Surgeons' non-transparent facemasks challenge the physician–patient relationship in the orthopedic outpatient clinic of a tertiary university hospital during the COVID-19 pandemic: a prospective cohort study of 285 patients

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Background and purpose — Facemasks play a role in preventing the respiratory spread of SARS-CoV-2, but their impact on the physician–patient relationship in the orthopedic outpatient clinic is unclear. We investigated whether the type of surgeons' facemask impacts patients' perception of the physician–patient relationship, influences their understanding of what the surgeon said, or affects their perceived empathy.

Patients and methods — All patients with an appointment in the orthopedic outpatient clinic of a tertiary university hospital during the 2-week study period were included. During consultations, all surgeons wore a non-transparent (first study week) or transparent facemask (second study week). Results of 285 of 407 eligible patients were available for analysis. The doctor–patient relationship was evaluated using the standardized Patient Reactions Assessment (PRA) and a 10-point Likert-scale questionnaire ranging from 0 (strongly disagree) to 10 (strongly agree).

Results — A non-transparent facemask led to more restrictions in the physician–patient communication and a worse understanding of what the surgeon said. Patients' understanding improved with a transparent facemask with greatest improvements reported by patients aged 65 years and older (non-transparent: 6 [IQR 5–10] vs. transparent: 10 [IQR 9–10], $p < 0.001$) and by patients with a self-reported hearing impairment (non-transparent: 7 [IQR 3–7] vs. transparent: 9 [IQR 9–10], $p < 0.001$). The median PRA score was higher when surgeons wore a transparent facemask ($p = 0.003$).

Interpretation — Surgeons' non-transparent facemasks pose a new communication barrier that can negatively affect the physician–patient relationship. While emotional factors like affectivity and empathy seem to be less affected overall, the physician–patient communication and patients' understanding of what the surgeon said seem to be negatively affected.

Vigorous efforts have been made to prevent respiratory coronavirus transmission and, along with contact precautions and social distancing, facemasks have become widely utilized with around 95% of the world's population living in countries recommending or mandating their use in public during the pandemic (1,2). While personal protective equipment (PPE) is especially important for healthcare workers (HCW), who are confronted with an enormous potential spread to patients and co-workers (3,4), facemasks also carry the risk of exacerbating problems in verbal and nonverbal communication potentially affecting the physician–patient relationship (5,6). In a recent review on the benefits and risks of facemasks during the COVID-19 crisis, Matuschek et al. have furthermore outlined that the lack of nonverbal communication when wearing a facemask "may make people feel insecure, disheartened or even psychologically troubled" (6).

While it remains non-debatable that infection control measures are crucial during a pandemic, potential pitfalls in physician–patient communication due to PPE must be evaluated

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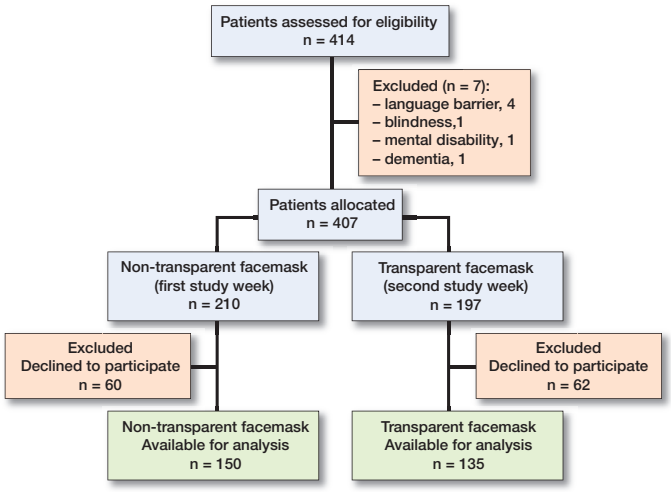

Figure 1. CONSORT study flow diagram.

and considered in daily clinical practice—especially in elective surgery where informed decision-making is essential.

Thus, we evaluated the following: 1) Does the type of surgeons' facemask impact patients' perception of the physician–patient communication, influence their understanding of what the surgeon said, or affect the perceived empathy? 2) Are there differences in the quality of the physician–patient relationship as determined by the Patient Reactions Assessment (PRA) and its three subscales? 3) What patient factors are associated with greater differences in scores depending on the type of facemask?

Patients and methods

For this prospective cohort study, all patients with an appointment in the outpatient clinic for orthopedic surgery at a tertiary university hospital in Germany during the 2-week study period in August 2020 were asked to participate in a 2-part survey. The outpatient clinic consists of daily consultation hours with different subspecialties for each day: children's orthopedics, deformity correction and foot surgery, spine surgery, arthroplasty and revision arthroplasty, sports orthopedics, and musculoskeletal oncology.

Exclusion criteria were blindness, mental disability, dementia, or an insurmountable language barrier. 285 of 407 eligible patients (response rate 70%; 139 female) agreed to participate with 150 patients (response rate 71%; 78 female) during the first study week and 135 patients (response rate 69%; 61 female) during the second study week (Figure 1, Table 1).

During the first study week, all surgeons wore a non-transparent facemask for consultations (Figure 2), while during the second week they wore a transparent facemask (Figure 2). While the non-transparent facemask was a classic disposable surgical facemask (normed following EN 14683:2019-10), the transparent facemask was a transparent face shield (Figure 2). After the consultation, the questionnaires were provided and collected by a medical assistant. All involved surgeons were not aware of the study protocol, the aims of the study, or the content of the questionnaires. They knew only that patients were asked to complete a questionnaire following the consultation and most importantly knew only after completion of the first study week that consultations in the second study week were going to be performed with a transparent facemask.

Table 1. Patient characteristics. Values are number of patients (%)

Variable	1st study week Non-transparent facemask n = 150	2nd study week Transparent facemask n = 135
Female	78 (52)	61 (45)
Age ≥ 65 years	21 (14)	22 (16)
Age ≤ 18 years	31 (21)	30 (22)
Self-reported hearing impairment	13 (9)	8 (6)
First consultation	42 (28)	40 (30)

Figure 2. Physician–patient consultation with a non-transparent and a transparent surgeon's facemask

Data collection

All patients received 2 questionnaires. Participation was non-compulsory and questionnaires were anonymized. The first 11-item questionnaire was specifically developed for this study and included questions on basic demographics (age and sex), self-reported hearing impairment, and duration of treatment, as well as 6 questions regarding restrictions in physician–patient communication, understanding of what the surgeon said, perceived empathy, overall perceived restrictions in the physician–patient relationship, and assessment of the feeling of safety with the surgeon's facemask (see Supplementary data). Each of the 6 questions was scored on a 10-point Likert scale ranging from 0 (strongly disagree) to 10 (strongly agree). Second, we obtained the validated German version of the standardized PRA (7,8). The PRA is a patient-reported 15-item questionnaire developed by Galassi et al. as a brief, visit-specific measure to assess the perceived quality of the physician–patient relationship (8). The PRA consists of 3 separate 5-item subscales, the Patient Information Index (PII), the Patient Affective Index (PAI), and the Patient Communication Index (PCI), and includes 7 negatively worded and reverse-scored questions to minimize response bias (8). The subscale PII reflects patients' perception of the physician on providing information and explanations regarding their illness and treatment and the extent to which the patients understand this information. The subscale PAI reflects the extent to which patients believe their physician values, understands, and respects them or is concerned and interested in hearing what they have to say. The subscale PCI reflects the ease or difficulty patients experience in initiating communication with a physician concerning some aspect of their illness or treatment (8).

Statistics

Frequencies were calculated for categorical variables and normality testing was performed using the Kolmogorov–Smirnov test. Depending on the distribution of data, metric variables were compared using the Mann–Whitney U-test for non-parametric analysis and the student's t-test for parametric analysis. All non-parametric values are given as medians with their respective 25–75% interquartile range (IQR). The significance level was set at $p < 0.05$ and all p-values were 2-sided. As there is no minimal clinically important difference (MCID) defined for the PRA, we assumed a mean PRA score of 88 based on previously published studies and performed an a priori power calculation and found that a sample size of 97 patients per group was needed to detect a 5-point difference on the PRA with 80% statistical power ($\alpha = 0.05$) (7). Considering the structure and setting of the outpatient clinic, 2 entire weeks of patient consultations were compared to ensure comparability. Statistical analysis was performed using Excel 12.3.6 (Microsoft Corp, Redmond, WA, USA) and SPSS 25.0 (IBM Corp, Armonk. NY, USA).

Ethics, registration, funding, and potential conflicts of interest

The study was performed in accordance with the 1964 Declaration of Helsinki, approved by the local ethics committee (reference number: 2020-498-f-S), prospectively registered in the German Clinical Trial Register (reference number: DRKS00022305) and is compliant with the STROCSS 2019 guideline (9). We acknowledge support from the Open Access Publication Fund of the University of Münster, Germany. All authors declare no conflict of interest.

Results

Patients reported greater restrictions in physician–patient communication when the surgeon wore a non-transparent facemask compared with a transparent facemask. Furthermore, patients' understanding of what the surgeon said was worse when the surgeon wore a non-transparent facemask. No difference was reported for patients' perceived empathy, with nearly perfect scores during both study weeks. While patients reported fewer restrictions of the physician–patient relationship when the surgeon wore a transparent facemask, patients' feeling of safety was higher when the surgeon wore a non-transparent facemask (Table 2, see Supplementary data).

All investigated subgroups reported restrictions in physician–patient communication due to the type of surgeons' facemask with the median difference of both weeks being highest for patients aged 65 years and older and for patients with self-reported hearing impairment (Table 2, see Supplementary data).

Regarding the PRA, overall score results improved when the surgeon wore a transparent facemask for male patients, for patients aged 65 years and older, as well as for patients aged 18 years and younger. Regarding the 3 subscales, no differences were found for the subscale PAI, while the subscales PII and PCI were also higher for male patients and patients aged 65 years and older (Table 3, see Supplementary data).

Discussion

Our most important finding is that the physician–patient relationship in the outpatient clinic might be challenged by the surgeon's non-transparent facemask. While emotional factors like affectivity and empathy seem to be less affected, physician–patient communication and patients' understanding of what the surgeon said seemed to be better when surgeons wore transparent facemasks.

The observed negative patient-reported impact of surgeons' non-transparent facemask on physician–patient communication is in line with previous reports from Tang et al. who reported a negative impact of PPE on patient satisfaction in their cohort of 149 patients from an outpatient radiotherapy

department during the 2005 SARS outbreak and from Wong et al. who reported a negative impact of the facemask on the physician–patient relationship after performing a randomized controlled trial with 1,030 primary care patients in 2011 (10,11).

More specifically, we found that patients reported a worse understanding of what the surgeon said when the surgeons wore a non-transparent facemask. Similar, Tang et al. have shown that 61% of their patients felt that the physician wearing PPE should have told them more about how to care for their condition (10). Challengingly, the study of Tang et al. is lacking a control group revealing how many of these findings can actually be attributed to PPE or the facemask (10). Conversely, Wong et al. have performed their study with a control group of physicians not wearing facemasks at all—but instead have not particularly evaluated patients' understanding (11).

Several authors have previously strengthened the importance of nonverbal communication and patients' understanding in medical communication (6,12–14). In their review, Roter et al. concluded that nonverbal messages are critical elements of high-quality care affecting the therapeutic relationship, patient satisfaction, adherence, and clinical outcomes (12). With non-transparent facemasks, crucial facial expressions become physically obstructed, resulting in a potential communication barrier (11). Graham and Brookey have emphasized that communication barriers in healthcare settings often go undetected and can have serious effects on the health and safety of patients (13). Furthermore, Pugliese et al. have accentuated the importance of patients' understanding in surgical disciplines and have concluded that surgical informed consent should be considered the highest point of a patient–surgeon relationship (14). Thus, surgeons should continuously be aware of the new pitfall in physician–patient communication and critically reassure patients' understanding (14).

However, contrary to reported restrictions in physician–patient communication and paradoxical in relation to previous studies, we found no impact of the facemask on patients' perceived empathy. While Wong et al. described the negative impact of the facemask on patients' perceived empathy, we were not able to reproduce this observation. One possible reason might be that Wong et al. performed their study in 2011 and "at safe distance" from the local influenza season and recent SARS outbreaks (11). However, our study was performed during the global COVID-19 pandemic when the population has shown an extraordinary solidarity with healthcare workers around the world, which could possibly have led to the nearly full score results of patients' perceived empathy.

The overall PRA scores were worse when surgeons wore a non-transparent facemask and while we observed only a non-statistically significant trend for the subscale PAI, the subscales PII and PCI differed between the two weeks. These findings support that the non-transparent facemask predominantly affects the core values of the physician–patient relationship regarding information and communication rather than emotional factors like empathy or affection.

Despite these findings, we were not able to detect the previously determined 5-point difference in the PRA score considered as the MCID. Thus, it remains unclear whether the detected improvements in PRA scores are clinically relevant.

Previous studies assessing the PRA have reported overall lower PRA mean scores compared with our study. For the first study on the PRA, caregivers of a Comprehensive Cancer Center in the USA were grouped by their supervisors based on their globally perceived ability to relate to patients (8). The patients of the caregiver group perceived as having more effective physician–patient relationships reported a PRA mean of 90 and those with caregivers perceived as having less effective physician–patient relationships had a PRA mean of 85 (8). For the German validation of the PRA, Brenk-Franz et al. have evaluated the PRA in 506 patients of 19 different family practices resulting in a mean PRA of 88 with 30 points for the PII, 31 for the PCI and 31 for the PAI (7). Although these previously reported mean scores remain lower than in our study overall, possible explanations remain vague as improvements cannot be assigned to one or two individual subscales but are observed in all three.

Nevertheless, in particular the subscales PII and PCI improved in our study when surgeons wore a transparent facemask. Levinson et al. have stressed the peculiarity of communication and information in surgery where patients are often fearful knowing that they might have to make a decision regarding possibly invasive and potentially risky procedures when lacking information about surgical procedures and possible nonoperative alternatives (15). These findings are supported by Richards and McDonald who reported that only 60% of patients in surgery were satisfied with the communication and 41% of surgeons wrongly estimated patients' knowledge (16,17).

During the COVID-19 pandemic, these anyway challenging physician–patient relationships in surgical disciplines are further impaired by facemasks, which seem to affect the key factors, i.e., communication and information. Thus, surgeons should be highly aware of this issue during consultations and reassure that the communicated content is perceived as appropriate and all information is fully understood.

We were also able to identify patient groups who experience more restrictions in the physician–patient communication than others. It appears troublesome that patients aged 65 years and older report the most restrictions due to the surgeons' non-transparent facemask but also represent the group of patients who are especially prone to a severe-to-critical course of a SARS-CoV-2 infection. Thus, it is not possible to overcome the facemask communication barrier by making concessions such as facemask-free communication when discussing critical matters. However, the increasing duration of the pandemic strengthens the need for new, potentially transparent but certified models of facemask that less affect the physician–patient relationship, especially in those critical groups of patients.

The other patient group that reported most improvements in the understanding of what the surgeon said were patients with self-reported hearing impairment. Davis has previously commented on the challenges for this patient group with dentists' facemasks, concluding that hearing-impaired patients dislike facemasks as their subconscious lip-reading is not possible leading to inadequate feelings and the inability to respond to surgery staff (18).

Suchman et al. have identified the physician–patient relationship as the most important determinant for overall physician and patient satisfaction (19). Interestingly, not only patients aged 65 years and older but also female patients reported that the surgeons' non-transparent facemask affected their overall physician–patient relationship, while the remaining subgroups of patients reported no difference in the physician–patient relationship in either study week. Notably, female patients also reported feeling less safe with the transparent surgeon's facemask, indicating a critical need for safety that is seemingly more pronounced in female than in male patients and should be strongly considered when trying to overcome the communication barrier with new models of facemasks. These findings are in line with previous studies, which have shown that women experience higher levels of fear and anxiety during the COVID-19 pandemic (20) and local studies, which have shown that women are more likely to wear masks in public than men, indicating their potentially higher risk awareness and need for safety (21,22).

Furthermore, we were able to detect the previously determined 5-point clinically relevant difference in the overall PRA not only for patients aged 65 years and older and for patients with self-reported hearing-impairment but also for patients with their first consultation in our clinic. This finding is in line with Wong et al. who previously described "knowing the doctor" as a protective measure against the negative effects of communication with a non-transparent facemask (11).

Limitations

We acknowledge several limitations to our study. First, one main concern arising in assessing the physician–patient relationship is a response bias, which might outweigh the factor "transparency of the facemask" itself. Thus, the study was designed to keep subjective confounding factors low: as different timely phases of the pandemic may impact the perception of the facemask, the study was performed in 2 consecutive weeks (calendar weeks 32 and 33, August 2020). Furthermore, infrastructure, administrative processes, and personnel (administrative staff, surgeons, and medical assistants) were kept identical in both weeks to ensure comparability.

Second, as the study was performed in 2 consecutive weeks, the patients in the two cohorts are not identical. However, the overall number of patients (n = 285) and the response rate (70%) are high, minimizing a potential response bias, and no statistically significant differences regarding the patient characteristics were found between the cohorts of the two study weeks.

Third, patients' hearing impairment was only self-reported and consequently might be susceptible to an over- and underestimate of hearing loss. However, self-reporting of hearing impairment appears to be common in the literature and has been shown to be sufficiently accurate when objectified with pure-tone audiometry (23).

Fourth, as patients' participation was voluntary, a self-selection bias has to be taken into account when analyzing and interpretating our findings. Ganguli et al. have shown that volunteers in health-related studies are more likely to be female and better educated, suggesting that "in general, those who volunteer for research are a healthier group than the general population from which they come" (24). A randomization of patients after their agreement to participate could have leveraged out this self-selection bias but it remains speculative as to how this would have affected our findings.

Fifth, as patients were not the same in the first and second study weeks, a potential confounding bias needs to be considered when interpreting results of this study. As such, patients' sex and age, which have both been shown to be associated with relevant findings of our study, were, although statistically non-significant, differently distributed over the two study weeks and may have led to an over- or underestimate of these findings. As this study followed an exploratory approach that cannot account for all potential confounding factors, the generated hypotheses should be re-investigated using a confirmatory statistical approach.

A further limitation of our study is the transferability as we performed this study in Germany, where wearing a facemask in public was not common prior to the COVID-19 pandemic, even in physician–patient consultations during the seasonal influenza epidemics. Conversely, in other cultures, people are more used to wearing facemasks in public and thus might experience fewer restrictions (11). In addition, this study was performed in an outpatient clinic for elective orthopedic surgery at a tertiary university hospital. Thus, our cohort might be especially prone to restrictions as a tertiary university hospital typically acquires the more complex cases that routinely require a more extensive consultation with use of verbal explanation. Therefore, our findings may possibly over-exaggerate effects. However, considering the study's design we acknowledge the hypothetical nature of this idea.

Lastly, due to the current pandemic and compulsory infection control measures, we were not able to perform this study with a control group not wearing facemasks at all. Thus, the real effect of the non-transparent facemask on the physician–patient relationship is potentially even higher.

Conclusion

Non-transparent surgeons' facemasks may put a strain on the physician–patient relationship and while emotional factors like affectivity and empathy seem to be less affected overall, physician–patient communication and patients' understanding of what the surgeon said are negatively affected. Challeng-

ingly, patient groups who report the most restrictions are also the ones who are especially prone to a severe to critical course of a SARS-CoV-2 infection. As facemasks represent a tool to combat the COVID-19 pandemic, surgeons should be highly aware of this new potential communication barrier and continuously ensure patients' understanding and consent—especially in patients aged 65 years and older, with self-reported hearing impairment and/or during first consultations.

Supplementary data

The questionnaire and Tables 2 and 3 are available as supplementary data.

KNS, LPL, GG, CT, RR, AM, SK, and CR designed the study and collected the data. KNS, CT, LPL, and CR were responsible for data management, data analysis, and preparation of figures. KNS and LPL wrote the manuscript. KNS, GG, CT, AM, SK, and CR helped with data analysis and with editing of the manuscript.

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Supplementary data

Questionnaire

1. How old are you (in years)? _____

2. Sex: ☐ Female ☐ Male ☐ N/A

3. Are you hearing impaired: ☐ Yes ☐ No

4. For how long have you been treated in our clinic?

☐ First consultation
☐ < 1 year
☐ 1–3 years
☐ > 3 years

5. Which outpatient clinic have you visited today?

☐ Children's orthopedics
☐ Deformity correction and foot surgery
☐ Spine surgery
☐ Sports orthopedics
☐ Arthroplasty and revision arthroplasty
☐ Musculoskeletal oncology

6. Did you experience restrictions in the physician–patient communication due to your own facemask today?

Strongly disagree — Strongly agree

0	1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

7. Did you experience restrictions in the physician–patient communication due to the facemask of your surgeon today?

Strongly disagree — Strongly agree

0	1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

8. Did you fully understand what your surgeon told you today?

Strongly disagree — Strongly agree

0	1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

9. Was your surgeon empathic today?

Strongly disagree — Strongly agree

0	1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

10. Did the surgeon's facemask affect your physician–patient relationship?

Strongly disagree — Strongly agree

0	1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

11. Have you felt safe with the surgeon's facemask today?

Strongly disagree — Strongly agree

0	1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Table 2. Week-wise comparison of the respective medians with IQR in parentheses, ranging from 0 (strongly disagree) to 10 (strongly agree) on a 10-point Likert scale

Factor	1st study week Non-transparent facemask	2nd study week Transparent facemask	p-value
Did you experience restrictions in the physician–patient communication due to your own facemask?			
Total	1 (0–3)	1 (0–3)	0.5
Male	1 (0–4)	1 (0–4)	0.5
Female	1 (0–3)	2 (0–3)	0.8
Age ≥ 65 years	4 (1–6)	2 (1–3)	0.1
age ≥ 18 years	1 (0–3)	1 (0–2)	0.4
Hearing impairment [a]	3 (2–5)	3 (2–5)	0.9
First consultation	1 (0–5)	2 (0–5)	0.6
Did you experience restrictions in the physician–patient communication due to the facemask of your surgeon?			
Total	0 (0–4)	0 (0–1)	< 0.001
Male	0 (0–4)	0 (0–1)	0.008
Female	1 (0–5)	0 (0–0)	< 0.001
Age ≥ 65 years	5 (2–7)	0 (0–0)	< 0.001
Age ≥ 18 years	0 (0–5)	0 (0–0)	0.02
Hearing impairment [a]	6 (5–8)	1 (0–1)	< 0.001
First consultation	0 (0–4)	0 (0–1)	0.006
Did you fully understand what your surgeon told you today?			
Total	10 (7–10)	10 (10–10)	< 0.001
Male	10 (6–10)	10 (10–10)	0.001
Female	10 (8–10)	10 (10–10)	< 0.001
Age ≥ 65 years	6 (5–10)	10 (9–10)	< 0.001
Age ≥ 18 years	10 (7–10)	10 (10–10)	0.007
Hearing impairment [a]	7 (3–7)	9 (9–10)	< 0.001
First consultation	10 (7–10)	10 (10–10)	0.01
Was your surgeon empathic today?			
Total	10 (9–10)	10 (9–10)	0.6
Male	10 (9–10)	10 (9–10)	0.7
Female	10 (9–10)	10 (9–10)	0.2
Age ≥ 65 years	10 (8–10)	10 (9–10)	0.4
Age ≥ 18 years	10 (9–10)	10 (9–10)	0.5
Hearing-impairment [a]	9 (9–10)	9 (8–10)	0.6
First consultation	10 (9–10)	10 (9–10)	0.9
Did the surgeon's facemask affect your physician–patient relationship?			
Total	0 (0–3)	0 (0–1)	0.01
Male	0 (0–3)	0 (0–2)	0.2
Female	0 (0–4)	0 (0–1)	0.01
Age ≥ 65 years	3 (0–10)	0 (0–3)	0.002
Age ≥ 18 years	0 (0–1)	0 (0–1)	0.2
Hearing impairment [a]	2 (0–8)	2 (0–3)	0.3
First consultation	0 (0–6)	0 (0–1)	0.1
Have you felt safe with the surgeon's facemask?			
Total	10 (8–10)	10 (9–10)	0.02
Male	10 (8 –10)	10 (8–10)	0.5
Female	10 (7–10)	10 (9–10)	0.004
Age ≥ 65 years	10 (7–10)	10 (8–10)	0.5
Age ≥ 18 years	9 (8–10)	10 (8–10)	0.2
Hearing impairment [a]	9 (4–10)	10 (10–10)	0.1
First consultation	10 (8–10)	10 (8–10)	0.7

IQR = interquartile range, [a] self-reported.

Table 3. Week-wise comparison of the respective medians with IQR in parentheses of the Patient Reactions Assessment and its 3 subscales in parentheses

Factor	1st study week Non-transparent facemask	2nd study week Transparent facemask	p-value
Patient Reaction Assessment (PRA)—total score 105:			
Total	95 (85–103)	99 (91–104)	0.003
Male	95 (83–101)	99 (90–104)	0.01
Female	95 (85–104)	99 (94–103)	0.1
Age ≥ 65 years	76 (68–93)	99 (69–93)	0.005
Age ≥ 18 years	98 (85–101)	102 (95–105)	0.02
Hearing impairment [a]	86 (81–99)	92 (82–98)	0.6
First consultation	94 (82–103)	99 (89–103)	0.3
Patient Affective Index (PAI)—total score 35:			
Total	33 (28–35)	34 (31–35)	0.1
Male	33 (28–35)	34 (31–35)	0.1
Female	33 (28–35)	34 (31–35)	0.4
Age ≥ 65 years	31 (27–34)	34 (31–35)	0.1
Age ≥ 18 years	32 (28–35)	34 (32–35)	0.1
Hearing impairment [a]	33 (28–35)	31 (29–32)	0.5
First consultation	33 (28–35)	34 (31–35)	0.7
Patient Information Index (PII)—total score 35			
Total	33 (29–35)	34 (31–35)	0.007
Male	33 (29–34)	34 (30–35)	0.03
Female	33 (28–35)	34 (31–35)	0.1
Age ≥ 65 years	27 (23–34)	34 (30–35)	0.009
Age ≥ 18 years	33 (30–35)	35 (32–35)	0.2
Hearing impairment [a]	31 (27–34)	34 (27–35)	0.4
First consultation	33 (30–35)	34 (30–35)	0.5
Patient Communication Index (PCI)—total score 35:			
Total	31 (25–35)	34 (28–35)	0.02
Male	30 (23–35)	34 (29–35)	0.04
Female	32 (26–35)	34 (28–35)	0.2
Age ≥ 65 years	24 (17–34)	34 (28–35)	0.006
Age ≥ 18 years	32 (28–35)	35 (31–35)	0.1
Hearing impairment [a]	28 (21–35)	27 (26–33)	0.9
First consultation	0 (22–35)	33 (27–35)	0.1

IQR = interquartile range, [a] self-reported.