

Original Research

How effective and acceptable is Web 2.0 Balint group participation for general practitioners and general practitioner registrars in regional Australia? A pilot study

Hilton Koppe, MBBS, MFamMed, FRACGP,¹ Thea F. van de Mortel, PhD, RN, FACN,^{2,3} and Christine M. Ahern, MBBS, FRACGP¹

¹North Coast GP Training, Ballina, NSW, ²School of Nursing and Midwifery, Griffith University and

³School of Health & Human Sciences, Southern Cross University, Lismore, NSW, Australia

Abstract

Objective: General practitioners (GPs) and general practice registrars report work-related stress. Balint groups may improve coping mechanisms. However, attendance at a face-to-face Balint group is difficult for rural doctors due to distance constraints. The study aim was to evaluate online Balint groups for rural doctors and determine effect size for a full-scale trial.

Design: A mixed-methods approach, including a pre-post controlled trial and thematic analysis of qualitative data.

Setting: Rural primary care.

Participants: Thirteen GPs and 8 general practice registrars completed the study.

Interventions: Balint groups were delivered over 8–9 fortnightly online sessions. GPs and GP registrars participated in separate groups. Data were collected on work-related affect, psychological medicine skills and professional isolation using the Warr's Work-Related Affect Scale, the Psychological Medicine Inventory, and a professional isolation scale.

Main outcome measures: Change scores on Warr's Work-Related Affect Scale, the Psychological Medicine Inventory, and a professional isolation scale.

Results: Balint participants' scores were significantly higher post-intervention on the Psychological Medicine Inventory (mean 6.49 (± 0.20) versus 5.43 (± 0.26); $P < 0.01$) and Warr's Work-Related Affect (mean 4.09 (± 0.09) versus 3.60 (± 0.12); $P < 0.01$) scales than control group scores. Effect size on these scales ranged

from 0.46 to 0.50. The greatest challenge was technical problems related to insufficient broadband speed.

Conclusions: Online Balint groups appear to improve rural doctors' psychological medicine skills and work-related affect. New data on effect size will inform a full-scale trial. Improved national broadband infrastructure may enhance online support opportunities for rural doctors.

KEY WORDS: rural GP, rural/remote GP and rural medicine education, rural workforce issue, telehealth/telemedicine, workforce.

Introduction

Work dissatisfaction, feelings of isolation and stress are reported by general practitioners (GPs).^{1–5} In Australia, 53% of metropolitan GPs contemplated leaving general practice due to work-related stress,⁶ and up to 49% of rural/remote GPs reported work-related distress.⁷ Australian GP registrars also report depression, stress and anxiety.⁸ Doctors with less clinical experience are at greater risk of burnout.^{2,9} Consequences can include poor work performance, low workforce retention and ill health.¹ GPs rate 'patients who are difficult to manage' as stressors,⁶ along with lack of professional support. For example, 45% of GPs surveyed¹⁰ cited lack of professional contact with colleagues as a cause of leaving rural practice. In another study, 16% of rural GPs⁷ frequently felt professionally isolated.

Balint groups, which involve doctors meeting regularly to discuss challenging patients,⁴ may improve coping. The Balint group conceived by Michael Balint¹¹ used psychoanalysts as facilitators to run groups for practising GPs. In the intervening 60 years, considerable variation has developed in how Balint groups are run. Groups are now run for trainees, with one leader or co-facilitated by two, with the case presenter symboli-

Correspondence: Dr Thea F. van de Mortel, School of Nursing and Midwifery, Griffith University, Parklands Drive, Southport, Queensland, 4222, Australia. Email: t.vandemortel@griffith.edu.au

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What is already known on this subject:

- General practitioners and general practice registrars report work-related stress and professional isolation, which can influence retention in rural areas.
- There is some international evidence that face-to-face Balint group participation can ameliorate these factors.
- Distance constraints may impact on rural doctors' ability to participate in face-to-face groups.

cally 'pushing back their chair' rather than physically leaving the room, and are often facilitated by trained GPs rather than psychoanalysts.^{12,13} The common key principles of the Balint method are that they are designed to examine the emotional content of the doctor–patient relationship through a process of case presentation and facilitated group discussion that focuses on those emotional interactions. Participants present emotionally challenging cases, and the trained group facilitator stimulates creative reflection on the doctor–patient relationship in a supportive environment.^{14,15} The self-analysis and peer support may allow doctors to recognise personal reactions, understand the dynamics of interpersonal doctor–patient interactions and reduce stress by sharing experiences.⁴ However, there has been little scientific evaluation of the process.

A qualitative study conducted with Swedish GPs reported enhanced work-related satisfaction, reduced professional isolation and improved competence in the patient encounter.¹⁶ However, the small sample ($n = 9$) and lack of a control group limit transferability of the findings. There have been several attempts to quantify the changes induced by Balint group participation using control groups. In the first, American family medicine residents who completed Balint training reported improved psychological medicine skills and more confidence than controls.¹⁷ In another, there was a non-significant increase in work satisfaction in the intervention group of American family medicine residents.¹⁸ A third study involving Swedish GPs found significant improvement in feelings of control over work, work satisfaction, work quality, training, work-related health and dealing with psychosomatic patients compared with controls¹⁹; however, these studies were limited by non-random allocation to groups and/or lack of baseline data. There are also no published Australian studies.

While Balint groups have potential benefits, attending in person is difficult when there are distance constraints. Web 2.0 technologies can deliver online 'face-to-face'

What this study adds:

- Participation in an online Balint group can improve Australian rural GPs' and GP registrars' work-related affect and psychological medicine skills.
- Current broadband speeds in Australian rural areas make online groups challenging.

support to remote locations.²⁰ Examples of such technology include Skype and Webex, which are online videoconferencing platforms. There are no published studies examining the impact, feasibility and/or acceptability of online Balint groups. Thus, the primary study aim was to trial an online Balint group, determine effect size to inform sample size calculations, determine the feasibility and acceptability of the intervention, and improve the study design prior to implementation of a full-scale study. A secondary aim was to obtain preliminary data on whether an online Balint group increased GPs' and GP registrars' psychological medicine skills, improved work-related affect and reduced perceptions of professional isolation. The null hypothesis was that the mean pre- to post-intervention change in scores of Balint group participants would not differ from those of the controls on the following outcome measures:

- Psychological Medicine Inventory (PMI)²¹
- Warr's Work-Related Affect Scale (WWAS)²²
- Professional isolation scale (PIS).

Methods

Sample/setting

Twelve GP registrars and 14 GPs from rural/regional areas in NSW, Victoria and Queensland enrolled. Following Southern Cross University Human Research Ethics Committee approval, participants were recruited via email invitations advising that a broadband Internet connection was required, participation was voluntary, survey responses would be anonymous, and participants would be randomly allocated to a treatment or control group. Volunteers signed a consent form. As this was a pilot study, no *a priori* sample was calculated.

Design

A mixed-methods approach was used, which included a controlled, pre- and post-intervention design to collect data on specific outcome measures in addition to open-ended survey questions and thematic analysis to collect and analyse qualitative data on participants' perceptions

of the intervention. Participants were allocated (based on day of availability) to a control group or a Balint group delivered via Webex. Separate groups were conducted for registrars and GPs as there were concerns that mixing the very different levels of experience in one group (first-term registrars and GPs with potentially decades of experience) might reduce the efficacy of the intervention. All participants completed a questionnaire pre- and post-intervention. The intervention groups participated in 8–9 Balint group sessions of 2 hours per fortnight (Box 1). The control groups completed the questionnaires and did not have any intervention. Each group was co-facilitated by two GP medical educators experienced in Balint group facilitation. The facilitators remained the same throughout the study.

Questionnaire

Data on age, gender and level of experience were obtained. Outcomes were measured via the PMI, WWAS and PIS. The 11-item PMI²¹ measures the following:

1. Clinical psychological abilities, such as confidence; interview, diagnostic and consultation skills; treatment decisions and therapeutic ability
2. Psychological sensitivity, for example awareness of own feelings and patients' feelings, and the doctor–patient relationship.

During psychometric testing in the USA, self-ratings of participants on this scale correlated well to faculty ratings, demonstrating good convergent validity. The WWAS (28 items) was validated in studies that measure work-related well-being and examines job-related anxiety contentment, job-related depression enthusiasm, self-perceptions of job-related competence, job-related aspirations and negative job carryover.²²

In addition, participants rated their degree of professional isolation on a newly developed seven-item PIS. Post-intervention, Balint group participants were also asked to rate the overall experience of the Balint group on a 5-point Likert scale, and to comment on the most valuable and challenging aspects of participation via open-ended survey questions.

BOX 1: *The procedure for Balint intervention group participants*

- Participants signed an informed consent form.
- Those who did not have video-enabled computers were sent webcams along with instructions on how to install and use them. Headphones were sent to participants who did not have a set.
- Participants were enrolled in Webex (an online videoconferencing platform) and sent written instructions on how to use it.
- The IT administrator sent electronic invitations to the participants that contained specific passwords to allow login.
- Participants would connect to the Webex meeting at the specified time.
- Each Balint group had two facilitators: a primary facilitator who ran the session and a second facilitator who could help with any technical glitches that occurred during the meeting. This often required the second facilitator to talk to a participant offline to troubleshoot the issue.
- At the beginning of the first meeting, ground rules were set about respectful communication processes. Time was spent giving an overview of the Balint process. Group members introduced themselves to other participants.
- The facilitators emphasised the confidential nature of the case discussions, specifying that the patient could not be identified, and that the case was not to be discussed after the group meeting finished.
- Participants were asked if anyone would like to present a case. Participants were encouraged to present cases that involved challenging doctor–patient relationship issues rather than diagnostic or treatment dilemmas.
- The volunteers presented their case to the group from memory without the aid of notes.
- The group could initially ask clarifying questions.
- The case presenter would then metaphorically 'sit back' from the group, listening to the discussion as the trained facilitator stimulated the group to reflect on issues in the doctor–patient relationship.
- Towards the end of time allocated to the case, the facilitator would invite the case presenter to rejoin the group. They were then free to rejoin the conversation if they wished.
- At the conclusion of time, there was no further discussion within the group about the case.
- Two cases were discussed at each session apart from the first session because of the time taken to explain the Balint process.
- At the end of each session, the two facilitators would meet to debrief any issues that had arisen within the group, without discussing the cases, and plan for the subsequent session.

Data analysis

Descriptive statistics were calculated. Cronbach’s alpha was used to determine scale reliability. A 2 by 2 between-groups ANCOVA was conducted. The independent variables were allocated to Balint intervention or control group, and GP/registrar. The dependent variables assessed at time 2 (post-intervention) were scores on the PMI, WWAS and PIS. Scores on these scales administered at time 1 (pre-intervention) were used as a covariate to control for individual differences. Preliminary checks determined no violation of standard ANCOVA assumptions. Thematic analysis was conducted on the written comments as described by Braun and Clarke.²³

Results

Fourteen GPs (8 intervention) and 12 GP registrars (6 intervention) enrolled. One control group GP, two control group registrars and two intervention group registrars dropped out. Twenty-one participants completed the study (Table 1).

Cronbach’s alpha values for the scales were 0.87 (WWAS), 0.87 (PMI) and 0.77 (PIS), which are considered adequate to good.²⁴ There was no significant interaction between allocation and level of experience (i.e. GP versus registrar) for any of the dependent variables ($P = 0.15-0.82$). Balint group participants demonstrated higher mean scores than the control group post-intervention on all measures when adjusted for pre-intervention scores (Table 2). This difference was significant for the PMI ($P < 0.01$) and WWAS ($P < 0.01$). The effect sizes for the change in PMI and WWAS scores are considered large, while the PIS was in the range considered small (Table 2).²⁴ GPs’ baseline

scores on the scales were generally higher than registrars. Based on the effect size (partial eta squared), the sample required to obtain a power of 0.95 on the PMI, WWAS and PSI would be 34, 33 and 3469, respectively.

When asked to rate the Balint group experience, scores ranged from 3 to 5 (mean 3.83 ± 0.72) on a scale where one was ‘terrible’ and five ‘fantastic’. When asked if they would be interested in future participation, 58.3% agreed, 16.7% disagreed and 25% were unsure. GPs were more likely to express interest in future Balint participation, and the majority have since set up their own online Balint group.

Qualitative analysis revealed the following themes in the data: *supportive relationships* indicated by the codes opportunity to debrief, feeling supported, accessing the views of others, reassurance through sharing, collegial experience; and *personal change* indicated by the codes working through own feelings, changing own perspectives and skills, and opening up (Table 3). Challenges included *technology* indicated by the codes technological difficulties and learning how to use the technology; and *time* indicated by time to become familiar with the process and time commitment.

Discussion

This small pilot study has demonstrated that an online Balint group delivered via Web 2.0 technology can increase the self-reported clinical psychological abilities, psychological sensitivity and work-related affect of Australian rural GPs and GP registrars. The effect size data obtained will inform a future full-scale trial.

These data add weight to previous qualitative findings on the efficacy of face-to-face Balint groups.¹⁶ Our participants similarly expressed the view that they felt supported, and that they learnt new skills in considering the

TABLE 1: Demographics of study participants

Group	Experience in general practice (n)	Age range (n)	Gender (n)
GP registrars (n = 8)			
Intervention (n = 5)	<6 months, 40% (2) >12 months, 60% (3)	<30, 25% (1) 30–39, 50% (3) 40–49, 25% (1)	F, 75% (3)
Control (n = 3)	>12 months, 100% (3)	30–39, 100% (3)	F, 66% (2)
GPs (n = 13)			
Intervention (n = 8)	≥5 years, 100% (8)	30–39, 12.5% (1) 40–49, 25% (2) 50–59, 37.5% (3) 60–69, 25% (2)	F, 62.5%
Control (n = 5)	<5 years, 1 (20%) ≥5 years, 4 (80%)	40–49, 40% (2) 50–59, 60% (3)	F, 60%

TABLE 2: Pre- to post-intervention changes to participants' scale scores

Scale	Group	Intervention† Mean (±SEM)	Control† Mean (±SEM)	Effect size (partial eta ²)	P-value
PMI	GPs	6.44 (±0.26)	5.28 (±0.32)	0.46 L	$F_{1,12} = 10.21$ $P < 0.01^*$
	GPRs	6.55 (±0.33)	5.58 (±0.42)		
	Total	6.49 (±0.20)	5.43 (±0.26)		
WWAS	GPs	4.09 (±0.13)	3.45 (±0.15)	0.50 L	$F_{1,12} = 11.78$ $P < 0.01^*$
	GPRs	4.09 (±0.15)	3.74 (±0.19)		
	Total	4.09 (±0.09)	3.60 (±0.12)		
PIS	GPs	3.82 (±0.18)	3.39 (±0.23)	0.01 S	$F_{1,12} = 0.09$ $P = 0.77$
	GPRs	3.58 (±0.22)	3.87 (±0.30)		
	Total	3.70 (±0.14)	3.63 (±0.19)		

*Significant. †Post-score adjusted for pre-value. GP, general practitioner; GPR, GP registrar; PMI, Psychological Medicine Inventory; L, large; PIS, Professional Isolation Scale; S, small; SEM, standard error of the mean; WWAS, Warr's Work-Related Affect Scale.

viewpoint of others that helped them clarify what was occurring in a consultation. In addition, the study design, which involved collection of baseline data, overcame some of the design issues of previous international quantitative studies examining the influence of Balint groups.¹⁷⁻¹⁹ However, study limitations include the small sample, the inability to blind participants to the intervention and the possibility of social desirability response bias.²⁵ It is also possible that registrars felt uncomfortable having medical educators run the group, although none expressed this feeling.

There was no significant difference between GPs and GP registrars on the outcome measures, which seems to indicate that both groups potentially found the experience useful. GP registrars are less likely to see patients over a long period of time, but because of their lack of experience in general practice the Balint process appears to have been of similar value to them. While GPs' mean baseline scores on the scales were generally higher than those of registrars, Warr²² has previously demonstrated that older people report greater job-related well-being and competence, possibly because they have increased skills and knowledge to cope compared with younger people.

The greatest obstacle in this study was difficulty with Internet connections. Webex allows for both video and voice connections. Poor Internet connection meant that at times video connection was impossible. At times participants dropped out completely, which was particularly troublesome when the dropout was the person presenting the case. Further work is required to ensure a better technical experience for participants. Improved Internet broadband infrastructure in rural and remote areas would substantially enhance the experience for rural participants.

Further research is required to replicate the benefits identified in this study in order to give greater credence to the use of Balint groups to support GPs and registrars in regional/rural settings. It is postulated that this may lead to improved retention of GPs in these areas, but further research would be required to confirm this. As there were no differences between GP and registrar intervention groups in the outcomes of the intervention, a future full-scale trial could potentially combine registrars and GPs in one group. The effect size data indicate that future studies should not include the PIS as the sample size required to obtain a reasonable power to detect significant difference on this scale would be very large due to the small effect size. While a full-scale trial would require 34 participants to reach power of 0.95, it would be best to over-enrol initially to account for potential attrition.

Conclusions

Participation in an online Balint group can improve GPs' and GP registrars' work-related affect and psychological medicine skills. Implementation of improved broadband infrastructure may substantially enhance online Balint group participation for rural participants.

Author contributions

HK and TFvdM conceived of the study; HK, TFvdM and CMA obtained study funding, and contributed to instrument development and to final edits of the manuscript. TFvdM managed the project, collected and analysed the data, and wrote the first draft of the manuscript.

TABLE 3: *Participants' views about valuable and challenging aspects of online Balint groups*

Theme	Code	Quote
Supportive relationships	Opportunity to debrief	'opportunity to debrief on difficult cases' 'the ability to debrief with other GPs about difficult problems' 'Catharsis . . . allowing distance and objectivity in handling complex cases'
	Feeling supported	'feeling supported in a non-judgemental way' 'communicating with supportive and non-judgemental peers'
	Accessing the views of others	'gaining multiple points of insight' 'other people's insights were generally helpful in reflecting on the problem' 'diverse perceptions about cases leading to different ways of approaching problems' 'different ways of seeing things'
	Reassurance through sharing	'sharing experiences helped me realize we all face challenging and worrying experiences from time to time, and mostly handle them well'
	Collegial experience	'I enjoyed getting to know the participants over time and distance' 'I enjoyed the company of the group . . . I have been encouraged by a group of great people sharing similar work experiences and reactions to them' 'I felt honoured that they trusted me enough to be willing to disclose their own vulnerabilities and challenges'
Personal change	Working through own feelings	'presenting clarified my own feelings about what occurred in a consultation'
	Changing own perspectives and skills	'taught me new skills to identify with others' 'made me enjoy challenging clinical situations more' 'considering the viewpoints of all parties in the relationship can alter one's own perspective of it' 'I was introduced to a new and refreshing way of thinking – not always offering advice'
	Opening up	'initially finding a personal willingness to open up' 'deciding whether to offer a case and managing that pre-case silence'
Technology	Technological difficulties	'technology difficulties, exacerbated by thunderstorms, and power outages, made it hard to feel truly connected with group at times' 'working with technology and limited internet access' 'participants dropping out, sometimes in mid sentence or while presenting the case, others had difficulty logging in, and weekly problems with sound or video that interrupted the flow of the session'
	Learning how to use the technology	'mastering the technology'
Time	Time to become familiar with the process	'it took time for me to become familiar with the Balint process' 'relationships in the Balint group take time to evolve, possibly just getting the feel of process before it stopped' 'getting used to the group rules'
	Time commitment	'fortnightly commitment was difficult at times' 'variable attendance'

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