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Awareness and Attitude towards Dental Pulp Stem Cell Banking among Malaysians (Article)

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Abstract

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Purpose: Like bone marrow and cord blood mesenchymal stem cells (MSCs), the regenerative potential of dental pulp stem cells (DPSCs) has been reported by several researchers. However, a lack of information on the knowledge and awareness of the Malaysians about DPSCs and their banking has been observed. Hence, this study aimed to assess the level of awareness and attitude among Malaysians about DPSCs and their banking. Methods: A cross-sectional study was carried out among 983 Malaysians using face-to-face interviews (n = 458) and electronic surveys (n = 525) through social media. Significant differences between the two groups were analyzed using the student t-test. Analysis of variance (ANOVA) and Hochberg's GT2 Post-hoc analysis were used to determine the differences among ≥2 groups. The level of significance was set at $p<0.05$. Results: Knowledge of the participants on the DPSCs was fair (without scientific information) while knowledge on the regenerative potential of DPSCs was poor regardless of their race, gender and level of education. However, people with tertiary education have significantly ($p<0.001$) higher knowledge compared to people with secondary education. Similarly, medical doctors, dentists, nurses and life science researchers presented significantly ($p<0.05$) higher knowledge than the people from all other occupations. Although 91% of people were not aware of the presence of stem cell banks in Malaysia, 84% supported the establishment of DPSCs banking, 66% agreed to donate their children's DPSCs, 73% agreed to donate own DPSCs, and 83% interested to know more about DPSCs and their regenerative potentials. Conclusion: Supporting of DPSCs banking and willingness of donating DPSCs by the vast majority of people indicate that taking an initiative by policymakers and establishment of DPSCs bank in Malaysia would be fruitful. This would enhance the advanced medical care systems through regenerative medical therapy in Malaysia. © 2021

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