



PREVALENCE AND RISK FACTORS OF KARAPPAN (ECZEMA) IN SCHOOL GOING CHILDREN - A CROSS SECTIONAL STUDY

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Abstract:

Skin diseases are major health problem in all age groups, especially in pediatric age group, one among them, Karappan (Eczema). Eczema is a chronic inflammatory disorder of the skin and it affects up to 30% of children. Prevalence of eczema in worldwide is 15 million. In those 10% are children / infants. Eczema can have a considerable impact on the quality of life of children and their families. The main objective of the present study is to evaluate the prevalence and risk factors of Karappan (Eczema) in school going children. This study was conducted in Kuzhandhai maruthuvam OPD of Ayothidoss Pandithar hospital, National Institute of Siddha, Chennai and approved by IEC (Institutional Ethics Committee) and also properly registered with CTRI. 200 children were selected with skin disease by systematic random sampling method. Data were collected by using a self-structured questionnaire. This study reveals that the prevalence of Karappan in school going children was increasing and is mainly triggered by food allergy and house mites.

Introduction:

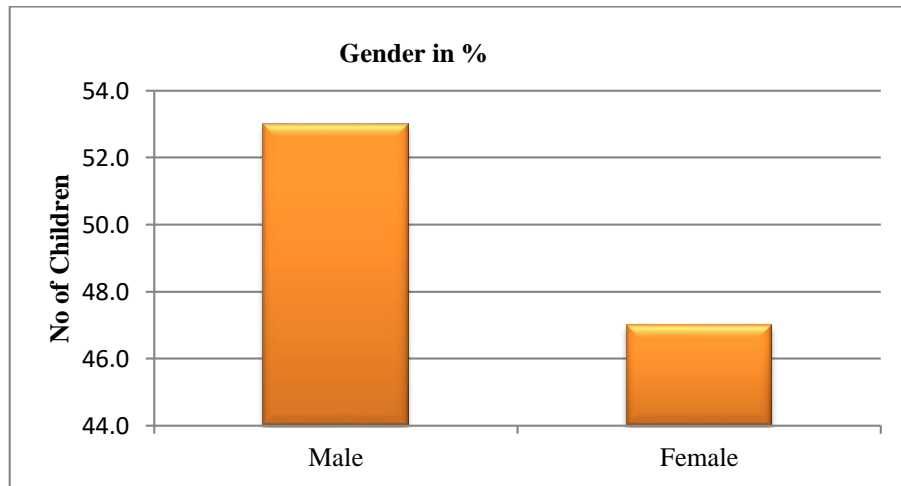
Eczema is a chronic skin condition that causes patches of red, itchy, dry skin that appears on various parts of the body. Childhood Eczema is a common chronic relapsing disease. The theory of "Atopic march" views Eczema as a systemic atopic disease with skin manifestation in early childhood. Prevalence of eczema in worldwide is 15 million. In those 10% are children / infants. Atopic dermatitis is the commonest dermatitis in children registered to a pediatric dermatology clinic where it constituted 28.46% of all registered patients. In India lower prevalence of childhood eczema observed in northern (0.42%) and eastern (0.55%) part. Eczema can flare periodically, especially when exposed to certain triggers such as cold or dry air and contact with irritants, including rough fabrics and chemicals, contact with plants, pet animals etc. The present study was conducted to find the prevalence and risk factors of eczema among school going children of age 5 to 12 years.

Materials and method:

It is a hospital based cross sectional study conducted in Kuzhandhai maruthuvam OPD of Ayothidoss Pandithar hospital, National Institute of Siddha, Chennai. This study was approved by college council and IEC (Institutional Ethics Committee) IEC No-NIS/IEC/2019/M-29 and also properly registered with CTRI (CTRI No-CTRI/2019/06/019554). 200 children were selected with the age group of 5 to 12 years by systematic random sampling method. It was identified that individuals with skin disorders by means of questionnaire.

RESULTS AND OBSERVATION:

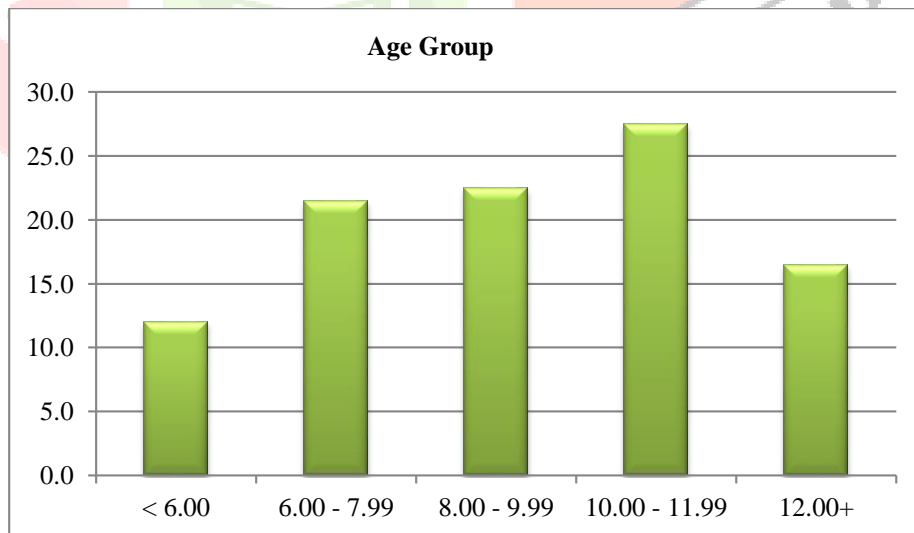
Distribution of children according to gender is shown in chart 1:



Gender	No of Children	Percent
Male	106	53.0
Female	94	47.0
Total	200	100.0

According to gender, out of 200 children 53.0% (106) of children were male child and 47.0% (94) of children were female child.

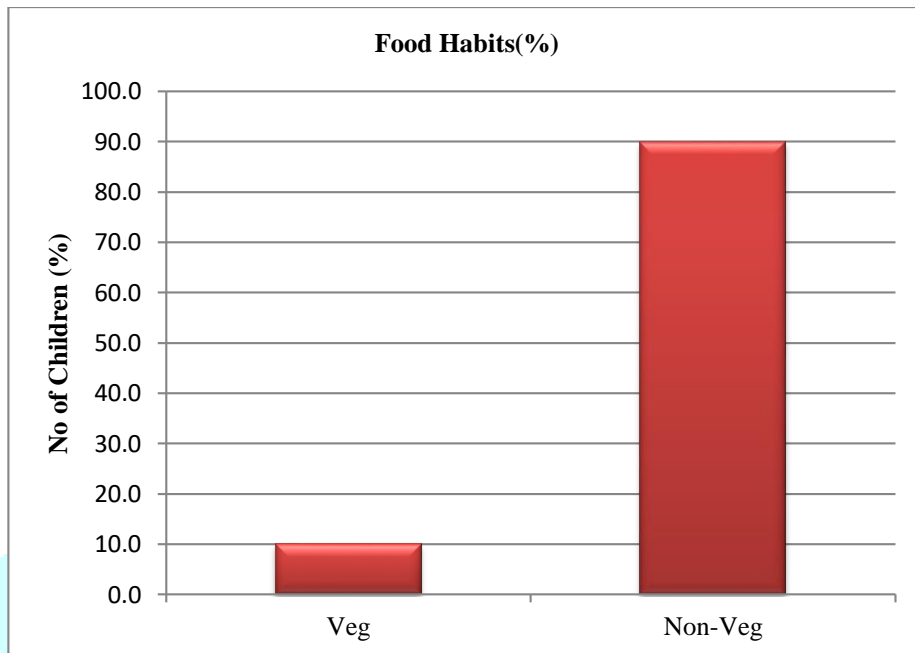
Distribution of children according to age group is shown in chart 2:



Age	No of Children	Percent
6 – 8	67	33.5
8 – 10	88	44.5
11 – 12	45	22
Total	200	100

According to age group, out of 200 children, 12% (24) of children were within 6 years, 21.5% (43) of children were within the range of 6 to 7 years, 22.5% (45) of children were within the range of 8 to 9 years and 27.5% (55) of children were 10 to 11 years, remaining 16.5% (33) of children were 12 years.

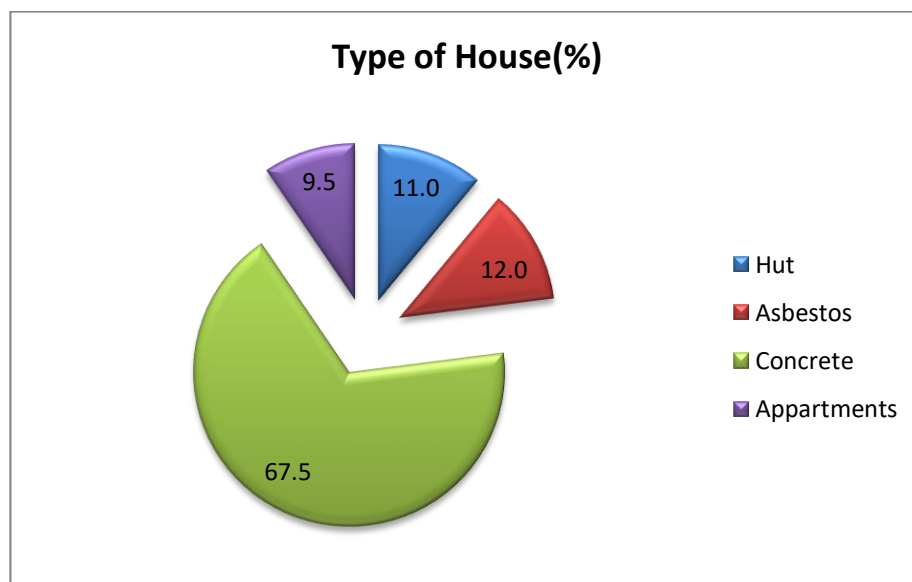
Distribution of children according to food habits is shown in chart 3



Food Habits	No of Children	Percent
Veg	20	10.0
Non-Veg	180	90.0
Total	200	100.0

Out of 200 children, 90% (180) of children were having non-vegetarian diet, only 10% (20) children were having vegetarian diet.

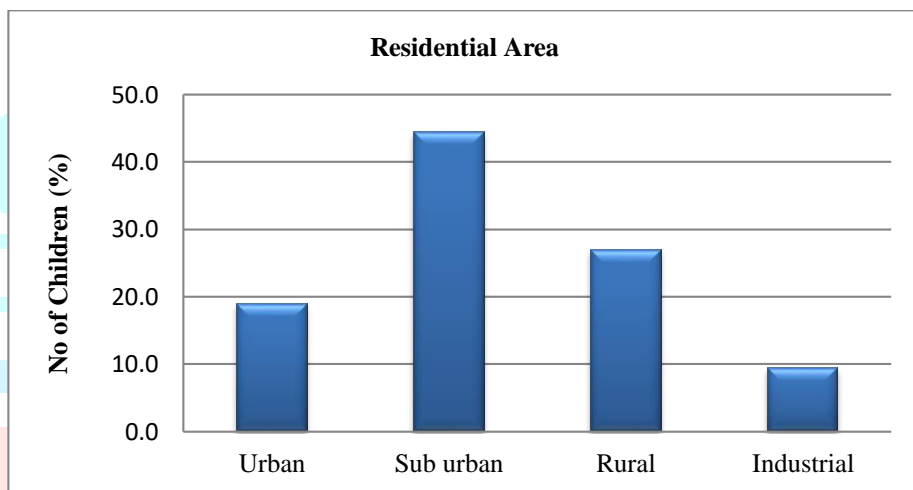
Distribution of children according to their type of house is shown in chart 4



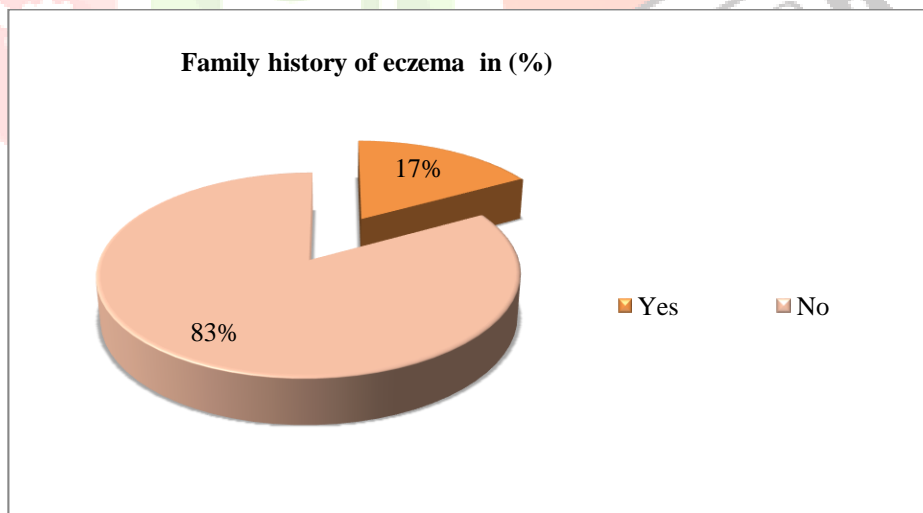
Type of House	No of Children	Percent
Hut	22	11.0
Asbestos	24	12.0
Concrete	135	67.5
Apartments	19	9.5
Total	200	100.0

Out of 200 children, 11% (22) of children were living in hut, 12% (24) of children were living in asbestos house and 67.5% (135) of children were living in concrete house, only 9.5% (19) of children were living in apartments.

Distribution of children according to their residential area is shown in chart 5:



Distribution of children according to family history of eczema is shown in chart 6:



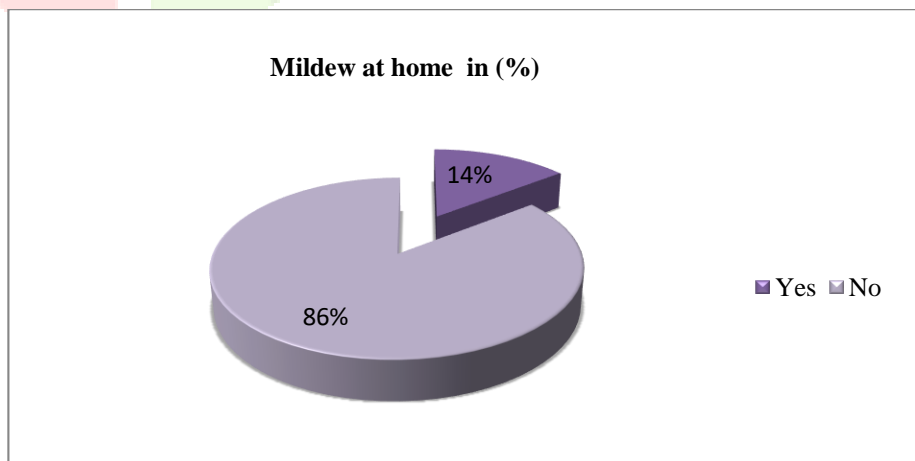
Residential Area	No of Children	Percent
Urban	38	19.0
Sub urban	89	44.5
Rural	54	27.0
Industrial	19	9.5
Total	200	100.0

Out of 200 children, 19% (38) of children were living in urban area, 44.5% (89) of children were living in sub urban area, 27% (54) of children were living in rural area and 9.5% (19) of children were living in industrial area.

Family H/O Eczema	No of Children	Percent
Yes	34	17.0
No	166	83.0
Total	200	100.0

Out of 200 children, 17% (34) of children were having family history of Eczema, remaining 83% (166) of children had no family history of eczema.

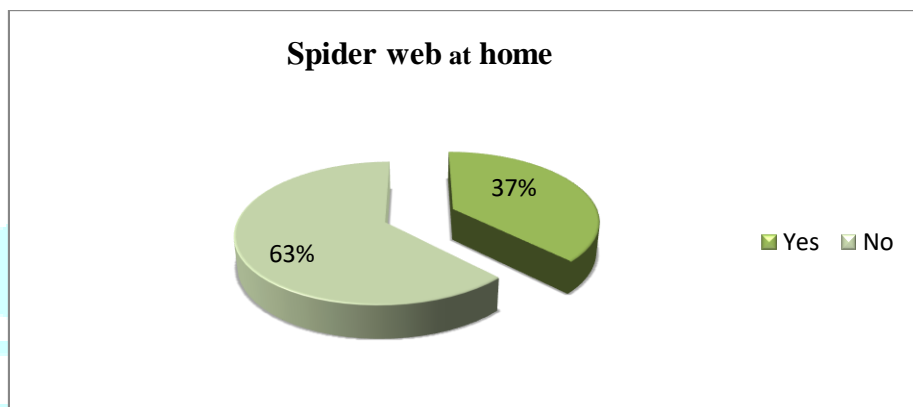
Mildew in children’s home is shown in chart 7:



Mildew at home	No of Children	Percent
Yes	29	14.5
No	171	85.5
Total	200	100.0

Out of 200 children, mildew present in 14.5% (29) of children's home, mildew not present in 85.5% (171) of children's home.

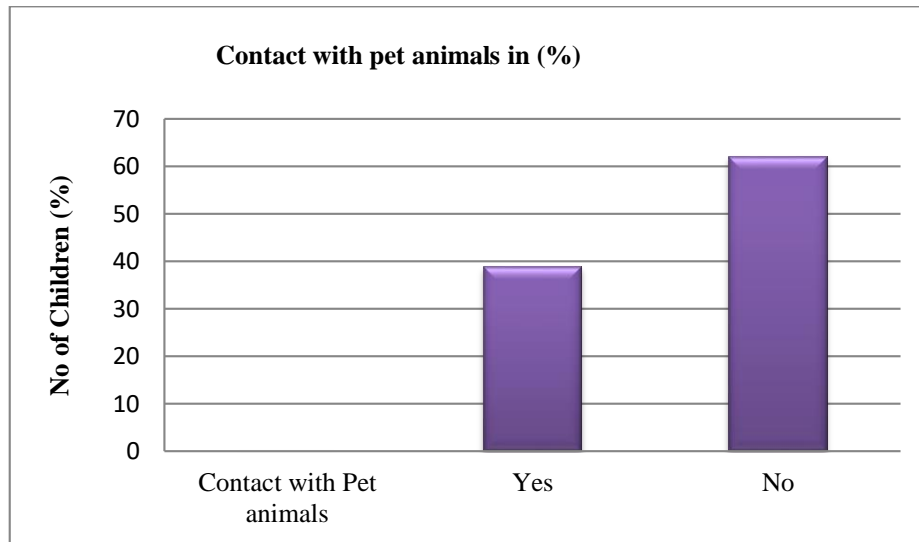
Spider web in children's home is shown in chart 8:



Spider web at home	No of Children	Percent
Yes	75	37.5
No	125	62.5
Total	200	100.0

Out of 200 children, spider web present in 37.5% (75) of children's home, spider web not present in 62.5% (125) of children's home.

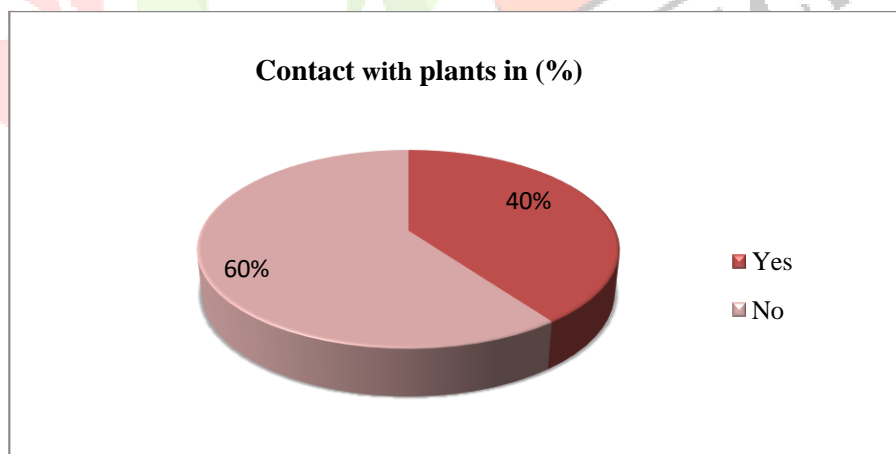
Distribution of children having contact with pet animal is shown in chart 9:



Contact with Pet animals	No of Children	Percent
Yes	76	38.0
No	124	62.0
Total	200	100.0

Out of 200 children, 38% (76) of children were having contact with pet animals, 62% (124) of children did not contact with pet animals.

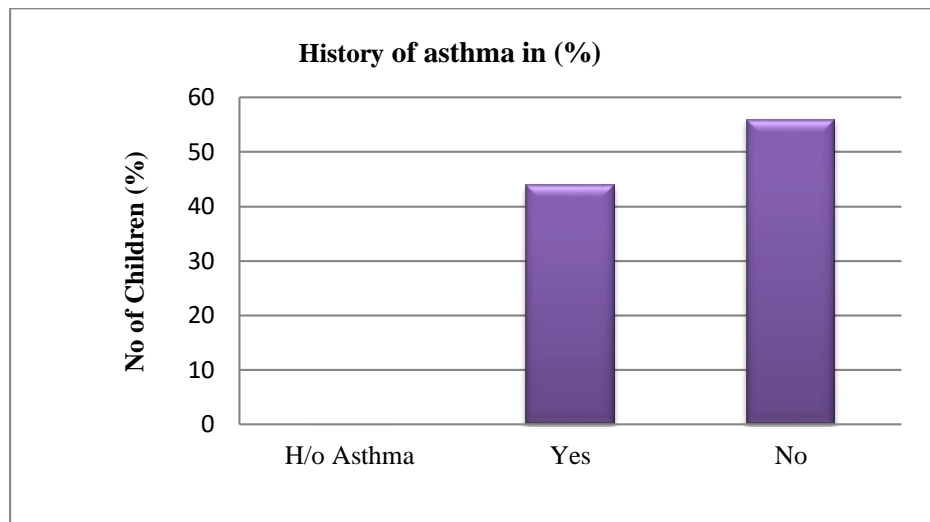
Distribution of children having contact with plant is shown in chart 10:



Contact with Plants	No of Children	Percent
Yes	80	40.0
No	120	60.0
Total	200	100.0

Out of 200 children, 40% (80) of children were having contact with plants, 60% (120) of children did not contact with plants.

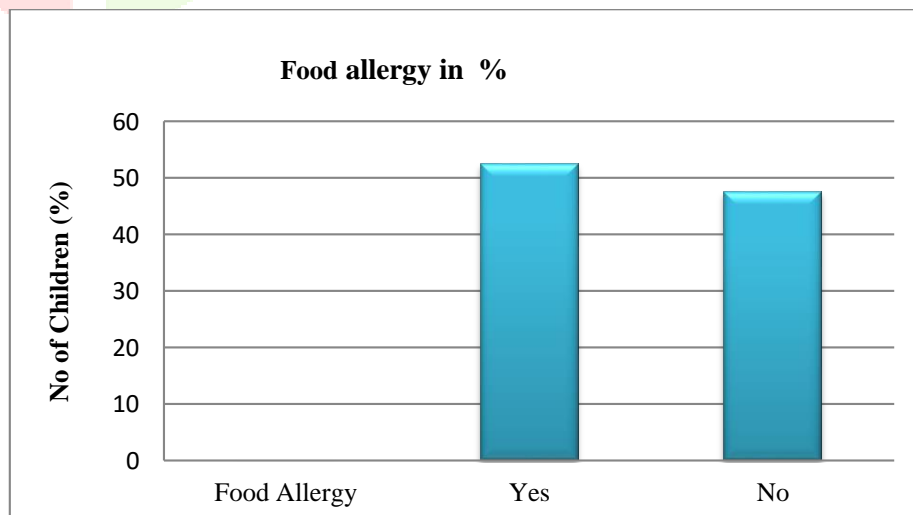
Distribution of children having history of asthma is shown in chart 11:



H/o Asthma	No of Children	Percent
Yes	88	44.0
No	112	56.0
Total	200	100.0

Out of 200 children, 44% (88) of children were having history of asthma, 56% (112) of children were having no history of asthma.

Distribution of children having food allergy is shown in chart 12:



Food Allergy	No of Children	Percent
Yes	105	52.5
No	95	47.5
Total	200	100.0

Out of 200 children, 52.5% (105) of children were having food allergy, remaining 47.5% (95) of children having no food allergy.

Discussion:

In this study the result showed that Karappan (Eczema) is the most common skin disease in children with the age group of 5 to 12 years who were attended the NIS OPD. This study revealed that the prevalence of Karappan (Childhood Eczema) among school going children is around 44%. It was found that the prevalence of Eczema in boys were higher than girls (53%:47%). We found that food allergy was an important risk factor for eczema in children. There were significant association occurred between eczema and food allergy ($P<0.05$). In this study, we found spider web is another triggering factor for eczema ($P<0.05$). This study has some limitations, and the results must be interpreted with caution. The study group is rather small, larger study populations are needed to confirm this observations. This study was performed in NIS-Kuzhandhai Maruthuvam OPD, thus the results do not necessarily reflect the situation in other places.

Conclusion:

Based on the results of current study we suggest that the prevalence of Karappan (Eczema) in children is increased significantly. This study showed that food allergy and spider web at home were the strong risk factors for childhood eczema. Contact with pet animals and plants can make Eczema symptoms worse and trigger attacks. The results highlight the need to educate the parents about food allergy, cleanliness of the house in the development of childhood eczema.

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