Managing patients expectations: a new dimension of success and failure in implant dentistry

Today’s Menu:
- Success and failure with implants
- A different point of view:
  - How do patients perceive success?
  - What do they expect from us?
  - How do we manage their expectations?

Emergency room, 1.30 am

Success...
...is a matter of definition!

Success and Failure with Dental Implants

How do dentists perceive success?

Osseointegration
2,765 Pat. | 11,311 Imp
9 years
95.8 %
98 %
4.4 %
1.4 %


Patient defined outcomes:
- Rehabilitation
- Improvement in quality of life?
- Getting back something lost?
- Getting something never had before?
- Satisfaction?


"... bronze medal winners were more satisfied by their performance and happier than silver medal winners..."

Counterfactual thinking:

Research has shown that people’s subjective responses to events are influenced by their thoughts on “what might have been”.

"This might explain the often observed phenomenon in which people who are objectively better off nonetheless feel worse."
Discrepancies between self-ratings of satisfaction with oral health in two older adult populations.


<table>
<thead>
<tr>
<th>Type</th>
<th>Cross-sectional survey with random sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>729 + 541 (&gt;50 yrs)</td>
</tr>
<tr>
<td>Instrument</td>
<td>OHRQoL questionnaires Clinical examination</td>
</tr>
</tbody>
</table>

“approximately 10% of those with favourable oral health ratings were dissatisfied while approximately 50% of those with unfavourable ratings were satisfied”.


“The group of males who had been browsing photos of attractive women showed significantly lower scores when asked how attractive did they find their wives”.

Perceived availability of choices:

“Subjective expression of satisfaction with a choice can be significantly affected by the person’s perception of available alternative options”.

6 May 1954

Roger Bannister 3:59
A longitudinal study of quality of life outcomes in older adults requesting implant prostheses and complete removable dentures.
Allen PF, Mc Millan A

4 groups:
a. Requested implants – got implants
b. Requested dentures – got dentures
c. Requested implants – got dentures
d. Control group – dentate subjects receiving other treatments
Comparing patient reported outcomes from edentulous patients with implant supported fixed and removable dental prosthesis. A systematic Review
Yao J, Cong C, Bornstein M, Mattheos N.
Manuscript

14 comparative studies:

<table>
<thead>
<tr>
<th>Function</th>
<th>FDP+</th>
<th>IOD+</th>
<th>No difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/11</td>
<td>8/11</td>
<td>8/11</td>
<td></td>
</tr>
<tr>
<td>Phonetics</td>
<td>1/11</td>
<td>8/11</td>
<td></td>
</tr>
<tr>
<td>Aesthetics</td>
<td>9/7</td>
<td>9/7</td>
<td></td>
</tr>
<tr>
<td>Overall Satisfaction</td>
<td>4/9</td>
<td>1/9</td>
<td>4/9</td>
</tr>
<tr>
<td>Oral Hygiene</td>
<td>5/5</td>
<td>2/2</td>
<td>2/2</td>
</tr>
</tbody>
</table>

Oh et al. 2016
De Souza et al. 2016
De Lack et al. 2011
Martinez et al. 2013
Martín-Ares et al. 2015
Bresner et al. 2010
Katsoulis et al. 2011
Quiroga et al. 2009
Zitzmann et al. 2000
Heydecke et al. 2003/2004
De Grandmont et al. 1994
Feine et al. 1994

Sense of Coherence (SOC):
"An individual with high SOC has the ability to define life events as less stressful, to mobilise resources to deal with encountered stressors and possesses motivation, desire and commitment to cope."
(comprehensibility, manageability, meaningfulness)
Patient Related Outcome Measures

Comparing patient reported outcomes from edentulous patients with implant supported fixed and removable dental prosthesis. A systematic Review
Yao CJ, Cong C, Bornstein M, Mattheos N. Manuscript

1. PROMs rarely supplement all clinical research
2. “Satisfaction” is often used interchangeable with Impact on Quality of Life
3. Supplementary data is need to correctly interpret PROMs
4. PROMs is rarely assessed prospectively
5. A standard array of instruments for PROMs assessment is needed

Patient’s satisfaction with the treatment does not only depend on the clinical outcomes of our treatment.
Patient’s expectations, perceptions and psychosocial background seriously affect their final satisfaction with rehabilitation.
A complete assessment of patient expectations and psychosocial background is necessary procedure.

How expectations (related to Implant Treatment) are formed:
- Personal characteristics
- Previous experiences
- Knowledge, Attitudes
- Perceptions, Values, Beliefs
- Raw models, social environment

How expectations are formed (PEHC):
- Personal characteristics
- Previous experiences
- Knowledge, Attitudes
- Perceptions, Values, Beliefs
- Raw models, social environment
Hof, Markus, 2012; 59% of patients think implant could last a lifetime.

Pommer, 2011; 51% of patients think implant could last a lifetime.

Topper, 2003; 34% of patients think implant could last a lifetime.

Rustemeyer, J., 2007; 7% >25 years; 66% 10-20 years.

Johannsen, A., 2012; "All patients expected the implants to function in the mouth during the rest of their lives."

What do patients expect from implants?

Grey, E. B., 2013; Participants expected implants to restore their oral-related quality of life to 'normal'.

However, individual definitions of normality differed significantly.

Rustemeyer, J., 2007; 68% of the women judged improvement in quality of life as very important, but only 41% of the men (p < 0.05).

How much care do implants need?

Pommer, 2011; 4.7% think implants need less care than natural teeth.

Rustemeyer, J., 2007; 4.9% felt that they were well informed.

Topper, 2003; 41-74% received information by the dentist.

Johannsen, A., 2012; "The patients perceived that the oral hygiene procedure was too time-consuming with the new teeth."

How did you learn about implants?

Pommer, 2011; 41-74% received information by the dentist.

Rustemeyer, J., 2007; 4.9% felt that they were well informed.

What is the main source of information?

- The Dentist: 36-63%
- Internet: 10-45%
- Friends: 41%
- Social Circle: 13%
- The Dentist: 42%
- (Yao et al. 2017)
- (Rustemeyer 2017)
- (Kaptein 2015)
- (Simensen 2015)

**Aim:**
- To determine the educational value of YouTube patient testimonials on Implant Dentistry
- To investigate their potential for misleading statements
- To provide patients and clinicians with salient advice on the topic

**Material and Methods**
- 270 Videos
- Sorted by “Relevance”
- Sampling consecutive videos
- URLs saved
- Matrix / production characteristics
- 4 different examiners
- Calibrated
- Conduct common set of 15 videos
Inclusion - Exclusion Criteria
Sorted by “Relevance”
Sampling consecutive videos
URLs saved
matrix / production characteristics
4 calibrated examiners
Conduct common set of 15 videos

Material and Methods

Systematic Review Methodology

Results:

270 videos

Video Characteristics:

- good to moderate interexaminer reliability
- excellent intra-examiner reliability
- 1 video produced/uploaded by the patient
- 5% very unlikely produced by the patient
- 95% not produced by the patient

Material and Methods

Material and Methods

Systematic Review Methodology

Results:

Video Characteristics:

- Top 3 Informative Categories:
  1. Potential to improve aesthetics (54.1%)
  2. Potential to improve function (37.6%)
  3. Relative advantages/disadvantages of alternative options (18.3%)

Conclusions:

- On average, informative points appeared more often than
  misinformative
- Nevertheless, informative value remains low, and potentially
  misleading themes are prevalent
- Patient testimonials tend to present emotional information, invoking
  hope and expectations of a change in quality of life
- The apparent bias of the production was easily perceived by the
  examiners…

Conclusions:

- Less than 0.5% of the videos appears to show genuine patient testimonials
- Reference to complications or negative results is minimal
- Reference to patient selection is minimal
- Frequently statements are potentially misleading or dangerous:
Providers misjudge the perception of their performance on elements that are most important to consumers.

<table>
<thead>
<tr>
<th>J. Yao et al., COIR 2017</th>
<th>P. Vipattanaporn et al submitted 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-treatment</td>
<td>Pre-treatment</td>
</tr>
</tbody>
</table>
| “less care than natural teeth” | 35%  | 37%  
| “last longer than natural teeth”  | 35%  | 18%  |

Implants last for a lifetime:

<table>
<thead>
<tr>
<th>Hof, Markus, 2012;</th>
<th>59%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pummer, 2011;</td>
<td>24%</td>
</tr>
<tr>
<td>Tupper, 2003</td>
<td>14%</td>
</tr>
<tr>
<td>Johannsen, A. 2012</td>
<td>100%</td>
</tr>
</tbody>
</table>

Provision of information to patients:

8 clinicians interviewed in UK:
Altered expectations on dental implant therapy

15 patients diagnosed with Peri-implantitis:

Initial ex:
- an ex
- it feels:

**CLINICAL ORAL IMPLANTS RESEARCH**


Initial expectations on dental implant therapy and living with dental implants:
• an excellent and worry-free treatment alternative!
• it feels like your own teeth!
- …until you notice that something is wrong

15 patients diagnosed with Peri-implantitis:


Altered expectations on dental implant therapy

Being referred to a periodontist and diagnosed with peri-implantitis:
• detecting problems - being referred to a specialist
• diagnosis of peri-implantitis
• talking to others about dental peri-implant problems and social support
• thoughts about reasons for dental peri-implant problems and about previous dental treatment decisions

Holistic Patient Assessment

Chief Complaint
Medical History
Dental History
Expectations, Perceptions

Yao J, C McGrath, Gao XL, N Mattheos. Patients’ Expectations of Dental Implants prior to consultation with the dentist. COIR 2016

Reliable patient information
• own material
• www.mattheos.net/resources

Investing again in an expensive treatment with no guarantee for the future:
• feelings of trust towards the specialist team
• "having to look deep into your wallet to be able to live like a human being"
• ambivalence regarding implant/peri-implant treatment and future oral health

Altered expectations on dental implant therapy

Yao J, C McGrath, Gao XL, N Mattheos. Patients’ Expectations of Dental Implants prior to consultation with the dentist. COIR 2016

Reliable patient information
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www.eao.org/patients
Patients come to us with a formed set of expectations often including serious misperceptions. Diagnosing expectations is a necessary part of patient assessment. Correcting misperceptions and communicating rehabilitation outcomes is one of the modern therapeutical challenges.

Success and Failure with Dental Implants

1. Which are the aims of our communication.
2. How to best communicate the treatment plan.
3. What is important to communicate to the implant patient.

Strategies for effective communication!
Communication of the treatment plan

- Establish trust.
- Provide reliable information.
- Empower patient to make decisions.
- Share decisions.

Establish Trust
- Trust is not related to intervention
- Professionalism
  - Attire
  - Confidence / Knowledge
- Empathy
  - non-Judgmental

Rolfe A1, Cash-Gibson L, Car J, Sheikh A, McKinstry B.

Chung H1, Lee H, Chang DS, Kim HS, Lee H, Park HJ, Chae Y.

Agledahl KM1, Gulbrandsen P, Førde R, Wifstad Å.
**Communication of the treatment plan**

**Professionalism**
- Active
- Confidence / Knowledge
- Settings / Environment

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**Communication of the treatment plan**

- Establish Trust
  - Trust is not related to intervention
- Professionalism
- Empathy → non-Judgmental

---

**From the patient’s point of view, an ideal treatment plan is:**

- Individual
- Targeting the problems
- Achieving clear end-points
- Has a specific duration
- Cost effective

**From the clinician’s point of view, an ideal treatment plan is:**

- Evidence Based
- Predictable
- Achieving clear end-points
- Achieving sustainable end-points

- Well supported by evidence and best practice
- Following the same protocols will achieve the same results in the great majority of cases
- Active treatment is not maintenance
- Results achieved by the treatment can be maintained in the long term through patient-clinician collaboration.

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**From the patient’s point of view, an ideal treatment plan is:**

- Current pathology
- Risk factors and risk behaviors
- Nature of the problem
- Risks for progression
- Impact on general health
- Impact on quality of life
- Prognosis - Future implications
- Aims of Therapy
- Predictability
- Sustainability
- Timeframe and steps
- Associated morbidity / Risks
- Impact on Quality of Life
- Maintenance needs
- Cost - Cost/effectiveness
- Present and future commitment
- Future implications

- Aims of Therapy
- Predictability
- Sustainability
- Timeframe and steps
- Associated morbidity / Risks
- Impact on Quality of Life
- Maintenance needs
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- Present and future commitment
- Future implications

---

**From the clinician’s point of view, an ideal treatment plan is:**

- Current pathology
- Risk factors and risk behaviors
- Nature of the problem
- Risks for progression
- Impact on general health
- Impact on quality of life
- Prognosis - Future implications
- Aims of Therapy
- Predictability
- Sustainability
- Timeframe and steps
- Associated morbidity / Risks
- Impact on Quality of Life
- Maintenance needs
- Cost - Cost/effectiveness
- Present and future commitment
- Future implications
Communication of the treatment plan

- Empower patient to make decisions
- well informed
- shared responsibility
- understanding of costs
- informed consent

"Will it hurt?"

"You can expect mild pain for the first couple of days, which will be well controlled by over-the-counter painkillers."

Comparison of patient-centered outcomes after routine implant placement, teeth extraction and periodontal surgical procedures

Jie Yao, Koon Kay Lee, Colman McGrath, Yu Nong Wu, Kar Yan Li, Nikos Mattheos
COIR 2016

<table>
<thead>
<tr>
<th>Use of NSAID (painkillers)</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple Extraction</td>
<td>40%</td>
<td>21%</td>
<td>11%</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Implant</td>
<td>57%</td>
<td>34%</td>
<td>24%</td>
<td>20%</td>
<td>11%</td>
</tr>
<tr>
<td>GBR</td>
<td>*71%</td>
<td>*50%</td>
<td>*35%</td>
<td>27%</td>
<td>20%</td>
</tr>
</tbody>
</table>

The change of pain during the first 4 days

The change of bleeding during the first 4 days
Comparison of patient-centered outcomes after routine implant placement, teeth extraction and periodontal surgical procedures
Jie Yao1, Koon Kay Lee1, Colman McGrath1, Yu Nong Wu2, Kar Yan Li1, Nikos Mattheos
COIR 2016

The change of swelling during the first 4 days

The change of bruising during the first 4 days

"Will it hurt..?"

"Most of our patients have experienced similar or less discomfort than from a simple extraction"

"half of our patients used painkillers the day after the surgery, only 1 out of 3 continued on the second day"

Periodontal
- Physiological
- Stable in health
- Contain disease progression

Peri-implant
- Repair tissue
- Stable in health
- Compromised at disease

Patient's Perception of Success
- Communication of the treatment plan aims at establishing the trust of the patient, while provide reliable information to empower the patient to share the responsibility of the treatment.
- Clarity, Professionalism and Empathy are required to achieve optimal communication, while visualisation of treatment outcomes and documentation are important steps.
- Shared ownership of the treatment with the patient will help to motivate them engage and achieve long term success.

THE WORLD'S FIRST IMPLANT DENTISTRY MOOC
BY THE UNIVERSITY OF HONG KONG
ENROL NOW AT: HTTPS://WWW.COURSERA.ORG/LEARN/IMPLANT-DENTISTRY
Thank you !!!

www.mattheos.net

www.youtube.com/c/NikosMattheos

www.mattheos.net

nikos@mattheos.net