(Parallel session papers should be 4-6 pages long and poster papers should be between 2 and 6 pages. The language of the manuscript should be English.)

The Paper Submitted to the Asian Conference on Ergonomics and Design: A Trend Analysis of Ergonomics Studies in Korea

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ABSTRACT

(The abstract should be no more than 500 words long.) The aim of this study is to investigate the attributing factors influencing major research areas of the papers published in the journal of Ergonomics Society of Korea (JESK). Ergonomics has a wide range of research areas. Diversity of research topic is one of the major strong points of this discipline especially in the era of fusion. Dominant areas among the diversity changed from time to time. It is interesting to study the attributing factors of the dominant areas. During the past three decades JESK has published 649 articles. We reviewed these papers and sorted them into the detailed research fields of ergonomics; (1) a grouping of the technical group (TG) s of the Human Factors and Ergonomics Society (HFES), (2) an editing grouping of the journal of Ergonomics Abstracts and (3) a grouping of the TGs of the Ergonomics Society of Korea (ESK). We also listed major events which might affect the publication trend. Anthropometry was the most dominant area all the time. Health and safety area has been steadily increasing in publication amount. Government research funding was the main attributing factor determining the publication trend of the JESK. The results of the publishing trend analysis might help to determine the editing policy of the JESK.

Keywords: Trend analysis, Publication, Research papers, Journal of the Ergonomics Society of Korea
(If you want your paper to be presented in the ESK-JES Joint Session, please add "ESK-JES Joint Session" in your keywords list.)

1. Introduction

Since the JESK one of the most active centrum of the Korean ergonomists' idea was launched, it has grown quantitatively as well as qualitatively in publication activities. Not only the number but also the research fields have become diversified in the papers published in the journal.

Zavod and Hitt (2000) examined the content of each article published in the journal Human Factors during 1988~1997 for subsequent classification within TGs of HFES.

Hitt (2000) reviewed the publishing trends in the HFES proceedings of the year 1988~1997. He also used 20 TGs from which each presentation paper is assigned as a classification method.

Lee (2000) grouped the ergonomics papers published in the journals and proceedings into (1) anthropometry and physical and physiological characteristics of human, (2) human performance, (3) industrial design, (4) manual materials handling and safety, (5) human computer interactions, (6) sensibility engineering, (7) aviation safety, (8) design of medical devices, and (9) aging.

2. Method

JESK published 649 articles during the year 1982 to 2009. The author examined each article and coded along 5 dimensions, which included (Size Korea Home Page, 2011):

(1) Year of publication: 1982~2009,
(2) Period of publication: 1980s (1982~1989), 1990s (1990~1999), and 2000s (2000~2009) with historical events occurred during each period,
(3) Classification method 1: TGs of the HFES (Table 1)

Table 1. Three classification methods by which articles were assigned

Classification method 1	Classification method 2	Classification method 3
Accidents, Safety, and Human Error	Display and Control Design	Biomechanics
Aerospace Systems	Environment	Cognitive science
Aging	General Ergonomics	Design ergonomics

3. Results

Some descriptive statistics along the above 5 dimensions reflected the change of the ergonomics research activities of Korea during the past three decades. The coefficient of variation can be expressed by the equation (1).

$$CV = (SD/mean) \times 100(\%) \quad (1)$$

3.1 Year of publication

In the first year the JESK published 12 articles. In 2009 the JESK published 47 articles, showing annual average growth rate of 11 percent (Figure 1). Table 2 shows that different time interval was significantly higher than normal situation (χ^2=17.22, p<0.05), (F(8, 16) = 3.71, p = 0.012).

3.2 Period of publication

We called the period of 1980s as the infant period of ergonomics (Lee et al., 2003). The ESK was established in 1982 by K. Park and his colleagues. Researchers working with industrial engineering, garments, or

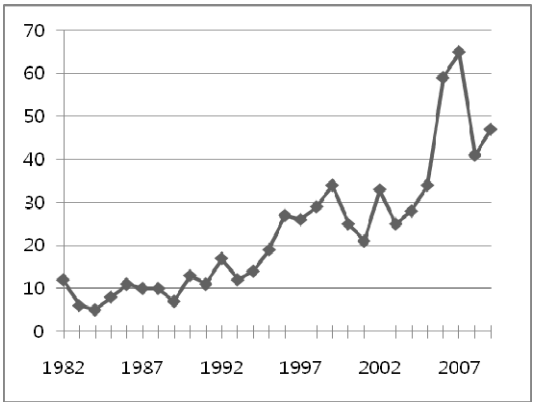

Figure 1. The annual numbers of papers published in the JESK

Table 2. The result of comparison of ANS response between baseline and happiness condition (N=217)

	Baseline	Happiness	t
HR	81.3±10.7	82.9±11.6	3.2**
SD_RRI	35.7±15.4	37.5±13.7	1.5
LF	0.4±0.2	0.4±0.1	3.0**
HF	0.6±0.2	0.6±0.1	3.0**
HRV	0.9±0.7	0.7±0.5	3.5**
BVP	0.2±0.1	0.1±0.1	11.3***
Resp_R	3.9±1.2	3.3±0.6	8.5***
Resp_A	4.4±3.9	4.5±3.8	1.0
Resp_Rsd	0.5±0.4	0.6±0.4	3.4**
Resp_Asd	0.6±0.7	1.0±0.9	6.7***
SCL	0.2±0.2	0.3±0.2	6.4***
SCR	0.1±0.3	0.9±0.8	13.3***
Mean SKT	31.9±2.6	31.8±2.5	8.1***

M ± SD *p<.05, **p<.01, ***p<.001

4. Conclusion

One interesting and remarkable point is a publication trend in health and safety area. As mentioned earlier the rank of this area has steadily risen all over the periods (Figure 3 to 8). The researchers majoring heath science area such as rehabilitation medicine have joined the ESK and actively published papers on work physiology and human characteristics.

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