Dementia Risk Reduction in Primary Care: Research design, progress and challenges

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Background

➢ Translation of dementia risk reduction knowledge into interventions that can be applied in the real world is a challenge.
➢ Results from our previous study:
  • Developed Body-Brain Life (BBL), an online dementia risk reduction program; and
  • showed BBL improved protective factors over a 6-month period (Anstey et al.,2015; see Figure 1).
➢ Study aims:
  • To implement BBL in primary care; and
  • Strengthen key risk reduction components by introducing clinical advice for physical activity and diet.
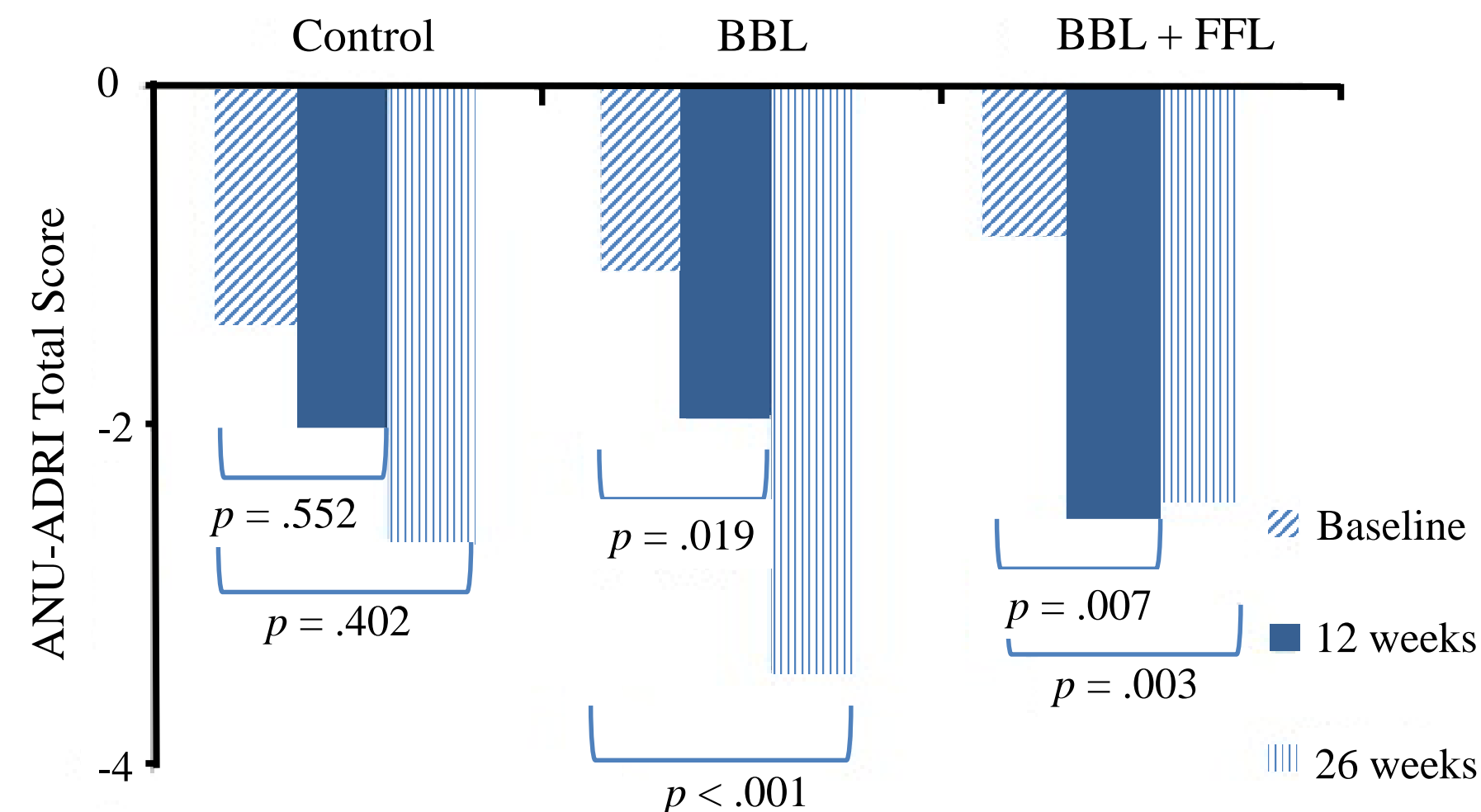

Figure 1. Effects of interventions on the total ANU-Alzheimer's dementia risk index (ANU-ADRI), the primary outcome (Anstey et al.,2015). Decrease in ANU-ADRI scores indicate risk reduction. FTF, face to face group sessions.

Methods

➢ *Primary care setting* which had existing practice-based Lifestyle Management Program (LMP)

➢ *Participants*
  • 125 patients with diagnosed chronic medical condition
  • GPs deemed LMP program would be beneficial

➢ *Pragmatic single blind RCT* (see *Table 1* and Figure 2)

Table 1. Trial conditions and sample sizes

Intervention	LMP	Active control
Body Brain Life-General Practice (BBL-GP) conducted over 12 weeks	6-week Lifestyle Management Program (originally 12 weeks, reduced after project was funded)	12-week email only program providing general health information
n = 42	n = 41	n = 41

➢ *Primary outcome*
  • dementia risk (modified ANU-ADRI-Short Form)
➢ *Secondary outcomes*
  • cognitive function
  • physical activity (IPAQ and actigraph; depression (CES-D)
  • quality of life for cost evaluation (SF-12)
  • Framingham coronary heart disease risk score
  • the AUSDrisk assessment tool
  • diet quality (Australian Recommended Food Score)
  • sleep quality (Pittsburgh Sleep Quality Index)

Figure 2. Study flow chart. BBL-GP; LMP, Lifestyle Modification Programme; PA, physical activity.

Preliminary Findings

➢ Baseline characteristics
  • 68.8% female, 31.2% male
  • 62% are partnered
  • mean ages 50-83 (*SD* = 13.3)
  • Mean education 16 years (*SD* = 4.1)

➢ As compared to baseline measures of BBL (Anstey et al., 2015), the current study had:
  • a lower mean age,
  • greater % female, and
  • higher average education (see Figure 3);
  • smaller % of smokers,
  • smaller % with overweight or obese BMI, and
  • greater % with diabetes (see Figure 4).

➢ **Practical challenges in implementation**
  • working within existing practice procedures and assessment protocols
  • training nurses to collect data for research
  • keeping track of equipment, and
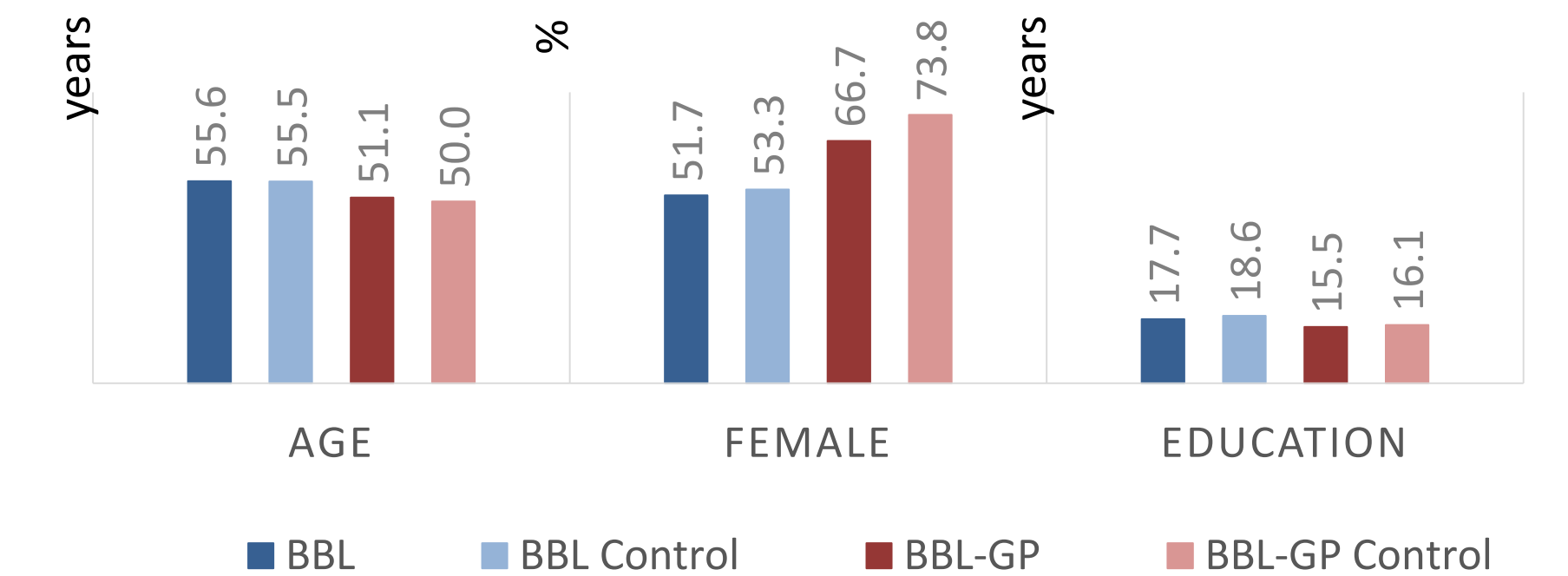 • dropout from follow-up assessments

Figure 3. Baseline demographics of BBL (Anstey et al., 2015) compared to BBL-GP. Mean ages, percentage of sample female, mean years of education attained.
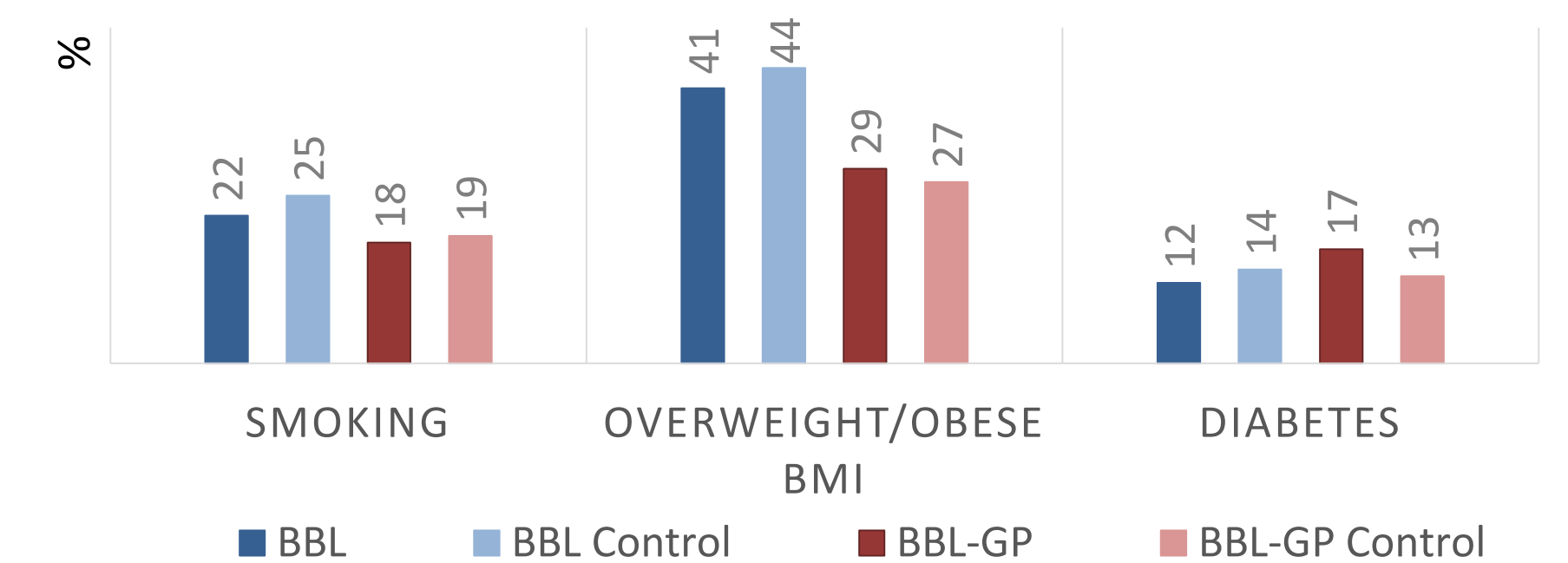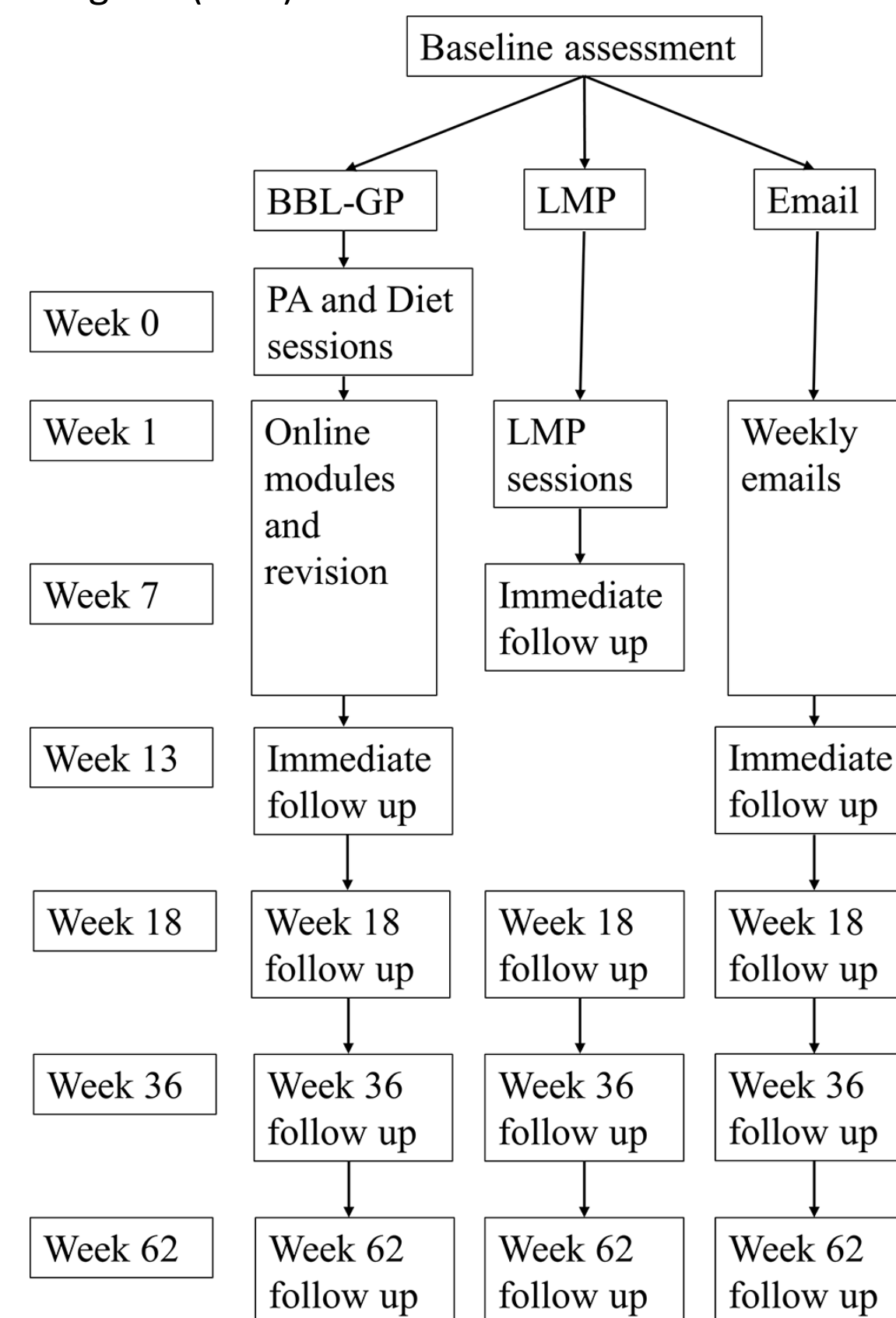

Figure 3. Baseline risk factor measures of BBL (Anstey et al., 2015) compared to BBL-GP. Proportion of sample smoking, with overweigh/obese body mass index (BMI), or with diabetes.

Key Lessons Learned

Working with primary care requires...
➢ *consultation* with various levels of primary practice staff when designing research processes
➢ *staff involvement* in planning and progress meetings to ensure challenges are dealt with effectively
➢ stakeholders to have *context and understanding* of research process
➢ *communication* between practice staff and research team at different levels, rather than single points of contact
  • research team relies on practice staff to feedback emerging issues
  • essential to relay outcomes and findings back to primary practice to ensure mutually benefit
➢ *monitoring* to ensure intervention and data collection are administered rigorously and in standardised manner

Discussion

➢ Research collaboration with primary practice enables access to large target samples, but presents unique challenges.
➢ As compared to research, primary care uses a different model of patient interaction.
  • i.e. prioritisation of individualised treatment v standardised interventions in RCTs
➢ Despite different processes and goals effective communication and relationship building at all staff-levels is essential.
➢ Although quantitative results are not yet available, preliminary observations are that using or building on existing systems and programs is highly recommended.

References: Anstey, K. J., Bahar-Fuchs, A., Herath, P., Kim, S., Burns, R., Rebok, G. W., & Cherbuin, N. (2015). Body brain life: A randomized controlled trial of an online dementia risk reduction intervention in middle-aged adults at risk of Alzheimer's disease. *Alzheimer's & Dementia: Translational Research & Clinical Interventions*, 1(1), 72-80.