



# HKU Faculty of Dentistry explores how patients rate the value of implants

When asked to imagine having a missing a tooth, patients are very likely to choose implant treatment as their preferred method of tooth replacement, but they would be willing to pay only half the market price for the procedure, according to two HKU Faculty of Dentistry researchers.

To find out about patients' treatment preferences for tooth replacement, [Dr Katherine CM Leung](#) and [Professor Colman McGrath](#) interviewed 51 patients (16 men and 35 women; average age, 39 years) attending the Prince Philip Dental Hospital, Hong Kong.

Study participants were each instructed to imagine that they had, in turn, a missing front tooth and a missing back tooth. They were then given half an hour to ask questions and review clinical photographs and diagrams showing (1) treatment using a dental implant, involving the permanent insertion of a metal post into the bone, (2) treatment using fixed partial dentures, (3) treatment using removable partial dentures, and (4) what could happen in the mouth without tooth replacement.

When the patients were asked to pick a method of treatment, the majority said they would prefer having implant treatment to replace a missing tooth: 94% chose an implant for a front tooth and 84% for a back tooth. These two percentages were similar, even though different proportions of patients actually had one or more missing front teeth (18% of patients) or missing back teeth (45% of patients), and different proportions said they needed to replace a front tooth (6% of patients) or a back tooth (24% of patients).

Next, the researchers used a bidding method to find out the amount of money that patients were willing to pay for implant treatment, starting at HK\$20,000 (the current mid-range fee for a single implant in Hong Kong). If this fee was acceptable, the bidding price was gradually raised in HK\$1000 steps until it was deemed too expensive; otherwise, the price was gradually lowered by HK\$1000 steps until it was deemed affordable. This technique revealed that, on average, patients were willing to pay just more than half the typical implant fee: HK\$11,282 for a front tooth and HK\$10,205 for a back tooth.

Finally, the researchers statistically examined the effect of various patient characteristics on the willingness to pay for an implant, while controlling for the effect of other characteristics. Their analysis revealed that women were more willing than men to pay for a front- or back-tooth implant (odds ratio [OR], 0.352). Dr Leung and Professor McGrath explain that this is related to the well-documented fact that women value oral health more highly and use oral health services more than men do.

The willingness to pay for treatment was not linked to the income level of these patients. However, patients who had received at least secondary school education were more willing to pay for a front-tooth implant than those who had received no or only primary school education (OR, 0.285), leading the authors to suggest that “greater educational attainment and particularly that relating to oral health may play an important role to improve patients’ understanding” of oral health treatments and willingness to pay for them.

On the other hand, having missing teeth was associated with a reduced willingness to pay for a back-tooth implant (OR, -0.509), perhaps because people with missing teeth eventually get used to their situation whereas people who still have their full set of teeth “would be willing to pay more to preserve it”.

Despite study limitations related to the uncertain quantity and quality of patients’ knowledge before their interviews, the two researchers conclude that “most people preferred to use an implant to replace missing teeth” and that “gender, level of education, and the presence of missing teeth were independent predictors that influenced the estimates of willingness to pay”.

Writing in the peer-reviewed journal *Clinical Oral Implants Research*, Dr Leung and Professor McGrath explain that research like this is useful because dentists are recognising the need to include patients in decisions on treatment. Speculating that the low treatment fee quoted by patients was probably because they expected prices at a teaching hospital to be much lower than market rates, the authors call for more studies in other types of clinic to investigate patients’ willingness to pay for dental treatment.

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**Source:** Leung KCM, McGrath CPJ. Willingness to pay for implant therapy: a study of patient preference. *Clinical Oral Implants Research* 2010;21:789-93.

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For more information about Dr Katherine CM Leung, visit <[http://facdent.hku.hk/about/academicstaff\\_info.php?sid=d0024&year=2010](http://facdent.hku.hk/about/academicstaff_info.php?sid=d0024&year=2010)>.

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