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Seasonal Pollinosis: Analysis in Rural and Urban Settings of Surkhandaryo Region

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Annotation: Seasonal pollinosis, commonly known as hay fever, is a significant public health issue characterized by allergic reactions to airborne pollen. The unique climate and geographical conditions of Surkhandaryo region provide a rare opportunity to study the spread and impact of seasonal pollinosis. This paper analyzes the differences in the manifestation, distribution, and management of pollinosis in rural and urban areas, taking into account environmental, demographic, and medical factors. The findings aim to inform the development of targeted prevention and treatment strategies for the population of Surkhandaryo region.

Keywords: Seasonal pollinosis, hay fever, allergic reaction, Surkhandaryo region, climate, geographical conditions, distribution, impact, environment, demographic factors, medical assistance, prevention, treatment strategies.

INTRODUCTION:

Pollinosis, an allergic reaction to pollen, affects millions of people worldwide, with its prevalence and severity being influenced by environmental and socio-economic factors. Located in the southern part of Uzbekistan, Surkhandaryo region has a diverse landscape ranging from arid foothill areas to mountainous regions. These geographical features, combined with seasonal agricultural activities, contribute to varying levels of pollen exposure in rural and urban settings. The aims of this study are:

1. To evaluate the spread of seasonal pollinosis in rural and urban areas of Surkhandaryo region.
2. To identify key environmental and social factors contributing to differences in pollinosis.

3. To propose appropriate measures for reducing the burden of pollinosis.

METHODS

Study Design: The study was conducted from March to September, covering the peak pollen season, as a cross-sectional observational study.

Population and Sampling: A total of 500 participants were included, with equal representation from rural and urban areas. Participants were selected using stratified random sampling to ensure a representative distribution by age, gender, and occupation.

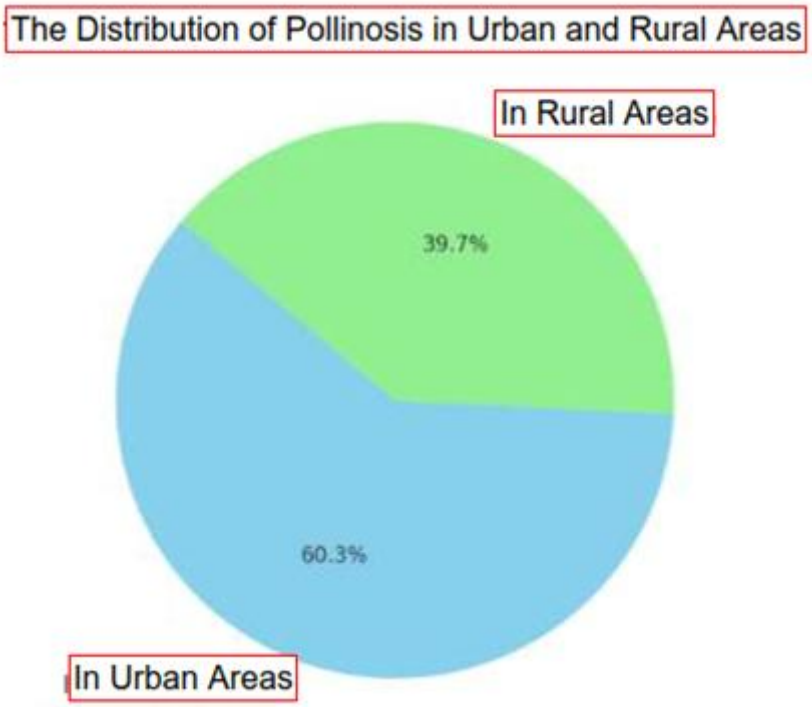
Data Collection

1. **Surveys and Questionnaires**: Participants filled out standardized questionnaires regarding the symptoms, duration, and severity of pollinosis.
2. **Environmental Monitoring**: Pollen levels were measured using volumetric spore traps installed in both rural and urban areas.
3. **Clinical Evaluation**: Skin prick tests and IgE level measurements in blood samples were used to confirm allergic sensitivity.

Statistical Analysis: Data were analyzed using SPSS software. Chi-square tests were used to assess differences in distribution, and logistic regression was applied to determine risk factors for severe pollinosis.

RESULTS:

Distribution:

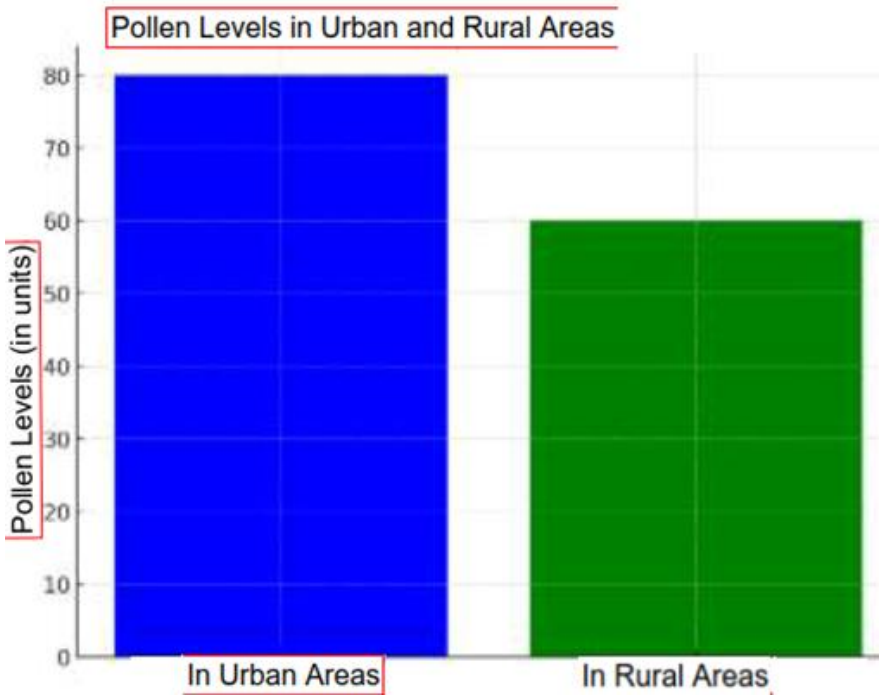


- ✓ **Urban Areas**: 38% of participants reported symptoms consistent with pollinosis.
- ✓ **Rural Areas**: A lower prevalence (25%) was observed.

Environmental Factors

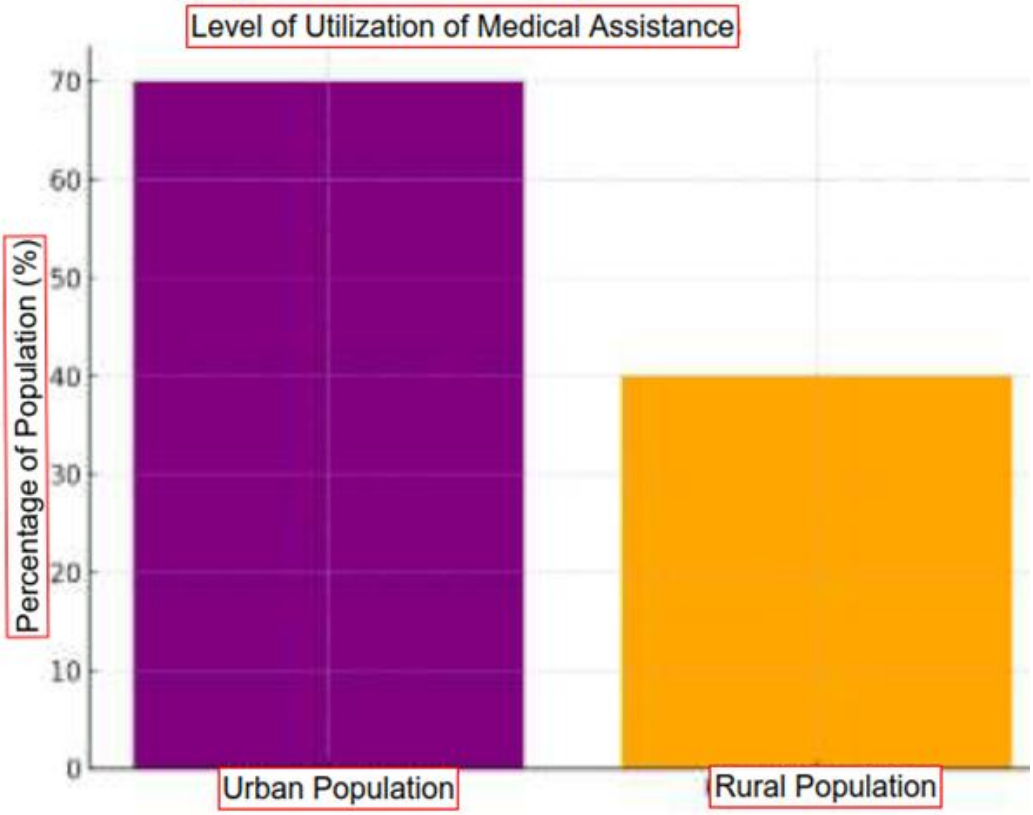
- ✓ In urban areas, higher pollen levels were found from ornamental plants and grasses.
- ✓ In rural areas, the primary sources of pollen exposure were agricultural crops such as wheat and cotton.

Risk Factors



- **Urban Areas**: The high pollen distribution was associated with air pollution and limited green spaces.
- **Rural Areas**: Occupational exposure related to farming and livestock was a significant risk factor.

Access to Medical Assistance: Urban populations had better access to allergists and antihistamines, while rural populations relied more on traditional treatments and delayed seeking medical advice.



DISCUSSION

The results demonstrate significant differences in the spread and management of pollinosis between rural and urban populations in Surkhandaryo region. Urban environments with higher levels of air pollution and ornamental pollen exposure exacerbate symptoms, while rural populations face challenges related to occupational exposure and limited medical resources. These differences require targeted interventions:

1. Increasing public awareness of pollinosis and its management.
2. Strengthening medical support in rural areas, including the introduction of mobile allergy clinics.
3. Implementing policies in urban areas aimed at reducing air pollution and optimizing green space planning.

CONCLUSION

Seasonal pollinosis presents distinct challenges in rural and urban settings in Surkhandaryo region. Addressing these disparities through targeted public health strategies and improved medical support can help reduce the disease burden and improve the quality of life for affected populations.

RECOMMENDATIONS

1. **Environmental Management**: Develop pollen monitoring systems and urban greening initiatives.
2. **Improvement of Medical Assistance**: Train primary care physicians in allergy management and increase the availability of allergists.
3. **Future Research**: Conduct long-term studies to monitor trends in pollinosis and evaluate the effectiveness of interventions.

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