The application research of interior exercise equipment design through point of human factors

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ABSTRACT

As inside fitness exercise vigorously developing, not only professional athletics, but also general begin to use exercise equipment. Some environments where lack of professional coaches, like sport corporations in school or personal house. For them the operating safety of exercise equipments are especially important. The purpose of this research is focus on the equipment whose general users could own, to find it''''s problems and analysis them from the point of human factors. By solving the problems, the eqipment will become more safety, then users'''' sport safety will be protectedtoo. The equipment of bench press which usually be used in weight training is the sample of this research. It starts by the way analyzing operating process and human factors of operating action, then use a questionnaire for survey to collect data from users. People who accepted the survey must operate the equipment first, then they could make evaluations by questionnaires. By this way, users'''' problems and the defects of design could truly be known. The result of this research has showed many problems of the equipment for bench press, the most serious defects are: 1. Fingers are hurt when send back the barbells. 2. The material of the holding points on barbells is not comfortable. 3. Users can''''t feel safely in the process of bench presses. After redesigning the equipment by the study, this three problems have been solved, and become better than any other points. Adjustment, touch material, operating point out and protecting design are very important for poor users. The conclusion could be applied to design other similar interior exercise equipments, and to be their checking points of human factors.

Keywords : exercise equipment ; defects of products ; safety ; human factors ; product design ; INDUSTRIAL-PRODUCT ; MANAGEMENT ; DESIGN

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