Distribution of Allergy Children's and Transportation Related Facilities in Seoul

Seong-min Han¹

ABSTRACT

This study provided basic information to reduce the health damage of children with allergic to children form transportation related facilities. National statistics are used to present national and Seoul status. The bus stop and gas-station index per child with allergy was calculated for children under the age 10. Statistics have shown value that are expected to be benefited or damaged per child. Visualizations used ArcMap 10.3. The distribution of bus stops were high in areas close to the central, while gas stations were highly distributed in central and western Seoul. Bus stop or gas-station per atopic dermatitis were the highest in Eunpyeong-gu, Gangbuk-gu and Dobong-gu, however bus stop or gas-station per asthma were the highest in Mapo-gu and Jung-gu. This study was meaningful in identifying the transportation related hazards facilities for allergy children's. Therefore, it is necessary to improve urban environments to prevent and reduce allergies.

Keywords : Bus stop, gas station, Asthma, Atopic dermatitis, Seoul

1. Introduction

According to data from the Ministry of Health and Welfare, the Disability Adjusted Life Year (DALY) had high asthma and skin diseases[1][2]. The burden of environment–related disease causes economic loss and social costs. Previous research has reported that environment polluation factors are a risk factor for childhood allergies[3][4][5]. Health damage caused by environmental pollution does not occur over a short period of time, but is usually caused by diseases that are concentrated in the body for a long time. In particular, children, pregnant women, elderly and socioeconomic weak are the sensitive classes caused by environmental pollution. Therefore, efforts should be made to protect the health of children who are sensitive and reduce environment pollution damage. Environment hazard factors can be distributed at various levels depending on geographical characteristics and information about environmental health can be identified and estimated using the geographic information system (GIS). GIS can analyze and process geospatial data for use in geospatial related areas[6][7][8]. The preceding study reported the status of environmental pollution related to geographical characteristics. However, there was a lack of research on children and fewer studies estimated the prevalence of allergic diseases index from environment hazard per child. The distribution of gas stations and bus stops around the community can indirectly affect the occurrence of childhood allergy disorders[9][10]. No studies have been reported to analyze the relationship between these environmental hazards and allergic diseases. Therefore, the purpose of this study was

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to examine the relationship between traffic-related facilities in Seoul and allergic diseases using GIS.[11][12].

2. Method

Study data on allergic diseases were used by the Korea National Health Insurance Claims Database and analyzed for Seoul area in 2016. The Korean Standard Classification of Disease (KCD) code was used for the principal diagnosis. Atopic dermatitis used L20 codes, asthma J45 and J46 codes. Allergic prevalence were analyzed for children aged 0 to 9 and classified by region and gender. In addition, the number of people who made the visitors on the hospital in outpatients and inpatients was sum to provide the prevalence rate of allergic diseases per 10000 people. Using GIS, spatial distribution of prevalence of allergic diseases was presented. The distribution of bus stops and gas stations facilities and the spatial distribution of the index per child. The data were obtained from the Statistical Korea (https://sgis.kostat.go.kr/view/index) and Seoul Metropolitan Government’s Open Data Plaza (http://data.seoul.go.kr/). Information about the bus station and gas station in Seoul was collected at Seoul Metropolitan Government’s Open Data Plaza, population groups collected national population open data from the Statistical Korea. The index for each child was calculated by the number of children aged 9 years total population in Seoul. In addition, the number of bus stops and gas stations were calculated, and the estimated number of prevalence with allergic diseases per bus stops and gas stations were analyzed. And mapping the GIS used ArcMap 10.3.

3. Results

1.1 Distribution of bus stop and gas station per child in Seoul

Analysis of the distribution of bus stops and gas stations per person under the age of 9 showed that the bus stops were the highest in Jongno-gu and Jung-gu and generally the outside areas of Seoul had the lowest distribution. And the gas-stations was also very high in the central area the outside was low. Most urban designs, including large cities, looked the same as the concentration of traffic in the central area (Figure2 – 3).

Fig 1. Distribution of bus stops per child
1.2 Distribution of the prevalence of atopic dermatitis and asthma

According to an analysis of the prevalence of allergic diseases among 10,000 children, atopic dermatitis was the highest at 429 in Songpa-gu and the lowest at 59 in Jongno-gu. Asthma was the highest at 606 in Gangbuk-gu and the lowest at Mapo-gu at 80 (Table 1).

<table>
<thead>
<tr>
<th>Area</th>
<th>Atopic dermatitis (per 10,000)</th>
<th>Asthma (per 10,000)</th>
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<tr>
<td></td>
<td>Total</td>
<td>Boys</td>
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<td>Nowon</td>
<td>309</td>
<td>159</td>
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<tr>
<td>Songpa</td>
<td>429</td>
<td>232</td>
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<td>Seongbuk</td>
<td>289</td>
<td>153</td>
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<td>Eunpyeong</td>
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<td>169</td>
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<td>Guro</td>
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<td>Gangseo</td>
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<td>Gangnam</td>
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<td>Gangbuk</td>
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<td>Dongdaemon</td>
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<td>Dongjak</td>
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<td>Gangdong</td>
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<td>Gwangjin</td>
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<td>101</td>
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<tr>
<td>Seocho</td>
<td>275</td>
<td>146</td>
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</table>
1.3 Residential hazardous environment and risk index for allergies

Analysis of the relationship between atopic dermatitis and traffic related facility in the community revealed that the highest level of bus stops in Jongno-gu, Seongdong-gu, Dobong-gu, and Geumcheon-gu were found to be per 10,000 children. In Jongno-gu, Jung-gu, Gangbuk-gu, and Dobong-gu, there were many gas stations per 10,000 children with atopic dermatitis. Bus stops were many in the central area of Seoul, while gas stations were many in the central area of Seoul and in some northern regions of Seoul. The prevalence of atopic dermatitis was the highest in Songpa-gu, while the prevalence of atopic dermatitis per bus stop was the highest in Jongno-gu. And the prevalence of atopic dermatitis per gas station was high in Jongno-gu and Seodaemun-gu.

The distribution of bus stops per 10,000 children with asthma was high in Mapo-gu and Jung-gu, while in gas stations, Mapo-gu and Jung-gu were also high. The distribution of bus stops were high in areas close to the central, while gas stations were highly distributed in central and western Seoul. Asthma prevalence was the highest in Gangbuk-gu, however atopic dermatitis per bus stop and gas-station was the highest in Mapo-gu and Jung-gu (Figure 3-6).
Fig 3. Bus stops per prevalence of atopic dermatitis

Fig 4. Gas stations per prevalence of atopic dermatitis
4. Discussion

This study was to identify the distribution of bus stops and gas stations in the community and to provide a distribution with the prevalence of allergic diseases. Bus stops and gas stations showed high distribution in the central area but did not match the prevalence of allergic diseases. And the relationship between the bus stop and the gas station showed different results from the local prevalence of allergic diseases. However, the prevalence of allergic diseases by bus stops and gas stations was mostly high in central. And each distribution of prevalence by bus stops and gas stations...
stations was similar. However, the difference was based on specific diseases. Atopic dermatitis had a high prevalence in the north regions and asthma in the west regions. In particular, atopic dermatitis, asthma were all high in the central regions. Previous studies reported important results for traffic-related environmental pollution factors and allergies. The increased exposure to traffic-related air pollution increased the risk of allergies. And the increase in traffic is shown to increase asthma. This study also showed high levels of allergies in urban areas with high traffic volumes. The results showed that children living in urban areas were more susceptible to allergies than outside areas because the frequency of bus stops and gas stations was concentrated in central regions. Asthma was estimated to have a high prevalence the area around the Han River, where bus stops were concentrated. Atopic dermatitis has a higher prevalence in northern areas where bus stops and gas stations are relatively low compared to central regions. In particular, the high prevalence of atopic dermatitis in the north can disprove the fact that it can be sensitive in facilities such as bus stops and gas stations. However, due to the many risk factors that increase allergies, we could not interpret the bus stops or gas stations as having to do with allergies. Nevertheless, bus stops and gas stations have been identified as one of the indirect factors, given that the distribution of the prevalence varies among all allergic diseases.

5. Conclusion

This study found that bus stops and gas stations could be indirectly involved in the prevalence of atopic dermatitis and asthma. Hazard at bus stops and gas stations were suggested in center area, but no specific cause could be found. This study was meaningful in identifying the prevalence of allergic and environmental hazards facilities. Therefore, it is necessary to improve urban environments to prevent and reduce allergies.

References

1999.


ICF 참여수준정도가 취업장애인의 일자리만족도에 미치는 영향 : 고용형태의 매개효과를 중심으로

한성민†

요 약

논문에 대한 요약을 기술하시면 다음과 같다.
첫째, ICF에 근거한 참여제약의 정도에 대한 측도를 통해서 측정한 ICF참여수준정도가 일자리만족도에 정적인 영향을 미치는 것으로 나타났다. 둘째, ICF 참여수준이 높아지면 고용형태에 있어 보다 안정적인 일자리를 가질 확률이 높은 것으로 나타났다. 셋째, 고용형태는 ICF참여수준과 일자리만족도의 관계에서 부부매개효과를 하는 것으로 나타났다. ICF참여수준과 실직 후 일자리가 장애인들의 삶에 긍정적인 영향을 줄 수 있다는 정책적 함의를 줄 수 있다.

주제어 : ICF, 참여수준정도, 취업장애인, 일자리만족도, 고용형태, 매개효과

The Effects of ICF Participation Level on Job Satisfaction for the Disabled : Focused on the effect of employment patterns

Seong-min Han†

ABSTRACT

The summary of the paper is as follows.
First, the level of ICF participation measured through a measure of the degree of participation drugs based on the ICF has a static effect on job satisfaction. Second, higher levels of ICF participation are likely to lead to more stable jobs in employment patterns. Third, the type of employment has a partial selling effect in relation to the level of ICF participation and job satisfaction.

Keywords : International Classification of Functioning, Disability, and Health(ICF), participation level, employment disability, job satisfaction, employment type, mediation effect

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1. 서 론

장애문제의 원인을 신체적 구조의 저하에서 찾는 의료모형(medical model of disability)의 기존의 패러다임에서 벗어나 발달된 사회적 모델(social model of disability)는 장애인이 사회에서 느끼는 일종의 "사회적 장벽'을 장애문제의 핵심으로 제시하며 시작되었다. 이러한 사회적 모델은 장애를 장애당사자의 관점에서 본다는 큰 장점을 가지고 있기 때문에 장애인이 겪는 사회적 한계와 장벽들을 없애는데 독특한 이론적 배경이 되었다. 그러나 이러한 사회적 모델 역시 장애문제를 완전히 이해하는 데 한계를 드러내었는데, 신체적인 손상과 이로 인한 신체적인 효과를 간과했다는 점에서 비판을 받고 있다(Shakespeare, 2006). 이는 장애를 바라보는 관점에서 새로운 패러다임 관점이 제시되어야 하며, 최근에 보편주의적 접근 방법에 따라 생물학적 조건, 사회의 물리적, 제도적 장벽 뿐 아니라 심리적 차원, 문화적 맥락에 함께 고려되어야 복합적인 장애문제를 설명할 수 있다는 의견이 있다(Zola, 1989; WHO, 2011, 신은경·이한, 2013).

이에 세계보건기구(WHO)에서는 건강과 건강관련 상태에 관한 포괄적이고 다차원적인 접근을 표방하는 ICF(International Classification of Functioning, Disability, and Health)을 주장하여, 장애에 관한 보편주의적 접근방식을 구현하였다. ICF는 장애인과 비장애인을 구분하기 위한 분류가 아니라 모든 인간에 관한 보편적인 정의에서 출발하였으며(WHO, 2001: 7), '장애'라는, 건강의 조건 중 하나로서 '장애상태'를 다루는데서(WHO, 2001: 242), 장애의 신체적(신체기능, 신체구조), 개인적(활동), 사회적(참여) 차원을 구분함으로써 개별모델과 사회적 모델과의 새로운 모습뿐 아니라, 기능과 관련된 요소들(손상, 활동제한, 참여제한)과 상황적 요인들(개인요인, 배경요인)의 상호작용을 설명하고 있으며, 이는 보편주의적 접근을 개념화 시켰다는 점에 그 의의를 두 수 있다(WHO, 2011). 이러한 요인 중 '참여(participation)'는 그 중에서도 장애인들의 인권보장과 사안에서 가장 중요한 요인이라 할 수 있다. '참여'는 '사회적 불리와'의 연속성에서 그 부정적인 관점에 중점을한 개념으로서, 장애의 사회적 차원을 반영하고 있다. 즉 '참여'란 일상적 생활가운데 개인이 겪는 사회적인 관계에서의 어려움이 없는 상태로 정의할 수 있다. 장애인은 사회적 존재이며, "사회적 역할수행"이 바로 "사회참여"와 동일하다. 그 범위는 "자기관리"와 같은 인간의 존엄성과 독립성을 보장할 수 있는 개인적인 영역으로부터, "사회생활" 즉, 인간을 가진 사회시민으로서의 참여 같은 영역까지도 설명해주고 있다. 이러한 참여는 UN장애인권협약(2006), 장애인복지법, 장애인차별금지 및 권리구제 등 각종 협약(convention)과 법령(law)에까지 다양하게 설명되고 있다.

이러한 장애인의 사회적 참여에 대한 관심은 국내외에서 활발하게 현재 수행되고 있다(박승용, 1997; 박수병, 2006; 이덕섭 외, 2003; 김영숙·정국인, 2008; 김희영, 2009; 방요준 외, 2011; Lim et al. 2001). 장애인들의 특성을 포함하는 다양한 범인들(신체적 요인, 인구사회학적 요인, 정서적 요인, 가족관련요인 등)이 장애인들의 사회 참여 여부에 미치는 영향에 대한 연구들이 지속적으로 수행되어 왔다. 이러한 연구들은 장애인의 전반적인 '참여' 수준의 확대가 장애인들의 삶의 질에 긍정적인 영향을 미친다는 결과를 설명해주고 있다.

이러한 장애인들의 삶의 영역 가운데 가장 중요한 것이 바로 인간으로서 가장 중요한 권리인 '노동'에 대한 영역이다. 즉 장애인들은 비장애인과 마찬가지로 직업활동을 통해 삶의 질을 성취하고 있다.

우리나라에서의 장애인의 경제활동 참가율 및 취업률은 장애인 의무고용제의 실시라는 국가적인 강력한 유인정책에 의해 지속적으로 증가하는 추세이다. 그러나 양적인 숫자에 비해 질적인 부분에서의 확충까지 이어나고 있지 않다. 한국보건사회연구원(2009)의 조사에 따르면, 취업 장애인들은 약 70%가 임금, 노동시간, 휴무시간 및 직무 집함 등에서 어려움을 겪고 있는 것으로 나타나고 있다는 결과는 장애인들이 느끼는 고용환경이 아직 개선되지는 않아 많은 장애인들이 고용환경이 아직 개선되지 않아 많은 장애인들이 고용환경이 아직 개선되지 않아 많은 장애인들이 고용환경이 아직 개선되지 않아 많은 장애인들이 고용환경이 아직 개선되지 않아 많은 장애인들이 고용환경이 아직 개선되지 않아 많은 장애인들이 고용환경이 아직 개선되지 않아 많은 장애인들이 고용환경이 아직 개선되지 않아 많은 사회적 참여의 권리를 보장하기 위한 "장애인차별금지 및 권리구제 등에 관한 법률"이하 장차법"이