuqarida keltirilgan ma’lumotlardan kelib chiqib, neft va kimyo zavodlari yaqinida yashashning salomatlikka salbiy ta'siri borligi aniq. Atmosfera havosining ifloslanishi salbiy sog'liq ta'sirining yagona manbai emas. Stress va zavod yaqinida yashash bilan bog'liq hayot sifatini bir necha tadqiqotlarda baholagan. Ushbu kasallikning ta'siri bevosita va qo'shimcha ravishda mahalliy tartibsizlik va shaxsiy kuchsizlik haqidagi hissiyotlar orqali namoyon bo'ladi, bu ta'sir ishchilar va kambag'allarda ko'proq, boylar bilan solishtirganda kuchliroq bo'ladi. Havo ifloslanishi, chiqindilar va hidlar kabi atrof-muhit stressorlari ham neftni qayta ishlash zavodiga yaqin yashovchilarni psixo-sotsial stressga olib kelishi mumkin. Shuningdek, saraton kasalligi neftni qayta ishlash zavodi yaqinida yashash bilan bog'liq, lekin natijalar doimiy emas.

Yaqin Sharqdan neftni qayta ishlash zavodi yaqinida yashovchilarning sog'liq ta'siri bo'yicha cheklangan ma'lumotlar mavjud. Neftni qayta ishlash zavodi yoqilg'i yonish jarayonlari orqali havo ifloslantiruvchi moddalarni ishlab chiqaradi, ayniqsa, chiqarilayotgan oltingugurt dioksidi, azot oksidlari, uglerod oksidi va vodorod sulfidi. Ushbu tadqiqot neftni qayta ishlash zavodi yaqinida yashovchi aholi orasida sog'liq holati va sog'liq haqidagi tasavvurlarni boshqa, ushbu hududdan uzoq joylashgan shahar bilan solishtirishni maqsad qilgan.

Materiallar va metodlar:

Kross-sektsional so'rov tadqiqoti Qoravulbazor shahrida (zavod joylashgan joyda) qulay tasodifiy tanlov orqali o'tkazildi. Tadqiqotda jami 486 ishtirokchi jalb qilindi. Ma'lumotlar tekshirilib, kodlanib, Excel jadvallariga kiritilib, keyingi tahlil uchun SPSS dasturiga eksport qilindi. Bog'liq omillarni aniqlash uchun ikkilik va ko'p o'zgaruvchan logistika regressiyasi ishlatildi. $P \leqslant 0.25$ bo'lgan o'zgaruvchilar ko'p o'zgaruvchan logistika regressiyasiga moslashtirildi. Statistika ahamiyati uchun P qiymati < 0.05 hisobga olindi. Tadqiqot Qoravulbozar shahrining aholisi orasida olib borildi (neftni qayta ishlash zavodidan taxminan 1 km uzoqlikda).

Kilinik ta'riflar:

Qayt qilish: Kuniga 4-6 marta bo'lgan, qattiq yo'tal bilan kuzatilgan.

Balg'am: Kuniga ikki marta balg'am ko’chgan.

Astma, teri kasalliklari, abortlar, surunkali kasalliklar: Tasdiqlangan diagnoz va/yoki davolanish.

Natijalar:

Tadqiqotda 486 ta to'g'ri ehtimoliy ishtirokchilar qatnashdi. Ishtirokchilarning 40% ($n = 195$) erkaklar va 60% ($n = 291$) ayollardir. Tadqiqot aholisining ijtimoiy-

demografik xususiyatlari natijalarda keltirilgan, bu aholi nisbatan yosh, daromadi past va o'rta ta'limga ega.

Xulosa:

Ushbu tadqiqot natijalari o'rganilgan mahalliy jamoalar o'rtasida sog'liq natijalarida muhim farqlarni ko'rsatadi. Neftni qayta ishlash zavodiga yaqin yashash aholining sog'lig'iga salbiy ta'sir ko'rsatishi mumkin, jumladan, nafas olish muammolari, abortlar, teri kasalliklari, saraton va yomon sog'liqni his qilish. Aholining neftni qayta ishlash zavodi sog'lig'iga ta'sirini his qilish va bolalarining sog'lig'i ularning tasavvurlari va haqiqiy zavod chiqindilari bilan bog'liq. Shuning uchun hukumatlar aholi yashaydigan joylar yaqinida neftni qayta ishlash zavodlarini qurishga qat'iy siyosatlarni qabul qilishi lozim, ammo eng yaxshi yondashuv va siyosat neft sanoatini uzoq va aholisiz hududlarda qurishdir. Shu bilan birga, bunday hududlarda turli havo ifloslantiruvchi moddalar bo'yicha standartlashtirilgan ishonchli baholar amalga oshirilishi va jamoatchilikka taqdim etilishi kerak. Strategiyalar neft muassasalaridan chiqindilarni nazorat qilishga qaratilishi, sanoat joylarida va qo'shni aholi uylarida filtrlar o'rnatilishi kerak. Keyingi tadqiqotlar, chiqindilar darajasini o'lchash va klinik natijalarni qayd etish uchun uzun muddatli tadqiqotlarni o'z ichiga olishi tavsiya etiladi.

ADABIYOTLAR:

1. Churg A, Brauer M, del Carmen Avila-Casado M, Fortoul TI, Wright JL. Chronic exposure to high levels of particulate air pollution and small airway remodelling. Environ Health Perspect. 2003;111:714-771.

2. Barbone F, Catelan D, Pistelli R, et al. A panel study on lung function and bronchial inflammation among children exposed to ambient SO2 from an oil refinery. Int J Environ Res Public Health. 2019;16:1057.

3. Deger L, Plante C, Jacques L, et al. Active and uncontrolled asthma among children exposed to air stack emissions of sulphur dioxide from petroleum refineries in Montreal, Quebec: a cross-sectional study. Can Respi J. 2012;19:97-102.

4. Yang CY, Chang CC, Chuang HY, Ho CK, Wu TN, Chang PY. Increased risk of preterm delivery among people living near the three oil refineries in Taiwan. Environ Int. 2004;30:337-342.

5. Abdo N, Khader YS, Abdelrahman M, et al. Respiratory health outcomes and air pollution in the Eastern Mediterranean region: a systematic review. Rev Environ Health. 2016;31:259-280.

6. Khader Y, Abdelrahman M, Abdo N, et al. Exposure to air pollution and pregnancy outcomes in the East Mediterranean Region: a systematic review. Int J Pediatr. 2016;4:1255-1271.

7. Downey L, Van Willigen M. Environmental stressors: the mental health impacts of living near industrial activity. J Health Soc Behav. 2005;46:289-305. doi: 10.1177/002214650504600306

8. Kondo MC, Gross-Davis CA, May K, et al. Place-based stressors associated with industry and air pollution. Health Place. 2014;28:31-37. doi: 10.1016/j.healthplace.2014.03.004

9. Pampalon R, Hamel D, De Koninck M, Disant MJ. Perception of place and health: differences between neighbourhoods in the Quebec City region. Social Science & Medicine 2007;65(1):95-111.

10. Luginaah IN, Taylor SM, Elliott SJ, Eyles JD. Community reappraisal of the perceived health effects of a petroleum refinery. Social Science & Medicine 2002;55:47-61.

11. Barregard L, Holmberg E, Sallsten G. Leukaemia incidence in people living close to an oil refinery. Environ Res. 2009;109:985-990.

12. Lin CK, Hung HY, Christiani DC, Forastiere F, Lin RT. Lung cancer mortality of residents living near petrochemical industrial complexes: a meta-analysis. Environ Health 2017;16:101. doi: 10.1186/s12940-017-0309-2

13. Yuan T, Shen Y, Shie R, Hung S, Chen C, Chan C. Increased cancers among residents living in the neighborhood of a petrochemical complex: a 12-year retrospective cohort study. Int J Hyg Environ Health. 2018;221:308-314.

14. Odat S. Diurnal and seasonal variation of air pollution at Karavulbazartown, Jordan. Earth Environ Sci. 2009;2:1-6.

15. Al-Helou BA. Air pollutant effects on the environment of the Al-Hashimyeh Town. Int J Environ Sci Dev. 2012;3(3):240.

16. Jordan Department of Statistics. 2020. Updated 2020. Accessed Febraury 1, 2019

17. Gizaw Z, Yifred B, Tadesse T. Chronic respiratory symptoms and associated factors among cement factory workers in Dejen town, Amhara regional state, Ethiopia, 2015. Multidiscip Respir Med. 2016;11:13.

18. SurveyMonkey. Sample Size Calculator. Accessed June 1, 2020

19. Marinaccio A, Belli S, Binazzi A, et al. Residential proximity to industrial sites in the area of Taranto (Southern Italy): a case-control cancer incidence study. Annali dell'Istituto superiore di Sanità. 2011;47:192-199.

20. Salerno C, Berchialla P, Palin LA, Vanhaecht K, Panella M. Cancer morbidity of residents living near an oil refinery plant in North-West Italy. Int J Environ Health Res. 2013;23:342-351.

21. Collins TW, Grineski SE, Chakraborty J, McDonald YJ. Understanding environmental health inequalities through comparative intracategorical analysis: racial/ethnic disparities in cancer risks from air toxics in El Paso County, Texas. Health Place. 2011;17:335-344.

22. Gilbert A, Chakraborty J. Using geographically weighted regression for environmental justice analysis: cumulative cancer risks from air toxics in Florida. Soc Sci Res. 2011;40:273-286.

23. Li J, Lu Y, Shi Y, et al. Environmental pollution by persistent toxic substances and health risk in an industrial area of China. J Environ Sci 2011;23:1359-1367.

24. Singkaew P, Chantanakul S. Health effects of people living close to a petrochemical industrial estate in Thailand. J Med Assoc Thai. 2013;96:S64-S72.

25. Perin PM, Maluf M, Czeresnia CE, Januário DANF, Saldiva PHN. Effects of exposure to high levels of particulate air pollution during the follicular phase of the conception cycle on pregnancy outcome in couples undergoing in vitro fertilization and embryo transfer. Fertil Steril. 2010;93:301-303.

26. Enkhmaa D, Warburton N, Javzandulam B, et al. Seasonal ambient air pollution correlates strongly with spontaneous abortion in Mongolia. BMC Pregnancy Childbirth. 2014;14:146.

27. Wichmann FA, Müller A, Busi LE, et al. Increased asthma and respiratory symptoms in children exposed to petrochemical pollution. J Allergy Clin Immunol 2009;123:632-638.

28. Tanyanont W, Vichit-Vadakan N. Exposure to volatile organic compounds and health risks among residents in an area affected by a petrochemical complex in Rayong, Thailand. Southeast Asian J Trop Med Public Health. 2012;43:201.

29. Chiang TY, Yuan TH, Shie RH, Chen CF, Chan CC. Increased incidence of allergic rhinitis, bronchitis and asthma, in children living near a petrochemical complex with SO2 pollution. Environ Int. 2016;96:1-7.

30. Rovira E, Cuadras A, Aguilar X, et al. Asthma, respiratory symptoms and lung function in children living near a petrochemical site. Environ Res. 2014;133:156-163.

31. Rusconi F, Catelan D, Accetta G, et al. Asthma symptoms, lung function, and markers of oxidative stress and inflammation in children exposed to oil refinery pollution. J Asthma. 2011;48:84-90

32. AbuDhaise BA, Rabi AZ. Pulmonary manifestations in cement workers in Jordan. Int J Occup Med Environ Health.

33. Moniz MDA, Cleber NC, Sandra DSH, Crystiane RBR, Rayara MD. Health risks perception in the context of the construction of a petrochemical complex in Brazil. Ambiente Soc. 22. Published online December 2, 2019.

34. Trumbo CW, McComas KA, Kannaovakun P. Cancer anxiety and the perception of risk in alarmed communities. Risk Anal.

35. Nriagu J, Udofia E, Ekong I, Ebuk G. Health risks associated with oil pollution in the Niger Delta, Nigeria. Int J Environ Res Public Health.

36. Burckhardt CS, Anderson KL. The quality of life scale (QOLS): reliability, validity, and utilization. Health Qual Life Outcomes.