

MIIEx2017

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Intellectual
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PROGRAMME ABSTRACT

AUTISM

INNOVATION

DESIGN

INVENTION

"Bridging Gaps with Creativity for Future Sustainability"

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"Bridging the Gaps with Creativity for Future Sustainability"

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IP BELT

Wan Mohd Farid bin Wan Zakaria, Mohd Addin bin Burhanuddin, Mohd Hanafi Bin Azman Ong, Mohd Hafizan bin Musa, Sharazad binti Haris,
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Abstract

Seat belt is a compulsory component in any type of vehicles as wearing one while driving is a strict regulation to be adhered by all drivers (and the passengers). Be that as it may, there are a few issues raised with respect to the safety belt for pregnant women. Findings on several studies done on the current seatbelts design indicate that there are some flaws in it for these users (i.e.: it is considered as uncomfortable, it lacks safety measures, it exerts pressure on the womb of the pregnant women and in some past severe cases it is also known as a cause for miscarriage) and these findings are supported by the Malaysian Institute of Road Safety Research (MIROS). Road Transport Act 1987 stated that pregnant women in Malaysia are exempted from wearing the safety belt. This exemption could impose a physical hazard to these ladies and consequently it could be a catalyst for an increased risk of death or other adverse effects to these women. Having said that, this research was conducted with a primary aim to create a great innovation of modern safety belt that accommodates the special needs of the pregnant women by providing comfort and enhance safety features. These modern safety belts that can be installed separately to any type of vehicles also provide a better design for ease of movement for the wearer. This research was carried out through quantitative and qualitative methods (i.e.: Needs Analysis Test) by distributing questionnaires to pregnant women. Interviews were also conducted at several agencies (Jabatan Pengangkutan Jalan (JPJ), Hospital Tengku Ampuan Afzan (HTAA) and Jabatan Keselamatan Jalan Raya) in order to get some insights, information, input and suggestions. Information obtained from the interviews was used as a guide and direction in building the prototype of this innovation. Prototype testing was conducted with the intent of getting some feedback from the targeted users. Result of the testing done, yields positive feedback from the pregnant women, as well as the doctors and officers at the HTAA and JPJ respectively. The level of satisfaction in term of design, level of comfort, ease of use, safety and practicality on using this modern safety belt are on point 5 on the likert-type scale as opposed to point 3 on the likert-type scale for the existing current safety belt. As a conclusion, this great innovation could assist these pregnant women to travel in comfort, with a peace of mind knowing that there is a suitable loss reduction device for them that adhered to the safety standards.