Classroom Ergonomic Issues in the University Setting

“Eighty percent of the U.S. population seeks medical attention for back problems at some time in their lives” (Mulry, 1992). However, this number has increased by 14% since the time of this study (Freburger et al., 2009). These statistics result in annual productivity losses, which cost approximately $28 billion in the United States (Rizzo, Abbott, & Berger, 1998). Many reasons for this problem are cited in the literature, including an overall increase in weight and BMI of the population, an increase in the time of static sitting, and a decrease in physical exercise to name a few. It is interesting to note that back pain begins during early school years and that there is a 51% cumulative prevalence of back pain by the age of 20 according to various community-based studies (Murphy, Buckle, & Stubbs, 2014). Among the many causes of back pain reported in the literature, the one that we are concerned with investigating is the high prevalence of both ergonomic mismatch and body discomfort in school-aged children, which reportedly increases as students get older. In particular, we are interested in investigating the ergonomics of seating and its impact on students in the university setting.

Much of the literature that we have found in preparing this abstract is focused on seating and positioning in K-12 aged students. Reports highlight that school is where students acquire long-term habits of sitting, which is why the causes and effects of seating problems need to be examined in a classroom setting (Parcells, 1999). Kids are known to spend 30% of their time at school (Maheswar & Jawalker, 2014). Some seating and positioning issues identified include that seats do not match students’ body types and this mismatch results in reports of neck and back pain and problems with posture and attention (Parcells, 1999). Brewer, Davis, Dunning, & Succop (2009) reported in a study of school-aged children that less than 10% of participants had chairs which matched their proportions, and that all students reported a mismatch between themselves and their desk height. A variety of additional factors are considered in the studies we have seen so far, including: age, gender, time spent sitting, and location of seating in the classroom.

Given the lack of research in the university setting, we would like to investigate and expand the study of seating and positioning of students into the university setting. In order to begin our research, we need to review the literature in order to inform our
research questions and to study variables so that we can design and carry out an informed research project. The goal of this Whalen proposal is to summarize the literature, to identify research questions, to study variables and to develop an appropriate research design.

References


