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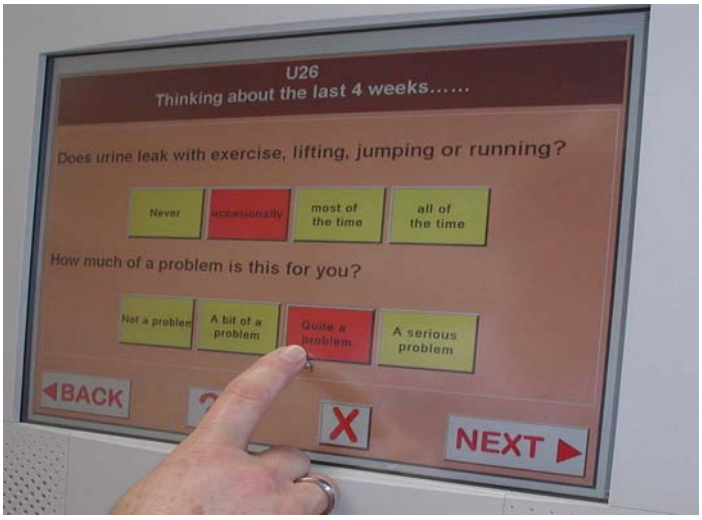
VALIDATION OF AN ELECTRONIC PELVIC FLOOR SYMPTOMS ASSESSMENT QUESTIONNAIRE: E-PAQ

Aims of study

Following on from previous work developing condition-specific questionnaires in this field (1, 2), we have now developed an interactive touch-screen questionnaire (e-PAQ) for the comprehensive assessment of pelvic floor symptomatology in women (figure 1). We have previously shown the acceptability and feasibility of this approach (3) and in the present study, aimed to measure the instrument's reliability and validity in both primary and secondary health care settings.

Figure 1. Single page of e-PAQ showing question & sub-question



Study design, materials and methods

This prospective study, evaluating e-PAQ (version 2) was approved by the local research ethics committee and was conducted between March and December 2003. The 94-item questionnaire was administered to women with pelvic floor disorders referred to an outpatient urogynaecology department (n = 351) and an opportunistic sample of women attending 2 general practices (n = 201). Principal component analysis (varimax rotation) was carried out to determine the underlying domains of the instrument, which were then analysed using the Cronbach's α statistic to measure their internal reliability. The predictive values of screening questions in each dimension were assessed. A total of 129 women repeated the e-PAQ at an interval of 1 – 2 weeks in primary care, of 114 stated that their pelvic floor symptoms had not changed prior to repeating the questionnaire.

Results

Factor analysis identified 14 domains for the instrument, which demonstrated good internal consistency. Test retest analysis in women in primary care showed good stability and internal reliability (Table 1). Screening questions were highly concordant with subsequently reported symptoms in each dimension (bladder, bowel, vaginal and sexual). Women who answered screening questions negatively, had less than 2% incidence of moderate or severe bother in over 90% of subsequent items. Levels of missing data were less than 1% for all items.

Table 1. e-PAQ Domains test-retest in women in primary care						
Symptom Domain	**Items**	**Single measure intraclass correl**	**Lower 95% CI**	**Upper 95% CI**	**Alpha value**	**P <**
Urinary sensation	U12, U13	0.73	0.63	0.80	0.84	.00
Urinary overactive bladder	U19 - U22	0.82	0.75	0.87	0.90	.00
Urinary stress incontinence	U25 - U27	0.90	0.85	0.93	0.94	.00
Urinary symptoms & QoL	U31 - U33	0.89	0.84	0.92	0.94	.00
Bowel evacuation	B6 - B13	0.87	0.81	0.91	0.93	.00
Bowel incontinence	B15-B20, B22	0.80	0.72	0.86	0.89	.00
Bowel constipation	B4, B5	0.87	0.82	0.91	0.93	.00
Bowel symptoms & QoL	B23 - B25	0.88	0.83	0.91	0.93	.00
Vaginal prolapse	V9, V12 - V14	0.70	0.59	0.78	0.82	.00
Vaginal sensation	V5 - V8	0.80	0.73	0.86	0.89	.00
Vaginal symptoms & QoL	V15 - V17	0.91	0.87	0.94	0.95	.00
Bowel & sex	S9 - S13	0.50	0.35	0.63	0.67	.00
Vaginal & sex	S14 - S18	0.93	0.90	0.95	0.96	.00
Urinary & sex	S4 - S8	0.95	0.92	0.96	0.97	.00

Interpretation of results

e-PAQ (version 2) offers a reliable, acceptable and valid measure of pelvic floor symptomatology in women. The skipping of irrelevant items based on responses to screening questions will reduce respondent burden in version 3 of the instrument, which will provide an interactive, user-friendly and valid clinical tool for use in both primary and secondary care.

Concluding message

Electronic interviewing using the e-PAQ offers an effective, user-friendly and accurate measure of pelvic floor pelvic floor symptoms. The approach allows the recording and analysis of high quality patient-derived data, which may be of great value in audit and outcomes research, as well as clinical practice. The intuitive nature of this instrument will be further enhanced by its programmed ability to skip questions; if subjects are asymptomatic, the number of questions presented will be minimized. Conversely, symptomatic individuals will have a detailed and relevant assessment of their problems. The system is of potential value across a wide variety of disciplines. In the light of these findings, the impact and value of the instrument will now be assessed at all levels of the multidisciplinary continence care pathway.

References

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