

Research Methods

Adaption and validation of the Working Alliance Inventory for General Practice: qualitative review and cross-sectional surveys

Elizabeth A Sturgiss^{a,*}, Elizabeth Rieger^b, Emily Haesler^{a,c,d},
Matthew J Ridd^e, Kirsty Douglas^a and Shelley L Galvin^f

^aAcademic Unit of General Practice, Australian National University Medical School, The Australian National University, Garran, Australia, ^bResearch School of Psychology, Australian National University Research School of Psychology, The Australian National University, Acton, Australia, ^cSchool of Nursing, Midwifery and Paramedicine, Curtin University, Perth, Australia, ^dSchool of Nursing and Midwifery, La Trobe University, Melbourne, Australia, ^eCentre for Academic Primary Care, Population Health Sciences, Bristol Medical School, University of Bristol, Bristol, United Kingdom and ^fUNC Health Sciences at MAHEC, Mountain Area Health Education Center, Asheville, NC 28803, USA.

*Correspondence to Elizabeth A Sturgiss, Building 62A, 62 Mills Road, Acton, ACT 2601, Australia. E-mail: elizabeth.sturgiss@anu.edu.au

Abstract

Background. Relational aspects of primary care are important, but we have no standard measure for assessment. The ‘working alliance’ incorporates elements of the therapeutic relationship, shared decision-making, goal setting and communication skills. The Working Alliance Inventory (short form) (WAI-SF) has been used in adult psychology, and a high score on the survey is associated with improved outcomes for clients.

Objective. To adapt the WAI-SF for use between GPs and patients and to test its concurrent validity with measures of shared decision-making and the doctor–patient relationship and discriminant validity with measures of social desirability.

Methods. Two rounds of online survey feedback from 55 GPs and 47 patients were used to adapt the WAI-SF—the WAI-GP. The tool was then completed by 142 patients in waiting rooms after seeing their GP and by 16 GPs at the end of their session. Concurrent validity with measures of shared decision-making and patient–doctor depth of relationship was determined using Spearman Rho correlations. Patients also completed two social desirability surveys, and discriminant validity with WAI-GP was assessed.

Results. Following feedback, the survey was re-worded to remove phrases that were perceived as judgmental or irrelevant. The patient measure of the WAI-GP was strongly correlated with Dyadic OPTION ($\rho = 0.705$, $P = 0.0001$) and Patient–Doctor Depth of Relationship scale ($\rho = 0.591$, $P = 0.0001$) and not with measures of social desirability.

Conclusion. The psychometric properties of the WAI-GP support its use for measuring GP–patient alliance. Possibilities for use include assessing the influence of therapeutic alliance on the effectiveness of interventions.

Key words: General practice, physician–patient relations, primary health care, quality of care, quantitative evaluation, survey methods.

In Australia and the UK, doctors with specialist training qualifications in family medicine are referred to as GPs. In Australia, the bulk of primary care is delivered by GPs in the community. Given the strong theoretical basis of the WAI-SF and its association with improved outcomes in adult psychology, our aim was to adapt the WAI-SF for the GP-patient setting and to test its concurrent validity with measures of shared decision-making and the doctor-patient

It was predicted that WAI-GP scores of patients would be associated with shared decision-making and depth of relationship. Conversely, it was predicted that WAI-GP scores of patients would not be associated with social desirability. We used the Spearman's

rank correlation coefficient to assess bivariate relationships among the variables due to the positively skewed data. Pearson's analysis was also undertaken, and results demonstrated that the pattern of correlations was unaltered.

The internal consistency of the total scale of the WAI-GP was evaluated using Cronbach's alpha. Confirmatory factor analysis was done to determine whether the original three-factor structure (goals, tasks and bond) was replicated and whether a higher order factor of overall therapeutic alliance emerged.

We only included surveys that were sufficiently complete to score in the analysis (i.e. those missing no more than one item per instrument). We excluded three patients with incomplete WAI-GPs and one with multiple incomplete instruments.

Results

The first online survey feedback had 47 patients and 55 GP participants (Table 1). The suggestions for re-wording were detailed, with participants particularly highlighting words and phrases that they perceived as judgmental or derogatory. Some GPs did not understand that the questions would be asked of them, rather than their patient. Sixteen (out of 23) patients and 14 (out of 26) GPs gave feedback on the revised version, and the majority agreed that the wording of the questions was improved in the revised version (Table 2). Two questions from both surveys were further revised based on the second round of feedback to produce the final version (Table 2).

Table 1. Online survey adaption of the WAI—patient and GP demographics in first round of feedback (completed 2017)

| Participant responses to demographic surveys n (%) | | | |
|----------------------------------------------------|-----------|-------------------------------------|-----------|
| Patients (n = 47) | | GPs (n = 55) | |
| | n (%) | | n (%) |
| Male | 8 (17.0) | Male | 14 (25.5) |
| Female | 32 (68.1) | Female | 32 (58.2) |
| Other | 1 (2.1) | Other | 0 |
| Age 25–44 years | 16 (34.0) | Age 25–44 years | 20 (36.4) |
| Age 45–64 years | 22 (46.8) | Age 45–64 years | 23 (41.8) |
| Age 65–74 years | 3 (6.4) | Age 65–74 years | 3 (5.5) |
| University educated | 28 (59.6) | | |
| Language other than English at home | 2 (4.3) | Language other than English at home | 6 (10.9) |
| Health status poor | 15 (31.9) | Practicing <5 years | 10 (18.2) |
| Chronic illness | 31 (66.0) | Practicing 6–15 years | 14 (25.5) |
| Has preferred GP | 38 (80.9) | Practicing 16–30 years | 15 (27.3) |
| | | Practicing 30+ years | 7 (12.7) |
| Agree to further feedback | 23 (48.9) | Agree to further feedback | 26 (47.3) |

Table 2. The adapted WAI-GP survey feedback—patient and GP results (completed 2017)

| Patient survey results | | | |
|---------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Element of therapeutic alliance | Original statement from WAI-short form(26) | Adapted statement following round 1 of feedback (n = 47) | Round 2 feedback: response to 'Is this wording improved?' on a 5-point scale (n = 16) |
| | | | Mean score (SD, CI, 95%) |
| Goal | As a result of these sessions I am clearer as to how I might be able to change. | As a result of seeing my GP, I am clearer as to how I can look after my health and wellbeing. | 4.88 (SD 0.33, 4.7–5.06) |
| Task | What I am doing in therapy gives me new ways of looking at my problem. | What I am doing with my GP gives me new ways of looking at my health and wellbeing. | 4.75 (SD 0.43, 4.52–4.98) |
| Bond | I believe ___ likes me. | I believe my GP cares about me. | 4.81 (SD 0.39, 4.6–5.02) |
| Goal | ___ and I collaborate on setting goals for my therapy. | My GP and I work together on setting goals for looking after my health and wellbeing. | 4.75 (SD 0.56, 4.45–5.05) |
| Bond | ___ and I respect each other. | My GP and I respect each other. | *2 (NA) |
| Goal | ___ and I are working towards mutually agreed upon goals. | My GP and I are working towards health goals that we both agree on. | 4.63 (SD 0.6, 4.31–4.95) |
| Bond | I feel that ___ appreciates me. | I feel that my GP understands me. | 4.94 (SD 0.24, 4.81–5.07) |
| Task | ___ and I agree on what is important for me to work on. | My GP and I agree on what is important for me to do to look after my health and wellbeing. | *1.56 (SD 0.5, 1.29–1.83) ^b |
| Bond | I feel ___ cares about me even when I do things that he/she does not approve of. | Even though I may do things that my GP does not advise or suggest, I know they still care about me. | 4.19 (SD 0.81, 3.76–4.62) |

Table 2. Continued

| Patient survey results | | | |
|---------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Element of therapeutic alliance | Original statement from WAI-short form(26) | Adapted statement following round 1 of feedback (n = 47) | Round 2 feedback: response to 'Is this wording improved?' on a 5-point scale (n = 16) |
| | | | Mean score (SD, CI, 95%) |
| Task | I feel that the things I do in therapy will help me to accomplish the changes that I want. | I feel the things I do with my GP will help me to achieve my health goals. | 4.13 (SD 0.86, 3.67–4.59) |
| Goal | ____ and I have established a good understanding of the kind of changes that would be good for me. | My GP and I have a shared understanding of what I need to do to look after my health and wellbeing. | 4.25 (SD 0.75, 3.85–4.65) |
| Task | I believe the way we are working with my problem is correct. | I think we're doing the right things for my health and well-being. | 4.56 (SD 0.5, 4.29–4.83) ^b |
| GPs survey results | | | |
| Element of therapeutic alliance | Original statement from WAI-short form(26) | Adapted statement following round one of feedback (n = 55) | Round 2 feedback: response to 'Is this wording improved?' on a 5-point scale (n = 14) |
| | | | Mean score (SD, CI, 95%) |
| Task | ____ and I agree about the steps to be taken to improve his/her situation. | My patient and I agree on the tasks required to manage his/her health and wellbeing. | 4.57 (SD 0.49, 4.29–4.85) |
| Bond | I am genuinely concerned for ____'s welfare. | I am genuinely concerned for my patient's welfare. | ^a 1.93 (SD 0.26, 1.78–2.08) |
| Goal | We are working towards mutually agreed upon goals. | We are working towards health goals that we both agree on. | 4.71 (SD 0.59, 4.37–5.05) |
| Task | ____ and I both feel confident about the usefulness of our current activity in therapy. | My patient and I both feel confident about the effectiveness of our current approach to managing their health. | 4.5 (SD 0.5, 4.21–4.79) ^b |
| Bond | I appreciate _____ as a person | I respect my patient as a person and accept them without judgment. | 3.38 (SD 1.33, 2.58–4.18) ^b N = 13 |
| Goal | We have established a good understanding of the kind of changes that would be good for ____. | We have a shared understanding of the kind of changes that would help my patient | 4.43 (SD 0.62, 4.07–4.79) |
| Bond | ____ and I respect each other. | My patient and I respect each other | ^a 2 (NA) |
| Goal | ____ and I have a common perception of his/her goals. | My patient and I have a common understanding of his/her health goals. | 4.71 (SD 0.45, 4.45–4.97) |
| Bond | I respect ____ even when he/she does things that I do not approve of. | I care about my patient even when he/she does things that I did not recommend or advise. | 4.5 (SD 0.82, 4.03–4.97) |
| Task | We agree on what is important for ____ to work on. | We agree on what is important for my patient to work on. | ^a 2 (NA) |

^aThe participant was asked 'This question has stayed the same, is this OK?', with Yes (Score 2) No (Score 1) options for response.

^bThis statement was re-written after phase 2 feedback taking into account the participants' suggestions.

Sixteen GPs and 142 patients from seven general practices participated in the clinical application of the WAI-GP. The GPs were 50% female, mostly over the age of 40 years (62.6%), and seven had been in practice for >10 years (68.8%) (Table 3). The median number of patients included per GP was 8 with a range from 1 to 15.

Eighty-nine (62.7%) of the patients who completed the WAI-GP were female, most were over the age of 45 years (52.9%), and 72 (50.7%) self-reported having a chronic illness. One hundred seven

patients (75.4%) said they were seeing their preferred GP that day (Table 3).

Both the patient and GP demographic data were comparable with Australian national general practice data. The 'Bettering the Evaluation and Care of Health (BEACH)' is a national Australian GP dataset that was collected up until early 2017 (27). In this study, the patients were similar to the national BEACH sample. There were slightly more patients in our survey that fell into the 25–44 years of

Table 3. Clinical application of WAI-GP: comparison of participant characteristics to national datasets (completed 2017)

| Patient Characteristics (n = 142) | n (%) | BEACH 2015–16 |
|-----------------------------------------------|-------------|-------------------------|
| Gender | | |
| Male | 53 (37.3) | 43% |
| Female | 89 (62.7) | 57% |
| Age | | |
| 18–24 years | 17 (12) | 19% |
| 25–34 years | 22 (15.5) | 23% aged 25–44 years |
| 35–44 years | 28 (19.7) | – |
| 45–54 years | 17 (12) | 27% aged 45–64 years |
| 55–64 years | 20 (14.1) | – |
| 65–74 years | 17 (12) | 31% >65 years |
| 75–84 years | 15 (10.6) | – |
| 85+ years | 6 (4.2) | – |
| Has a chronic illness | 72 (50.7) | – |
| COOP-WONCA functional status | Mean ± SD | |
| Hardest physical activity possible | 2.78 ± 1.27 | – |
| Very heavy–Very light (1–5) | | |
| Bothered by emotional problems | 2.70 ± 1.38 | – |
| Not at all–Extremely (1–5) | | |
| Difficulty with usual tasks | 2.42 ± 1.21 | – |
| No difficulty at all–Could not do it (1–5) | | |
| Limited social activities | 2.14 ± 1.24 | – |
| Not at all–Extremely (1–5) | | |
| Health change/2 weeks | 3.05 ± 0.98 | – |
| Much better–Much worse (1–5) | | |
| Health in general | 3.12 ± 1.15 | – |
| Excellent–Poor (1–5) | | |
| GP Characteristic (n = 16) | n (%) | BEACH 2015–16 |
| Gender | | |
| Male | 8 (50) | 55% |
| Female | 8 (50) | 45% |
| Age | | |
| ≤30 years | 2 (12.5) | |
| 31–40 years | 4 (25) | 8.3% <35 years |
| 41–50 years | 4 (25) | 46.5% 35–54 years |
| 51–60 years | 5 (31.3) | 45.3% >55 years |
| 61+ years | 1 (6.3) | |
| Years in clinical practice | | |
| ≤2 years | 3 (18.8) | 0.8% |
| 3–5 years | 2 (12.5) | 12.3% (2–5 years) |
| 6–10 years | 4 (25) | 14.6% |
| 11+ years | 7 (43.8) | 72.3% |
| Qualification | | |
| FRACGP | 13 (81.3) | 63% |

BEACH, Bettering the Evaluation of Care and Health General Practice Dataset(27); FRACGP, Fellow of the Royal Australian College of General Practitioners.

age bracket. The GPs in our survey were younger than the national sample; however, more GPs in our survey had the specialty qualification of a Fellowship with the Royal Australian College of General Practice (Table 3). Compared to the national dataset, our sample included more consultations where patients were meeting that GP for the first time (Table 4).

The patient measure of WAI-GP was strongly correlated with Dyadic OPTION ($\rho = 0.705$, $P = 0.0001$) and PDDR ($\rho = 0.591$,

Table 4. Clinical application of WAI-GP: patients' reason for consultation and consultation experience (n = 142, completed 2017)

| Patients' characteristics (n = 142) | n (%) | Comparative data |
|----------------------------------------------|------------|------------------------------------|
| Preferred GP | | |
| Yes | 107 (75.4) | |
| No | 27 (19) | |
| Prefer not to say/no response | 8 (5.6) | |
| Number of times seen GP | | |
| First meeting today | 31 (21.8) | 7% new to practice ^b |
| 2nd appointment | 19 (13.4) | |
| <1 year | 21 (14.8) | |
| About 1–5 years | 37 (26.1) | |
| >5 years | 34 (23.9) | |
| Experience in consultation | | |
| Attended with a support person | 21 (14.8) | |
| GP listened carefully | 141 (99.3) | 75% ^c |
| GP showed respect | 141 (99.3) | 81% ^c |
| GP spent enough time | 140 (98.6) | 76% ^c |
| Patient reason for consultation ^a | | |
| To find out what's wrong/diagnosis | 32 (22.5) | |
| For reassurance | 11 (7.7) | |
| To get test results | 30 (21.1) | |
| For treatment (incl scripts) | 55 (38.7) | |
| For routine check | 31 (21.8) | |
| For review | 31 (21.8) | |
| For referral | 19 (13.4) | 16 per 100 encounters ^b |

^aMore than one choice permitted.

^bBettering the Evaluation of Care and Health (BEACH) General Practice Dataset 2015–16 (27).

^c2016–17 Patient Experience Survey, Australian Bureau of Statistics(28): Always listens; respect; time.

$P = 0.0001$). As hypothesized, the WAI-GP was not correlated with the measures of social desirability (Table 5). The patient and GP WAI-GP scores were only related in a low-moderate way ($\rho = 0.351$, $P = 0.0001$).

The WAI-GP data from the patients were highly positively skewed (mean $4.33 \pm \text{SD } 0.59$) (Table 5), and this was mirrored in the positive experience reported by patients of being listened to, respected and having enough time with the GP (Table 4). Using confirmatory factor analysis, we were unable to separate the three domains in the analysis, probably due to the positively skewed data. Rather, one overall factor was identified. We explored how each item related to the overall WAI-GP using Cronbach's alpha in the item analysis and found very high internal reliability (standardized Cronbach's $\alpha = 0.949$).

Conclusions

Using online survey feedback, we developed a general practice version of the WAI (short form) for use in primary care. We found strong concurrent validity for the WAI-GP in terms of its association with shared decision-making and depth of relationship, as well as evidence for its discriminant validity in relation to socially desirable responding.

In this study, the patients' and GPs' scores for the WAI-GP were moderately related. It is also noteworthy that the WAI-GP total score (patients plus GPs) was normally distributed, but the patient scores were highly positively skewed. It would be helpful to further explore this finding to determine whether the patient assessment is

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