

Preliminary report

POSSIBILITY OF THE WHO GREEN PAGE ENVIRONMENTAL HEALTH DIAGNOSTICS IMPLEMENTATION IN PRIMARY CARE

PRZYDATNOŚĆ DIAGNOSTYKI ZDROWIA ŚRODOWISKOWEGO WG ANKIETY „WHO GREEN PAGE ENVIRONMENTAL HEALTH” W PODSTAWOWEJ OPIECE ZDROWOTNEJ

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Abstract

The aim is to define workable framework for implementation of the WHO Green Page Environmental Health Diagnostics in primary care.

The study was carried out with the employment standard form questionnaire among parents of children.

159 parents took part in the study. 34 (24.3%) of parents expressed their concern about the child's environment. 23.7% of the examined demonstrated awareness of existing environmental risks.

The Green Page allows for an approximation to environmental diagnostics to characterize positive or negative factors and detection of the most vulnerable individuals or groups.

Keywords: environmental health, diagnostics, primary care

Streszczenie

Celem pracy jest ocena przydatności ankiety WHO Green Page Environmental Health dotyczącej zdrowia środowiskowego w wywiadzie i diagnostyce w praktyce lekarskiej podstawowej opieki zdrowotnej. Ankieta ta jest proponowana jako standardowy wywiad lekarski przeprowadzany u rodziców.

Badanie przeprowadzono u 159 rodziców, z których 34 (24,3%) wyrażało swoją troskę lub niepokój na temat środowiska dzieci, 23,7% badanych wykazało wiedzę i świadomość na temat zagrożeń środowiskowych.

Ankieta pozwala na przybliżoną ocenę świadomości środowiskowej i na wskazanie pozytywnych i negatywnych czynników ryzyka środowiskowego oraz na wykrycie najbardziej narażonych pacjentów lub grup.

Słowa kluczowe: zdrowie środowiskowe, podstawowa opieka zdrowotna, diagnostyka

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Introduction

According to WHO over 40% of infant disease cases can be attributed to environmental risk factors. Children under the age of 5, who make up 10% of the world's population, are affected. Every year, over 3,000,000 children under the age of 5 – predominantly from poorly developed areas – die of cases connected with environment [1,2].

Identification of negative environmental factors which may pose a threat to health starting from fetal life to infancy and/or later in maturity is important in implementing proper preventive and mitigating measures such as decreasing exposure, keeping parents informed and improving environmental situation and health care. Risk factors connected with environment can be physical, chemical, biological and social and can take multiple environmental forms (water, air, soil, food and objects) [3].

The WHO Green Page Environmental Health is a tool used to collect information on child's environmental conditions in all places in which the child lives and develops. It could be a potential support for primary care doctors in determining environmental risks to children under its supervision.

Aim

The aim is to define possible framework for the implementation of the WHO Green Page Environmental Health Diagnostics in primary care as well as the knowledge of the parents about environmental risk factors for their children.

Methods

The study was conducted by means of standard form questionnaire (the WHO Green Page Environmental Health Diagnostics) amongst parents of children from urban, suburban and rural environment.

Results

159 parents including 87 parents of girls (58%) and 63 parents of boys (42%) took part in the study. The average age was 11.2 years (SD 6.2, median 11). 91.3 % of the children lived with both parents, 10 lived with their mother only. 87 (56.2 %) of the subjects came from urban areas, 59 (38,3%) – from rural areas, 8 (5.2 %) – suburban areas ($p < 0.05$). Sex distribution of the respondents was independent of the environment (i.e. rural, urban, suburban) – it was similar in all environments ($p > 0.05$).

Mothers were employed in 135 cases (87.7%), 5 persons did not respond to this question. 134 fathers were employed (91,2 %), 13 fathers did not work (8.8%). Among the examined children: 125 (93.3%) did not work and 9 (6.7%) worked to earn

money, 25 persons did not provide information. The distribution of answers regarding parents' and children's work was independent of child's living habitat – it was similar ($p > 0.05$).

Overpopulation at home was noted only in 7 (4.4%) cases. This question was responded by 159 persons. The distribution of responses to this question was not independent of living habitat of the child ($p > 0.05$).

There were pets in 117 (74.5%) homes. The distribution of replies to this question depended on the child's living habitat – it was totally different in rural environment (there were pets in 91.53% of cases) from urban and suburban areas (63.95% and 57.14% respectively), $p < 0.05$.

Concern about the child's environment was expressed by 34 (24.3 %) of children's supervisors, 106 (75.7%) supervisors were not concerned. The distribution of replies to this question was independent of living environment of the child ($p > 0.05$).

Environmental awareness of the risks was noted in 32 (23.7%) of cases concerning steelworks, cement and limestone dust, water pollution, cellular network transmitters, coke industry, drug addiction, street traffic, overflowing litter bins, and power plant fumes.

153 (96.2%) of the respondents realized the presence or absence of agents transmitting diseases: the majority (57.5 %) of them were conscious when such agents did not occur, 42,5% realized the agents transmitting diseases – 37 persons gave a clear definition of the factors: insects, birds, rodents, dogs. The distribution of answers to this question depended on the child's living habitat – it was totally different in rural environment (pets were found in 64.3% of cases) from urban and suburban areas (31.4% and 33.3% respectively), $p < 0.05$.

Only 7% (out of 157 respondents) - confirmed traffic related injuries – such as: being hit by a car, fractures and spraining of limbs. Injuries connected with fire were reported by one child only which makes for 0.6% of all the subjects (the question was answered by 155 persons). Exposure to chemical substances was realized by 5.2% of the respondents (the question was answered by 153 persons) – pesticides and detergents appear on numerous occasions – it calls for closer examination. 6.4 % of the subjects (out of 157 persons) got intoxicated as a result of contact with chemical substances. Potential threat from venous animals was indicated by 157 subjects. 9.6% believed that such a threat exists – the majority pointed at vipers and rabies in forest and domestic animals. Some proofs have been found the subjects have poor knowledge concerning e.g. grass snakes, exotic animals in cages etc.

Distribution of answers to questions concerning injuries, fire, contact with chemical substances, danger of venomous animals were independent from the child's living habitat (rural, urban, suburban) – they were similar.

None of the respondents indicated dangers connected with exposure to extreme temperatures.

Discussion and conclusions

Surprisingly low percentage of subjects showed interest in the child's living habitat as well as poor awareness of environmental risks. The term environment is treated very broadly by parents and environmental risks mean both cement dust and drug addiction.

The problem of exposure to chemical substances is new to many respondents – the awareness is limited to pesticides and detergents – therefore closer examination is worth the effort from the perspective of individual analysis of child's environment.

The subjects who claim to have been intoxicated as a result of contact with chemical substances viewed food poisoning as a symptom of that intoxication but they also pointed to rotaviruses – evident biological factors.

Regarding presence of venomous animals – some of the comments prove that respondents have poor knowledge e.g. grass snakes. It would be advisable to scrutinize the issue of keeping poisonous exotic animals at home which was mentioned by the subjects.

The WHO Green Page Environmental Health is a new diagnostic tool which can potentially be included in patient's medical history and which can be used with symptomatic and asymptomatic patients already upon first contact with primary care doctor. It includes the following elements: description of child's habitat, description of exposure (real and potential) and its possible effect. Moreover, it allows the medical staff to obtain

information on living environment of the child, his mother, father, family and local community. This kind of information boosts the effectiveness of community care and certainly widens the range of possibilities available to medical staff responsible for health of children.

Keypoints:

The WHO Green Page questionnaire as a tool to assess environmental risks has not yet been analyzed in yet terms of its practical utility on medical diagnostics.

The WHO Green Page Environmental Health is a tool used to collect information on child's environmental conditions in all places in which the child lives and develops.

It could be a potential support for primary care doctors in determining environmental risks to children under their supervision.

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