Lower limb paralysis and pain cause restrictions in mobility; therefore, the use of wheelchairs is quintessential. Manual wheelchairs are the most popular due to their affordability and low maintenance requirements. They come along with one major drawback however: the strength required to pull oneself forward is moderately high and can lead to upper limb joint injuries. Without the knowledge of the threshold force that initiates injuries caused by the application of force on the wheel, one could suffer injuries in the lower back and joints. The purpose of this study is to determine how much extra assistance is required for the wheelchair users to move on inclined and flat surfaces in order to prevent injuries that develop due to prolonged use of manual wheelchairs. Previous research suggests that extended use of wheelchairs can affect one’s quality of life’s increased levels of cholesterol, body mass index and much more yet there are minimal studies on threshold force that initiates these inconsistencies and sufferings. Based on the results collected from 5 people using wheelchairs on different surfaces and varying distances, the force applied is dependent on the environment. It was made clear that there is a range of force that causes fatigue and leads to pain in the joints due to the input torque to the push rims. The uncertainty of range of force that instigates the discomfort is concerning as the wheelchair user’s health would continue to deteriorate without a sure way to regulate required force. These findings provide an overview of upper extremity joint force involved in wheelchair use.

Themes:

Check (highlight) the most applicable theme according to the abstract.

<table>
<thead>
<tr>
<th>Innovation and Technology</th>
<th>Health and Wellness</th>
<th>Culture and Society</th>
<th>Sustainability and Conservation</th>
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Comments:

Good topic for the conference. I have suggested some edits, but as you work through the abstract, always remember to keep your message focused. Be as clear and succinct as possible and describe what the situation is, why the study is important, what you did, and what the results are. Avoid using unfamiliar words. Simple words are usually much more effective at conveying information clearly. You don’t have to use big words to seem smart, and in fact when you use the wrong word it makes the abstract confusing.