

## Notification, an Important Neglected Essential Education for Children in Kindergartens and Primary Schools (Education about Parasitic Infections in Kindergartens)

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### Dear Editor-in-chief,

One of the most important threats to global public health, especially in developing countries is parasitic infections. These infections are very common in children and young people especially those who kept in kindergarten and primary schools. Because of the high population density and sometimes by the lack of adequate hygiene, these places are prone to parasitic infections. Infestation causes by ectoparasites like pediculosis, water-borne protozoan infections like giardiasis and the last but not less important, helminth infection like as Oxyuris are a permanent threat for children in this places.

Prevalence of children parasitic infections in developing countries are meaningfully higher than other countries; so that from Yemen, Cuba and Egypt; 64.5%, 71.1% and 38% of these infections have been reported, respectively (1- 3). More or less, Iran has a similar situation like these countries. Iranikhah et al. (2017) studied a total of 2,140 students from several primary schools in Qom that 12.86% of them were infected by intestinal parasites (IP) (4). In another survey was done by Haji Aliani et al. (2014), 904 children from 34 day-care Center in Karaj were studied that 172 (19%) of them were harboring at least one parasite (5). Alavi Naeeni et al. (1999) too surveyed the prevalence of (IP) in under 5 years' old children in Saveh, Iran. In this study in rural and urban areas from a total of 1,043 and 436 children, surprisingly 637 (61.2%) and 228 (52.3%) of them were infected, respectively (6). The prevalence of any parasitic infection in other parts of country unfortunately was significantly high. For example; from Sirjan, Shahrood, Kashan and Semnan, prevalence rate were 58.3%, 43.10%, 34% and 10.20%, respectively (4).

Placing children in a poor hygiene day-care center or school remarkably increase possibility of parasitic infections. Children spent a large part of day in close contact with each other. Since these infections sometimes have not special symptoms, then they more easily spread by asymptomatic infected children. Using the common toys and had frequent contact between objects and mouth by children cause increasing the possibility of infections transmission. For example one of the most common children parasitic diseases in kindergartens and primary schools that are extremely related to personal hygiene is Oxyuris. Infected child with scratching the contamination site and touching various toys, vehicles and their friends easily spread the parasite's eggs between their homes and kindergartens.

**Key Words:** Children, Education, Iran, Parasitic Infections, Primary Schools.

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Lack of adequate measures for raising school-age children information about parasites and not understanding of this issue's importance by children makes them more prone to parasites infections. The primary years of childhood are very important times for teaching personal hygiene for introduction by common parasites and this training could have lasting result during the whole person's life. Not only health education about parasites and their transmission ways is necessary for children but also is very important for their instructors, teachers and parents, because their unawareness about this infections or negligence in observance of health standards can contribute to spread of potential contamination. But it seems there is not an appropriate educational plan as a basic part of the curriculum in kindergarten and even in primary schools. So for control and reducing the parasitic infections in this place, we suggested several important solutions:

- Preparing educational brochure and pamphlets about parasites and distributing them among kindergartens and primary schools or add this educational content to school books,
- Regularly and continuous monitoring of this center at least every six months by health inspectors of responsible health organs,
- Conduct training courses for instructors and teachers to raising their information about common parasitic infections,
- Practice the kitchen and toilets hygiene as an important subject for preventing of infections by parasites,
- Pay attention to the fact that the health of kindergarten's staff shouldn't be ignored at all,
- Periodically doing IP detection tests from both children and staff of this centers,
- Providing good quality drinking water in kindergarten and primary schools and washing of fruits and vegetables before eating by children.

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