SUPPLEMENTARY MATERIAL

Are treatment adherence factors apparent in patients with asthma and to physicians? Results from the APPaRENT 3 survey

Authors: Mohamed Al-Moamary[1]; Bhumika Aggarwal[2]; Mona Al-Ahmad[3]; Thitiwat Sriprasart[4,5]; Steven Koenig[6]; Gur Levy[7]; Abhay Phansalkar[8]; Mark Silvey[9]; Gary Milligan[9]

Affiliations: [1]Department of Medicine, College of Medicine, King Saudi bin Abdulaziz University for Health Sciences, Riyadh, Kingdom of Saudi Arabia; [2]General Medicines, GSK, Singapore; [3]Microbiology Department, College of Medicine, Kuwait University, Kuwait City, Kuwait; [4]Department of Medicine, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand; [5]King Chulalongkorn Memorial Hospital, Thai Red Cross Society, Bangkok, Thailand; [6]UK St. Claire, Morehead, KY, USA; [7]GSK, Ciudad de Panamá, Panamá; [8]GSK, Mumbai, India; [9]Adelphi Real World, Bollington, UK

Lead corresponding author: Dr. Mohamed Al-Moamary

Address: Department of Medicine, College of Medicine, King Saudi bin Abdulaziz University for Health Sciences, PO Box 84252, Riyadh 11671, Kingdom of Saudi Arabia

E-mail: almoamary@yahoo.com

Tel: +966 (11) 4299999 Ext. 92929

Statistical analysis

Sample sizes were based on the APPaRENT 1 and 2 studies and were designed to be sufficient for within-country regression analyses [1–3]. Responses of ‘prefer not to say’ and ‘don’t know’ were excluded from cross-tabulations and bivariate analyses. For multiple regression analysis, a within-country sample size of 200 per country was sufficient to test the contribution of a single variable in a model with up to 16 covariates. There was 85% power to test the addition of one covariate that could raise the total model R-squared by 0.04 in a model whose combined R-squared (all variables) was at least 0.10. Power calculations using the Power Analysis and Sample Size software (version 2021) revealed that the APPaRENT 3 sample size of 599 physicians had sufficient power for cross-country comparisons, with an approximate effect size of 0.103, power of 80% and a significance level of 0.05 for a test with 5 degrees of freedom. For analysis of variance-based testing, there was 100% power to test significances between countries for groups with standard deviations of ≤100, which was more than double the current standard deviation for the groups.

Regression analysis

Multivariable logistic regression analysis was conducted to identify patient characteristics associated with poor adherence to controller inhalers. Among 847 patients reporting daily controller inhaler use, 27 patients with missing values for some of the variables in the regression analysis as well as those responding with ‘don’t know’ or ‘prefer not to say’ were excluded. The remaining 820 patients were included in the regression analysis. The regression model included the following

variables: sex, age, education level, household smoking status, country, asthma severity, current inhaled reliever used and treatment regimen.

Inverse probability of treatment weighting analysis

Inverse probability of treatment weighting analysis was conducted to determine whether the differences in nonadherence among countries persisted after adjusting for variations in patient characteristics. Weights were assigned to balance sample characteristics (current age, sex and current asthma severity [mild, moderate and severe] as well as treatment type [controller only, controller + inhaled reliever and maintenance and reliever therapy]), making the groups more comparable. Patients using controller inhalers, with or without inhaled relievers, were included in the nonadherence comparisons.

Incentives

Patients who completed the survey received panel points as a standard incentive, equivalent to one British pound in the local currency. Physicians who completed the survey were given an incentive ranging from £16 to £76, converted to the local currency based on fair market rates. At the beginning, all participants were informed that the survey was sponsored by the GSK in the Global Model Informed Consent Forms (ICFs).

Privacy

All survey responses were kept confidential, with no identifiable information associated with the data. During the study, data were pseudonymised, and all links were removed to ensure anonymity by the end of the study. Participants could

choose to opt out of the survey or decide whether their personal information could be used for further research, as specified in the ICF. Only pseudonymised and de-identified data were collected and securely transmitted to GSK. GSK never had access to the identities of the patients or physicians who participated in or completed the surveys.

Supplementary references

1. Chapman KR, An L, Bosnic-Anticevich S, et al. Asthma patients' and physicians' perspectives on the burden and management of asthma. Respir Med. 2021; 186:106524.
2. Chapman KR, Canonica GW, Lavoie KL, et al. Patients' and physicians' perspectives on the burden and management of asthma: results from the APPaRENT 2 study. Respir Med. 2022; 201:106948.
3. Aggarwal B, Al-Moamary M, Allehebi R, et al. APPaRENT 3: asthma patients' and physicians' perspectives on the burden and management of asthma in seven countries. Adv Ther. 2024; 41:3089–118.

Table S1. Treatment adherence based on (a) physician and (b) patient responses

a. Physician responses, n (%)	Overall	Indonesia	Malaysia	Philippines	Thailand	Saudi Arabia	UAE
What percentage of your patients with moderate, severe or fluctuating severity asthma do you think adhere to their regular asthma regimen?							
Base, N	584	100	93	97	94	100	100
Mean[a] (SD)	73 (20.3)	72 (22.0)	72 (19.0)	70 (24.5)	70 (22.7)	70 (14.9)	85 (12.4)
Agreement with: Most adults with asthma become more adherent to controller therapy over time[a]							
Base, N	584	97	97	99	93	100	98
Agree or strongly agree	412 (71)	74 (76)	62 (64)	85 (86)	33 (35)	70 (70)	88 (90)

b. Patient responses by country, n (%)	Overall	Indonesia	Malaysia	Philippines	Thailand	Vietnam	Saudi Arabia	UAE
How often do you forget to take inhalers?[b]								
Base, N	845	124	106	91	139	151	110	124
Rarely or never	383 (45)	61 (49)	55 (52)	42 (46)	52 (37)	69 (46)	48 (44)	56 (45)
Sometimes, mostly or always	462 (55)	63 (51)	51 (48)	49 (54)	87 (63)	82 (54)	62 (56)	68 (55)
During the last 7 days, how often did you forget to take your inhalers?[c]								
Base, N	1192	168	162	166	176	174	172	174
Forgot ≥ half	354 (30)	47 (28)	45 (28)	47 (28)	50 (28)	41 (24)	73 (42)	51 (29)
Agreement with: I often forget or misplace my asthma inhaler devices[a]								
Base, N	1338	198	196	195	185	195	181	188
Agree or strongly agree	590 (44)	79 (40)	67 (34)	69 (35)	99 (54)	86 (44)	94 (52)	96 (51)
Among patients who were prescribed daily controller inhaler with or without inhaled reliever: nonadherence (weighted comparison) as defined by binary variables[b,d]								
Base, N	820	120	103	90	131	151	103	122
Adherent, n (%)	155 (19)	19 (16)	19 (18)	17 (19)	20 (15)	38 (25)	16 (16)	26 (21)
Nonadherent, n (%)	665 (81)	101 (84)	84 (82)	73 (81)	111 (85)	113 (75)	87 (84)	96 (79)

Patient responses by asthma severity, n (%)	Mild	Moderate	Severe
Among patients who were prescribed daily controller inhaler with or without inhaled reliever: how often do you forget to take inhalers?[b]			
Base, N	256	504	82
Rarely or never	122 (48)	232 (46)	28 (34)
Sometimes, mostly or always	134 (52)	272 (54)	54 (66)
During the last 7 days, how often did you forget to take your inhalers?[a]			
Base, N	383	702	102
Forgot ≥ half	120 (31)	182 (26)	50 (49)
Agreement with: I often forget or misplace my asthma inhaler devices[e]			
Base, N	445	777	106
Agree or strongly agree	173 (39)	348 (45)	65 (61)

ANOVA, analysis of variance; NS, not significant; N, total number of patients included in the survey, excluding those who responded 'don't know' or 'prefer not to say'; n, number of patients who responded to the question; UAE, United Arab Emirates

Overall cohort also included patients with asthma of unknown severity.

P values, determined by the chi-square test for categorical variables and ANOVA for continuous variables, indicate significant variations across the surveyed countries and asthma severities.

[d]Data showing weighted comparisons when adjusted for age, sex, asthma severity and treatment type. Nonadherent patients were those who reported using their daily controller inhaler less than once daily and those who 'sometimes', 'always' or 'mostly' forgot using their inhalers. The remaining patients who reported 'rarely' or 'never' forgetting to use their inhalers were classified as adherent.

[a]$P<0.0001$; [b]NS; [c]$P<0.01$; [e]$P<0.001$

Table S2. Sensitivity analysis of erratic and nonerratic nonadherence

Variable	Category	Odds ratio	95% CI	*P* value	Composite *P* value
Sex	Male	1.00			
	Female	0.77	0.56–1.04	0.090	
Age		1.01	0.99–1.03	0.415	
Household smoking status	Yes	1.00			
	No	0.73	0.53–1.00	**0.050**	
Education level	Not beyond 16 years of age	1.00			0.987
	College/university	1.02	0.60–1.72	0.943	
	Postgraduate degree	1.05	0.57–1.92	0.882	
Country	Indonesia	1.00			0.080
	Malaysia	0.51	0.27–1.00	0.050	
	Philippines	0.52	0.26–1.04	0.064	
	Thailand	0.47	0.25–0.89	0.021	
	Vietnam	0.41	0.22–0.75	0.004	
	Saudi Arabia	0.43	0.22–0.84	0.013	
	United Arab Emirates	0.36	0.19–0.68	0.002	
Current level of asthma severity	Mild	1.00			**0.031**
	Moderate	0.62	0.43–0.88	0.008	
	Severe	0.68	0.38–1.20	0.184	
Treatment type	Controller only	1.20	0.78–1.85	0.418	0.697
	Controller + inhaled reliever	1.06	0.70–1.60	0.778	
Reliever treatments	MART	1.00			
	BREO/Relvar	0.87	0.57–1.32	0.508	
	Advair/Seretide	0.94	0.62–1.41	0.755	
	Symbicort	0.86	0.58–1.29	0.468	
	Zenhale	1.21	0.82–1.79	0.338	
	Alvesco	1.11	0.69–1.79	0.676	
	Flovent	1.38	0.85–2.24	0.196	
	Ventolin	0.75	0.54–1.04	0.082	
	Flixotide	1.05	0.68–1.63	0.825	
	Pulmicort	0.89	0.54–1.45	0.638	
	Fostair/Foster	0.95	0.53–1.72	0.871	
	Flutiform	0.87	0.52–1.46	0.594	
	Trelegy	0.93	0.52–1.66	0.795	
	Atectura	0.83	0.48–1.44	0.510	
	Enerzair	1.15	0.66–2.00	0.629	
	Breztri	0.99	0.51–1.90	0.966	
	Other	0.52	0.14–1.89	0.321	

CI, confidence interval; MART, maintenance and reliever therapy; R, coefficient of determination.

Patients who reported using their daily controller inhaler less than once daily and those who reported ‘always’ or ‘mostly’ forgetting to use their inhalers were categorised as nonadherent.

Number of observations, 820; pseudo-R^2, 3.7%.

Table S3. Regression and sensitivity analyses of erratic nonadherence

	Regression analysis[a]		Sensitivity analysis 2a[b]		Sensitivity analysis 2b[c]	
Among patients who were prescribed daily controller inhaler with or without inhaled reliever: how often do you forget to take inhalers?						
	Nonadherent	**Adherent**	**Nonadherent**	**Adherent**	**Nonadherent**	**Adherent**
Mostly or always	✓		✓		✓	
Sometimes	✓			✓		
Never or rarely		✓		✓		✓
n (%)	445 (54)	374 (46)	178 (22)	641 (78)	178 (32)	374 (68)
Variables	***P* value**	**Pseudo-R^2**	***P* value**	**Pseudo-R^2**	***P* value**	**Pseudo-R^2**
Sex	NS		0.017		0.015	
Age	0.007		NS		NS	
Household smoking status	0.017		<0.001		<0.001	
Education level	NS		0.035		NS	
Country	NS	6.6%	0.001	17.1%	0.020	19.8%
Current asthma severity	NS		0.001		0.003	
Treatment regimen	0.010		<0.001		<0.001	
Current inhaled reliever used	0.013[d], 0.048[e]		0.023[f]		NS	

n, number of patients; NS, not significant; R, coefficient of determination.

[a]Regression analysis: number of observations, 819; χ^2, 74.7. [b]Sensitivity analysis 2a: number of observations, 819; χ^2, 146.4.

[c]Sensitivity analysis 2b: number of observations, 552; χ^2, 137.5.

[d]Alvesco; [e]Breztri; [f]BREO/Relvar.

Table S4. Asthma action plan based on (a) physician and (b) patient responses

a. Physician responses, n (%)	Overall	Indonesia	Malaysia	Philippines	Thailand	Saudi Arabia	UAE
How often do you provide your patients with an asthma action plan?[a]							
Base, N	597	99	100	99	99	100	100
Always	247 (41)	22 (22)	37 (37)	56 (57)	29 (29)	52 (52)	51 (51)
Often	167 (28)	41 (41)	35 (35)	23 (23)	29 (29)	27 (27)	12 (12)
Sometimes	142 (24)	27 (27)	26 (26)	15 (15)	36 (36)	16 (16)	22 (22)
Rarely	35 (6)	6 (6)	2 (2)	5 (5)	3 (3)	4 (4)	15 (15)
Never	6 (1)	3 (3)	0 (0)	0 (0)	2 (2)	1 (1)	0 (0)
How often do your patients adhere to their asthma action plan?[a]							
Base, N	586	94	98	98	97	99	100
Always	56 (10)	11 (12)	5 (5)	18 (18)	8 (8)	3 (3)	11 (11)
Often	255 (44)	33 (35)	24 (24)	30 (31)	56 (58)	62 (63)	50 (50)
Sometimes	225 (38)	43 (46)	59 (60)	40 (41)	32 (33)	33 (33)	18 (18)
Rarely	49 (8)	7 (7)	10 (10)	9 (9)	1 (1)	1 (1)	21 (21)
Never	1 (<1)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)

b. Patient responses by country, n (%)	Overall	Indonesia	Malaysia	Philippines	Thailand	Vietnam	Saudi Arabia	UAE
Was an asthma action plan discussed with your doctor during or post consultation?[a]								
Base, N	1378	199	196	198	195	199	194	197
Yes	1306 (95)	197 (99)	172 (88)	187 (94)	189 (97)	195 (98)	183 (94)	183 (93)
How often does your doctor follow up on the progress of your Asthma Action Plan?[a]								
Base, N	1304	196	171	187	189	195	183	183
Always	344 (26)	61 (31)	19 (11)	47 (25)	71 (38)	42 (22)	57 (31)	47 (26)
Very often	450 (35)	59 (30)	58 (34)	40 (21)	43 (23)	103 (53)	69 (38)	78 (43)
Sometimes	403 (31)	57 (29)	73 (43)	62 (33)	65 (34)	47 (24)	51 (28)	48 (26)
Rarely	92 (7)	18 (9)	17 (10)	34 (18)	9 (5)	2 (1)	5 (3)	7 (4)
Never	15 (1)	1 (1)	4 (2)	4 (2)	1 (1)	1 (1)	1 (1)	3 (2)

b. Patient responses by asthma severity, n (%)	Mild	Moderate	Severe
Was an asthma action plan discussed with your doctor during or post consultation?[b]			
Base, N	459	803	111
Yes	425 (93)	772 (96)	105 (95)
How often does your doctor follow up on the progress of your asthma action plan?[a]			
Base, N	424	772	104
Always	117 (28)	180 (23)	46 (44)
Very often	103 (24)	306 (40)	40 (38)
Sometimes	133 (31)	255 (33)	15 (14)
Rarely	61 (14)	28 (4)	3 (3)
Never	10 (2)	3 (<1)	0 (0)

N, total number of patients included in the survey, excluding those who responded 'don't know' or 'prefer not to say'; n, number of patients who responded to the question; UAE, United Arab Emirates.

Overall cohort also included patients with asthma of unknown severity.

P values, determined by the chi-square test for questions with binary outcomes (yes/no) and by the Kruskal–Wallis test for questions with more than two outcomes, indicate significant variations across the surveyed countries and asthma severities.

[a]$P<0.0001$; [b]$P<0.05$.

Table S5. Asthma management based on (a) physician and (b) patient responses.

a. Physician responses, n (%)	**Overall**	**Indonesia**	**Malaysia**	**Philippines**	**Thailand**	**Saudi Arabia**	**UAE**
Which of the following do you use to estimate your patients' use and adherence to asthma treatments? (categories are not mutually exclusive)							
Base, N	599	100	100	100	99	100	100
Patient self-report[a]	477 (80)	76 (76)	76 (76)	90 (90)	84 (85)	69 (69)	82 (82)
Checking prescription records[b]	346 (58)	44 (44)	55 (55)	66 (66)	65 (66)	59 (59)	57 (57)
Review of notes related to past prescribing[a]	339 (57)	60 (60)	48 (48)	64 (64)	70 (71)	47 (47)	50 (50)
Direct adherence monitoring[c]	213 (36)	31 (31)	24 (24)	38 (38)	68 (69)	33 (33)	19 (19)
Adherence questionnaires[d]	208 (35)	25 (25)	35 (35)	25 (25)	29 (29)	43 (43)	51 (51)
Review patient completed adherence diary[a]	117 (20)	16 (16)	21 (21)	24 (24)	31 (31)	15 (15)	10 (10)
I do not assess adherence[e]	13 (2)	2 (2)	2 (2)	0 (0)	0 (0)	4 (4)	5 (5)
Other[e]	20 (3)	5 (5)	4 (4)	4 (4)	3 (3)	4 (4)	0 (0)
Which of the following do you think is the most reliable method of tracking patients' use and adherence to asthma treatments?[c]							
Base, N	461	72	71	87	91	74	66
Patient self-report	111 (24)	14 (19)	10 (14)	26 (30)	18 (20)	29 (39)	14 (21)
Checking prescription records	88 (19)	8 (11)	17 (24)	17 (20)	18 (20)	15 (20)	13 (20)
Review of notes relating to past prescribing	77 (17)	17 (24)	7 (10)	12 (14)	12 (13)	3 (4)	26 (39)
Direct adherence monitoring	92 (20)	12 (17)	16 (23)	16 (18)	38 (42)	9 (12)	1 (2)
Adherence questionnaires	61 (13)	12 (17)	12 (17)	6 (7)	2 (2)	17 (23)	12 (18)
Review patient completed adherence diary	20 (4)	5 (7)	5 (7)	6 (7)	3 (3)	1 (1)	0 (0)
Other	12 (3)	4 (6)	4 (6)	4 (5)	0 (0)	0 (0)	0 (0)

b. Patient responses, n (%)	**Overall**	**Indonesia**	**Malaysia**	**Philippines**	**Thailand**	**Vietnam**	**Saudi Arabia**	**UAE**
How do you track the dosing of your controller inhaler? (categories are not mutually exclusive)								
Base, N	729	107	81	80	121	145	91	104
Dose counter on the inhaler itself[b]	352 (48)	64 (60)	41 (51)	38 (48)	57 (47)	74 (51)	41 (45)	37 (36)
Record use in a diary/journal[a]	282 (39)	34 (32)	34 (42)	20 (25)	50 (41)	75 (52)	35 (38)	34 (33)
Track prescription refills[e]	242 (33)	33 (31)	32 (40)	23 (29)	44 (36)	53 (37)	21 (23)	36 (35)
Regular follow-ups with your doctor[b]	270 (37)	47 (44)	30 (37)	35 (44)	53 (44)	51 (35)	29 (32)	25 (24)
Do not track[e]	23 (3)	5 (5)	4 (5)	3 (4)	5 (4)	2 (1)	2 (2)	2 (2)
		Mild		**Moderate**			**Severe**	
Base, N		212		443			73	
Dose counter on the inhaler itself		102 (48)		209 (47)			40 (55)	
Record use in a diary/journal		65 (31)		172 (39)			44 (60)	
Track prescription refills		67 (32)		144 (33)			31 (42)	
Regular follow-ups with your doctor		64 (30)		174 (39)			32 (44)	
Do not track		7 (3)		13 (3)			3 (4)	

NS, not significant; N, total number of patients included in the survey, excluding those who responded 'don't know' or 'prefer not to say'; n, number of patients who responded to the question; UAE, United Arab Emirates.

Overall cohort also included patients with asthma of unknown severity.

P values, determined by the chi-square test, indicated significant variations across the surveyed countries and asthma severities.

[a]$P<0.01$; [b]$P<0.05$; [c]$P<0.0001$; [d]$P<0.001$; [e]NS.

Table S6. Checklist for Reporting Results of Internet E-Surveys (CHERRIES).

Checklist Item	Explanation	Page Number
Describe survey design	Describe target population, sample frame. Is the sample a convenience sample? (In 'open' surveys this is most likely.)	Page 7
IRB approval	Mention whether the study has been approved by an IRB.	Page 8
Informed consent	Describe the informed consent process: Where the participants were told the length of time of the survey, which data were stored and where and for how long, who the investigator was and the purpose of the study.	Page S3
Data protection	If any personal information was collected or stored, describe what mechanisms were used to protect unauthorised access.	Pages S3 and S4
Development and testing	State how the survey was developed, including whether the usability and technical functionality of the electronic questionnaire had been tested before fielding the questionnaire.	Suppl Ref 3
Open survey versus closed survey	An 'open survey' is a survey open for each visitor of a site, while a closed survey is only open to a sample that the investigator knows (password-protected survey).	Page 7
Contact mode	Indicate whether or not the initial contact with the potential participants was made on the Internet. (Investigators may also send out questionnaires by mail and allow for web-based data entry.)	Suppl Ref 3
Advertising the survey	How/where was the survey announced or advertised? Some examples are offline media (newspapers) or online (mailing lists: If yes, which ones?) or banner ads (Where were these banner ads posted and what did they look like?). It is important to know the wording of the announcement as it will heavily influence who chooses to participate. Ideally the survey announcement should be published as an appendix.	Suppl Ref 3
Web/E-mail	State the type of e-survey (e.g. one posted on a website or one sent out through email). If it is an email survey, were the responses entered manually into a database, or was there an automatic method for capturing responses?	Suppl Ref 3
Context	Describe the website (for mailing list/newsgroup) in which the survey was posted. What is the website about, who is visiting it, what are visitors normally looking for? Discuss to what degree the content of the website could preselect the sample or influence the results. For example, a survey about vaccination on an anti-immunisation website will have different results from a web survey conducted on a government website.	Suppl Ref 3
Mandatory/voluntary	Was it a mandatory survey to be filled in by every visitor who wanted to enter the website, or was it a voluntary survey?	Suppl Ref 3
Incentives	Were any incentives offered (e.g. monetary, prizes or nonmonetary incentives such as an offer to provide the survey results)?	Page S3
Time/Date	In what timeframe were the data collected?	Suppl Ref 3
Randomisation of items or questionnaires	To prevent biases, items can be randomised or alternated.	Suppl Ref 3
Adaptive questioning	Use adaptive questioning (certain items, or only conditionally displayed based on responses to other items) to reduce number and complexity of the questions.	Suppl Ref 3
Number of items	What was the number of questionnaire items per page? The number of items is an important factor for the completion rate.	Not reported
Number of screens (pages)	Over how many pages was the questionnaire distributed? The number of items is an important factor for the completion rate.	Not reported
Completeness check	It is technically possible to do consistency or completeness checks before the questionnaire is submitted. Was this done, and if 'yes', how (usually JAVAScript)? An alternative is to check for completeness after the questionnaire has been submitted (and highlight mandatory items). If this has been done, it should be reported. All items should provide a nonresponse option such as 'not applicable' or 'rather not say', and selection of one response option should be enforced.	Suppl Ref 3
Review step	State whether respondents were able to review and change their answers (e.g. through a Back button or a Review step that displays a summary of the responses and asks the respondents if they are correct).	Not reported
Unique site visitor	If you provide view rates or participation rates, you need to define how you determined a unique visitor. There are different techniques available, based on IP addresses, cookies or both.	N/A
View rate (ratio of unique survey visitors/unique site visitors)	Requires counting unique visitors to the first page of the survey, divided by the number of unique site visitors (not page views!). It is not unusual to have view rates of less than 0.1% if the survey is voluntary.	N/A
Participation rate (ratio of unique visitors who agreed to participate/unique first survey page visitors)	Count the unique number of people who filled in the first survey page (or agreed to participate; for example, by checking a checkbox), divided by visitors who visit the first page of the survey (or the informed consents page, if present). This can also be called 'recruitment' rate.	Suppl Ref 3
Completion rate (ratio of users who finished the survey/users who agreed to participate)	The number of people submitting the last questionnaire page, divided by the number of people who agreed to participate (or submitted the first survey page). This is only relevant if there is a separate 'informed consent' page or if the survey goes over several pages. This is a measure for attrition. Note that 'completion' can involve leaving questionnaire items blank. This is not a measure for how	Suppl Ref 3

	completely questionnaires were filled in. (If you need a measure for this, use the wording 'completeness rate'.)	
Cookies used	Indicate whether cookies were used to assign a unique user identifier to each client computer. If so, mention the page on which the cookie was set and read, and how long the cookie was valid. Were duplicate entries avoided by preventing users access to the survey twice; or were duplicate database entries having the same user ID eliminated before analysis? In the latter case, which entries were kept for analysis (e.g. the first entry or the most recent)?	N/A
IP check	Indicate whether the IP address of the client computer was used to identify potential duplicate entries from the same user. If so, mention the period for which no two entries from the same IP address were allowed (e.g. 24 hours). Were duplicate entries avoided by preventing users with the same IP address access to the survey twice; or were duplicate database entries having the same IP address within a given period eliminated before analysis? If the latter, which entries were kept for analysis (e.g. the first entry or the most recent)?	N/A
Log file analysis	Indicate whether other techniques to analyse the log file for identification of multiple entries were used. If so, please describe.	N/A
Registration	In 'closed' (non-open) surveys, users need to log in first, and it is easier to prevent duplicate entries from the same user. Describe how this was done. For example, was the survey never displayed a second time once the user had filled it in, or was the username stored together with the survey results and later eliminated? If the latter, which entries were kept for analysis (e.g. the first entry or the most recent)?	Not reported
Handling of incomplete questionnaires	Were only completed questionnaires analysed? Were questionnaires that terminated early (where, for example, users did not go through all questionnaire pages) also analysed?	Suppl Ref 3
Questionnaires submitted with an atypical timestamp	Some investigators may measure the time people needed to fill in a questionnaire and exclude questionnaires that were submitted too soon. Specify the timeframe that was used as a cut-off point and describe how this point was determined.	N/A
Statistical correction	Indicate whether any methods such as weighting of items or propensity scores have been used to adjust for the nonrepresentative sample; if so, please describe the methods.	Page S2

IP, internet protocol; IRB, Institutional Review Board; N/A, not applicable.