RESEARCH ON SOCIAL WORK INTERVENTION IN WATER QUALITY PROTECTION

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Abstract. Water is the source of life and an important resource that is indispensable for the survival and development of human society. However, the world is currently facing severe water quality problems. Water pollution and water shortage are becoming increasingly prominent, seriously threatening human health and the balance of the ecological environment. In this context, social workers play the role of propagandists, volunteers, rights defenders, and practitioners in water quality protection. Social workers use their professional advantages to solve social problems in water quality protection and contribute to the sustainable use of water resources and human well-being.

Keywords: social work, water quality, water pollution, water shortage, ecological balance, sustainable water management, human well-being

The impact of water quality on health issues

Social ecology is closely related to health issues. Social ecology refers to the living state of human society and the natural environment. A healthy social ecosystem is essential for individuals and groups. The environment of human health is a complex system for interaction between the natural environment and the social environment. The impact of natural environment on health includes: air quality, water quality, soil quality, climate change, ecosystem services, noise pollution environmental pollution, and other factors (Figure 1), which directly affects people's health and potential threats. Air pollution can cause respiratory diseases, water pollution can cause unclean drinking water and water transmission of water, soil pollution may affect food safety, crops and agricultural production. Therefore, protecting the environment and improving the natural environment is the key to maintaining human health. The impact of social factors on health is very extensive and far -reaching.

The impact of social factors on health is many aspects: improving socio-economic conditions, improving education levels, providing social support, reducing social discrimination and inconsistency, urbanization, etc. (Figure 2), and improving the social environment is an important way to promote the overall health of the population. Today, we mainly explore the impact on health in terms of water quality.

1.Classification of water quality

Water quality is the abbreviation of water quality. It indicates the physical (such as chromaticity, turbidity, odor, etc.), chemical (inorganic and organic content) and biological (bacteria, microorganisms, plankton, benthos) characteristics and composition of the water body [4][8].

Water quality is the condition of evaluating water quality, and different uses have different requirements for water

Figure 1

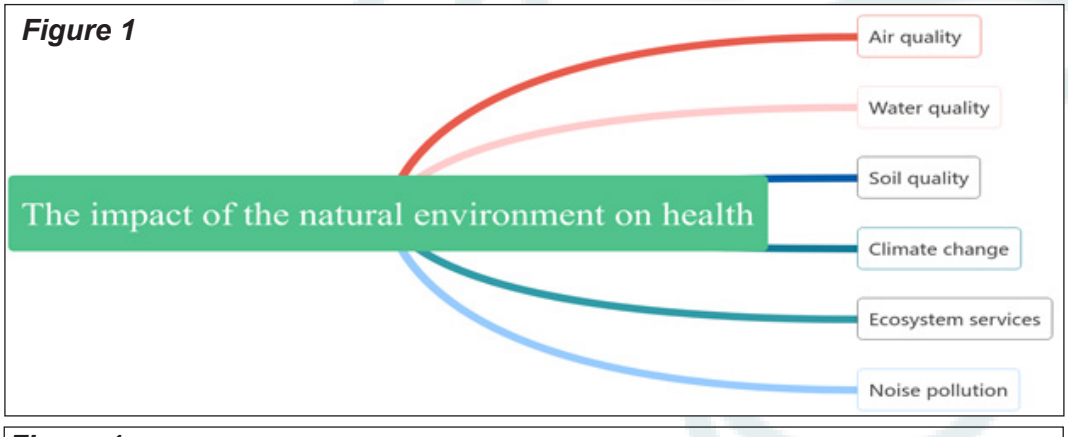
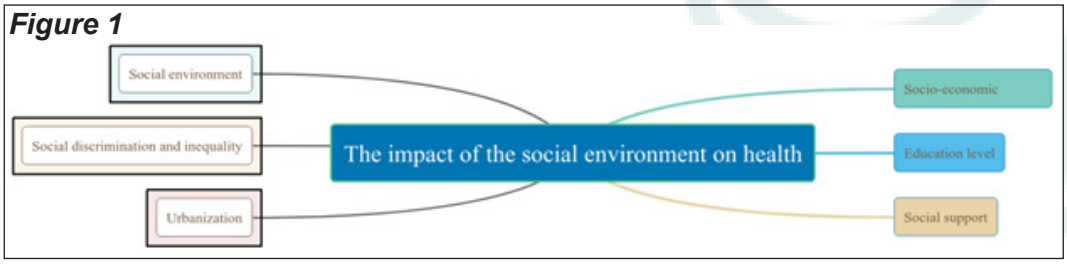


Figure 1



quality. According to the water resource standards, water resources are classified as follows: domestic drinking water, industrial water, and fishery water. The water quality requirements for drinking water are high, with strict regulations on the physical properties, total mineralization, total hardness, bacterial and harmful substance content of the water. Water is an important substance that maintains normal physiological functions in the human body. Water is an essential resource for human survival, and water quality has a significant impact on health. Water pollution poses a threat to drinking safety and the health of aquatic organisms, thereby affecting human health. Polluted water sources may lead to waterborne diseases such as diarrhea, cholera, and typhoid fever

2.Sources of water pollution

The main sources of water pollution are as follows (Figure 3):

(1) Industrial pollution: The exhaust gas, waste liquid, and residue generated in the industrial production process contain a large amount of harmful substances, such as heavy metals, organic solvents, acids and bases. If discharged directly without treatment, it will cause serious pollution to the water body.

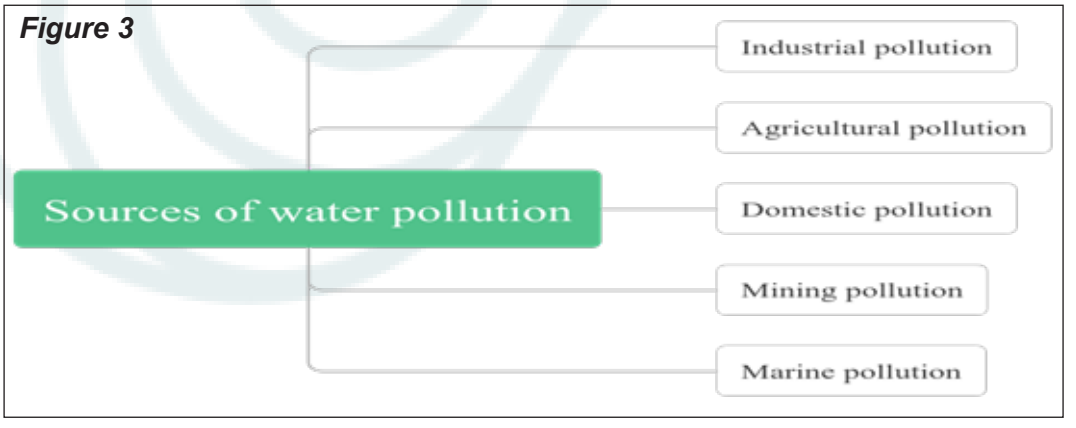
(2) Agricultural pollution: chemicals such as fertilizers, pesticides and other chemicals used in agricultural production, as well as feces generated by the aquaculture industry, excessive or improper use can cause these substances to enter the water body and cause water quality to deteriorate.

(3) Domestic pollution: Domestic sewage contains a large amount of organic matter, pathogens, and detergents. If discharged without treatment or if the treatment does not meet the standards, it will also cause pollution to the water environment.

(4) Mining pollution: Waste such as tailings and slag from mining activities, as well as acidic wastewater generated during mining processes, can cause pollution to nearby water bodies.

(5) Marine pollution: Pollutants from land and marine vessels, including oil spills, wastewater and garbage discharged from ships, have a serious impact on the marine ecological environment.Especially for the emissions of nuclear pollution water: According to China News Network: China News Network, April 19th (Zhang Aolian) On April 19, Japan officially began to discharge the fifth batch of Fukushima nuclear pollution water, which will continue until May until May until May until May until May until May. On the 7th, the emissions were roughly the same as the previous four, and it was still about 7,800 tons. This is the first batch of nuclear pollut-

Figure 3



ing water discharged from the Fukushima nuclear power plant from April 2024 to March 2025). The annual annual 54,600 tons of nuclear pollution water will be discharged, which is significantly increased from about 30,000 tons in 2023 [5].

3. The impact of water quality on health

Water is the resources necessary for human survival. The impact of water quality on health is mainly manifested in the following aspects:

(1) Water pollution: Pollution of water sources may cause harmful substances such as heavy metals, pesticide residues, bacteria, and viruses in water. Drinking polluting water can cause a variety of health problems, including gastrointestinal diseases, poisoning, infectious diseases, etc.

(2) Hardness and calcium and magnesium content: Hard water contains high calcium and magnesium ions. Long-term drinking hard water may cause stones to form and have a certain impact on kidney health.

(3) Polycinity: The pH of water also affects physical health. Excessive or alkaline water may cause irritation to the gastrointestinal mucosa, and cause problems such as indigestion and stomach pain.

(4) Microbial pollution: Microorganisms such as bacteria and viruses in water are likely to cause infectious diseases. Drinking water without treatment or treatment can easily cause diseases such as diarrhea and vomiting.

(5) Chlorine and Residual chlorine: In order to ensure the hygiene of water, tap water is usually sterilized by chlorine. However, if the residual chlorine content in water is too high, it may have a negative impact on human health, such as causeing taste and abnormal smell, stimulating the skin, and so on.

(6) The quality of bottled water and barrel water: Bottle water and barrel water are very popular in the market, but if these water sources are contaminated or handled properly, it may also cause harm to health.

(7) The impact of nuclear wastewater discharge on global.

The impact of nuclear wastewater discharge on the world mainly includes the following aspects:

a) Impact on the marine ecosystem: The radioactive substances in nuclear sewage will spread to all corners with the current flow, causing devastating blows to the marine ecosystem, and continuously accumulating and transmitting through the food chain, which eventually affects the health of human beings.

b) Impact on human health: Studies have shown that long -term contact with radioactive substances may cause serious diseases such as cancer and genetic mutations, which directly threatened to human life security.

c) Impact on food safety: after the nuclear polluted water is discharged into the sea, it will first damage fish, shellfish, seafood, etc. after these biological pollution, human health will also be affected after eating.

d) Impact on global water quality: after the nuclear polluted water is discharged into the sea, it will flow into all the sea areas around the world in 15 days. Through the photosynthesis of the sun, it will form raindrops from the sea water and then pollute any part of the world through rain.

To sum up, the discharge of nuclear wastewater will have a serious negative impact on the global ecological environment and human health, so effective measures need to be taken to avoid or

reduce the occurrence of this situation. Therefore, the discharge of nuclear polluted water sources is a global environmental problem, which should be paid attention to by all mankind. In short, paying attention to water resources is a global problem. Regular monitoring and evaluation of water quality, the use of appropriate water treatment technology, and the safety of packaging materials are the key to ensure the quality of drinking water. At the same time, individuals should also pay attention to the selection of reliable water sources and observe hygiene habits to reduce the potential risk of water quality to health. By paying attention to and improving the quality of water, we can better protect the health of people, animals and plants, and maintain the ecological balance.

4. Measures taken for water pollution treatment

Water pollution treatment and prevention measures include:

(1) Laws and regulations: formulate and implement relevant environmental protection laws and regulations, standardize and punish water pollution behaviors.

(2) Sewage treatment: build and improve sewage treatment facilities to treat industrial, agricultural and domestic sewage to meet discharge standards. Strengthen the protection and governance of water resources, improve the utilization efficiency of water resources, and promote the sustainable use of water resources.

(3) Pollution control: promote scientific fertilization and rational drug use in agriculture, and implement agricultural pollution control measures. Promote cleaner production and circular economy, reduce the discharge of industrial, agricultural and domestic sewage, and protect water quality and water ecosystem.

(4) Water resources management: implement water resources management measures, strengthen global health policies and infrastructure construction, invest in water treatment facilities and infrastructure, and improve global health and water safety.

(5) Public participation and education: improve the water-saving awareness and responsibility of global citizens, cultivate and practice a water-saving lifestyle, and reduce unnecessary water use and waste.

(6) Emergency response: establish emergency mechanism and measures for water pollution accidents, and timely handle and mitigate the impact of water pollution events. And provide more targeted and wiser use of funds to fill the gaps and inefficiencies in clean water treatment.

The prevention and control of water pollution is a systematic project, which requires the joint efforts of governments, enterprises and the public of all countries to effectively protect water resources and maintain the health of water ecosystem. The shortage of water resources is a global problem, which needs global cooperation and action to solve. We should recognize the value and shortage of water resources, and take effective measures to protect and save water resources, in order to achieve the harmonious coexistence between man and nature.

Reasons for social work to intervene in water quality protection

Water is the source of life and an important resource that is indispensable for the survival and development of human

society. However, the world is currently facing severe water quality problems. Water pollution and water shortage are becoming increasingly prominent, seriously threatening human health and the balance of the ecological environment. In this case, the intervention of social work is of great significance.

1. Social work can improve the public's awareness of water quality protection. Many people lack sufficient understanding of the seriousness of water quality issues, and may have bad habits such as wasting water and discharging sewage at will in their daily behavior. Social workers can popularize the knowledge and importance of water quality protection to the public and enhance the public's environmental awareness through publicity and education activities, such as holding lectures, distributing publicity materials, and organizing community activities. Let people understand the negative impact of water pollution on health, ecosystems, and economic development, so as to encourage them to consciously take actions such as saving water and reducing pollution emissions in their lives, and form a good atmosphere for the whole society to participate in water quality protection.

2. Social work can promote community participation and cooperation. Water quality protection is not only the responsibility of the government, but also requires the active participation of community residents. Social workers can organize and mobilize community residents to form environmental protection volunteer teams to jointly carry out activities such as water quality monitoring, river cleaning, and water source protection. Through community participation, residents can have a deeper understanding of the local water quality conditions and enhance their sense of responsibility and belonging to the community environment. At the same time, community cooperation can also help integrate resources from all parties, form a joint force, and jointly solve problems encountered in water quality protection. For example, residents can cooperate with other community organizations such as enterprises and schools to jointly promote the implementation of environmental protection measures.

3. Social work helps coordinate the relationship between different interest groups. In the process of water quality protection, multiple interest groups may be involved, such as government departments, enterprises, residents, etc., and their interests may differ or even conflict. Social workers can serve as a neutral third party to build a communication platform to promote dialogue and consultation among all parties. It helps government departments better understand the needs and opinions of residents and formulate more reasonable policies and measures; at the same time, it also assists enterprises to fulfill their social responsibilities and reduce pollution to the water environment while pursuing economic benefits. By coordinating interest relations, contradictions and conflicts can be reduced and the smooth development of water quality protection work can be promoted.

4. Social work's attention to vulnerable groups is also of great significance in water quality protection. Some vulnerable groups, such as poor families, the elderly, and the disabled, may be more susceptible to water quality problems due to economic constraints or their own lack of ability. Social workers can provide support and help to these vulnerable groups, such as assisting them in obtaining safe drinking water resources and solving health problems caused by water pollution. Ensure that

water quality protection work can benefit everyone and achieve social equity and justice.

5. The professional methods and skills of social work can provide effective support for water quality protection. Social workers can use methods such as case work, group work, and community work to provide specific services for different situations and problems. For example, helping individuals and families who suffer from health problems due to water pollution solve practical difficulties through case studies; Organize environmental protection teams to cultivate residents' environmental awareness and behavioral habits; Promote the implementation of environmental protection projects at the community level. Meanwhile, social workers also possess excellent communication, coordination, organization, and resource integration skills, which can play an important role in water quality protection work.

Therefore, there are many reasons for social work to intervene in water quality protection. It can raise public awareness, promote community participation, coordinate interests, pay attention to vulnerable groups, and use professional methods and skills to support water quality protection work. Through the intervention of social work, we can better mobilize social forces to jointly respond to water quality issues, protect our precious water resources, and create good environmental conditions for the sustainable development of mankind. This is why social work intervenes in water quality protection.

Methods and measures of social work intervention in water quality protection

The intervention methods and measures of social work in water quality protection mainly include the following points:

1.Community Education and Promotion

(1) Carry out lectures and training on water quality protection to popularize the hazards of water pollution, the importance of protecting water resources, and water-saving and environmental protection methods in daily life to residents, so as to enhance the public's knowledge and awareness of water quality protection.

(2) Produce promotional posters, brochures, short videos and other promotional materials, and widely disseminate them in the community to enhance the publicity effect.

(3) Organize community activities with water quality protection as the theme, such as environmental knowledge competitions, parent-child environmental activities, etc., to increase residents' participation and enthusiasm.

2.Promoting public participation

(1) Establish a volunteer team for community water quality protection, encourage residents to actively participate in activities such as water resource monitoring, river cleaning, and environmental supervision, and enhance their sense of responsibility and participation.

(2) Organize residents to participate in relevant policy formulation and decision-making processes, collect residents' opinions and suggestions, improve the scientific nature and democracy of decision-making, and at the same time let residents better understand the background and significance of policy formulation, so as to better support and cooperate with the implementation of policies.

(3) Carry out supervision activities by community residents on surrounding enterprises, factories, etc., encourage residents to report illegal pollution dis-

charge behaviors in a timely manner, and create an atmosphere of joint supervision by the whole society.

3.Promote resource integration

(1) Establish cooperative relationships with government departments, environmental protection organizations, scientific research institutions, etc., integrate resources from all parties, and jointly promote water quality protection work. For example, invite professionals to provide technical guidance and training to residents, and cooperate with government departments to carry out special rectification actions.

(2) Link social resources to obtain financial, material and technical support for water quality protection projects to ensure the smooth implementation of the projects.

(3) Build an information exchange platform to promote experience exchange and sharing in water quality protection among different regions and groups.

4. Advocate a green lifestyle

(1) Promote household water-saving measures, such as installing water-saving appliances, rationally utilizing vegetable washing and laundry water, etc., to reduce household water waste.

(2) Encourage residents to reduce the use of phosphorus containing detergents, fertilizers, and pesticides to reduce water pollution

(3) Advocate green travel and reduce indirect pollution of water bodies caused by motor vehicle exhaust emissions.

5. Strengthen environmental monitoring and assessment

(1) Assist professional organizations in carrying out water quality monitoring work, timely understand water quality conditions, and provide a basis for formulating targeted protection measures.

(2) Establish a community water quality file to record changes in water quality and the progress of related protection work, so as to evaluate and reflect on the effectiveness of the work.

(3) Based on the monitoring and evaluation results, protection measures will be adjusted and optimized in a timely manner to ensure the effectiveness and sustainability of the work.

6.Addressing social issues related to water quality

(1) Pay attention to health problems caused by water pollution, provide psychological support and help to victims, and assist them in safeguarding their own rights and interests.

(2) Provide corresponding consulting and counseling services to residents and businesses that may be affected by the implementation of water resource protection policies to help them solve practical difficulties and reduce social conflicts.

By implementing the above methods and taking a series of effective measures, social work can play a vital role in the field of water quality protection. These efforts can not only significantly enhance the public's environmental awareness, but also effectively enhance their participation, thereby laying a solid foundation for the sustainable use and protection of water resources. In addition, in order to ensure the continuous progress and effectiveness of water quality protection work, we must constantly summarize past experiences and lessons, make necessary adjustments according to the changing actual situation, and be brave in innovation, in order to find more efficient and adaptable protection strategies.

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Qu Hang

Suyun keyfiyyətini qorumaq üçün sosial iş müdaxiləsinin tədqiqi

Xülasə

Su insan cəmiyyətinin yaşaması və inkişafı üçün əvəzsiz həyat mənbəyidir. Lakin hazırda dünyada suyun keyfiyyəti ilə bağlı ciddi problemlər yaşanır. Suların çirklənməsi və su qıtlığı getdikcə daha çox önə çıxır. Bu isə insan sağlamlığına və ekoloji mühitin tarazlığına ciddi təhlükə yaradır. Bu kontekstdə su keyfiyyətinin mühafizəsində sosial işçilər tərəfdarlar, könüllülər, hüquq müdafiəçiləri, praktiklər rolunu oynayırlar. Sosial işçilər suyun keyfiyyətinin mühafizəsində öz peşəkar üstünlüklərindən istifadə edərək suların keyfiyyətinin mühafizəsi sahəsində sosial problemlərin həlli, su resursları və insan rifahının davamlı istifadəsinə töhfə verirlər.

Açar sözlər: sosial iş, suyun keyfiyyəti, qorumaq, sağlamlıq təsiri

Цюй Хан

Исследование вмешательства социальной работы в защиту качества воды

Резюме

Вода является источником жизни и важным ресурсом, необходимым для выживания и развития человеческого общества. Однако в настоящее время мир сталкивается с серьезными проблемами качества воды. Загрязнение воды, нехватка воды и другие явления становятся все более заметными, серьезно угрожая здоровью человека и балансу экологической среды. В этом случае социальные работники играют роль пропагандистов, волонтеров, правозащитников и практиков в области защиты качества воды. Социальные работники используют свои профессиональные преимущества для решения социальных проблем в области охраны качества воды и содействия устойчивому использованию водных ресурсов и благосостоянию людей.

Ключевые слова: социальная работа, качество воды,сохранение, воздействие на здоровье