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### ABSTRACT:

This study aims to assess the feasibility of transferring the Aboriginal Family Wellbeing empowerment program (FWB) from a Papua New Guinea (PNG) tertiary setting to broader community contexts to address the problem of endemic interpersonal violence and to generate pilot data to inform future community wellbeing interventions in PNG. Levels of wellbeing among a convenience sample of 100 participants recruited from Bereina station, Kairuku- Hiri District and other parts of the National Capital District and Central Province were assessed using a cross-sectional survey with an anonymous self-administered questionnaire. Follow-up FWB pilot workshops conducted in Bereina station for participants in the wellbeing survey used standardised FWB workshop evaluation questionnaires to obtain community feedback on the relevance of the program. Up to one in four females and over half of males who completed the survey reported being a victim of actual or threatened violence in the last 12 months. In terms of wellbeing, participants were least satisfied with their standards of living and most satisfied with spirituality. Workshop participants could see that FWB has the potential to address community concerns, including interpersonal violence, as it provides a process for identifying basic community needs and introduces skills to address conflict. The challenges and opportunities involved in sustaining such programs at community levels are highlighted.

**Keywords:** Feasibility, Transferring, Family wellbeing, Interventions, Interpersonal violence, Community, Sustainability

### INTRODUCTION:

Interpersonal violence imposes a significant burden of health harm on both men and women in Papua New Guinea (PNG), including increased HIV risk, hospital admission and

death [1,2]. Violence for men most often takes the form of criminal assault or tribal fights [2]. For women violence involves domestic and family violence and rape, and torture or even murder of women accused of sorcery [3]. The

United Nations Development Program (UNDP) [4] rates PNG 140 out of 146 countries in gender inequality; two-thirds of women in PNG have reported violence and domestic violence accounts for 90% of female trauma in women and girls [2,3, 5].

Interpersonal violence is aggravated by growing unemployment and associated alcohol and drug use among young adults. In PNG, youth unemployment is a major concern, especially for those who have completed primary, secondary or even tertiary education [6,7]. In urban settlements, towns and big villages across the country, there are growing numbers of youths who are unemployed and not engaged in economic or community activities. They are the so-called “drop outs” or “forgotten generation” and are often involved in excessive use of alcohol and drugs, including home brewing, which leads to disharmony within family and communities [6,7, 8]. These young people are also more susceptible or vulnerable to infectious diseases, including HIV, because of the risks associated with excessive alcohol and drug use [9].

Health practitioners, whose role is to provide help at the individual, family and community level, are also affected by interpersonal violence. The level of safety and security in the workplace has been shown to be a factor in health worker motivation [10].

Despite efforts including legislative change, public awareness campaigns and training the levels of interpersonal violence in PNG are

worsening [11,12]. The history of PNG as an independent nation is littered with well-intended, gender-informed policies, plans, programs and other initiatives [11]. The problem has been the lack of a systematic approach to endemic interpersonal violence. Such an approach requires needs assessment, the selection of appropriate, evidence-based interventions in relation to those needs, pilot testing of the interventions and the assessment of their outcomes to establish their feasibility and acceptability, followed by the design of compelling trials to determine what will work in practice [11].

Previous pilot studies established the acceptability and feasibility of the Aboriginal Australian Family Wellbeing (FWB) program in the context of training University of Papua New Guinea (UPNG) public health students in community development [13,14,15]. The students, as well as community and church leaders who later became aware of the program, recommended the potential usefulness of FWB to tackle the high levels of interpersonal violence in PNG communities [13,15].

The present paper responds to the student recommendation and subsequent invitations by church and community leaders by testing the appropriateness of FWB as an interpersonal violence intervention in a community setting. The aim is to generate relevant baseline data to inform future FWB and other community interventions in PNG.

**Overview of the FWB program:**

This overview of the history, rationale and previous practical application of the FWB program provides a context for the methods and outcomes of the present study.

FWB is an evidence-informed group intervention developed by Aboriginal Australians in 1993 [16] to enhance their individual and collective capacity to negotiate a changing and uncertain world and manage problems associated with being a minority population in their own country [17,18,19].

The program recognises that there are no easy strategies to manage complex problems such as racism and discrimination, transition from traditional to modern lifestyles, poverty, intergenerational trauma, interpersonal violence and substance abuse. FWB seeks to impart communication, self-reflection and analysis skills to empower people to create support networks, develop resiliency and resolve apparently insurmountable problems using creativity and innovation [13,17,19,20].

The FWB approach to empowerment has four main components. First, people meet in small interactive groups and introduced to the premise that as individuals they have the capacity to take control of their lives and make positive changes to improve their day-to-day situation, however dire that may be. Second, a safe space where these ideas can be

discussed and developed is established through the development of negotiated group agreements and peer-support relationships based on confidentiality, honesty, empathy and trust. Third, experiential exercises show participants how to think and communicate effectively emphasising human qualities such as creativity, perseverance, forgiveness, commitment and generosity. Fourth, participants are encouraged to recognise their own experience and knowledge, strengths and basic human needs. Alternative ways of dealing with emotional problems, difficult relationship patterns, violence and abuse, conflict and crisis are explored to suggest strategies for change. Participants are encouraged to share their fears and insights with others, to build support networks, practise problem and conflict resolution, identify change objectives and implement and monitor changes.

Underpinning the entire process is the teacher, as role model and guide, creating a supportive environment where students and teachers, as co-learners, to experience what Fullan and Scott [21] referred to as “deep learning” pedagogy. In consequence participants not only have greater influence and agency in their personal situation, but can become agents for change in their family, workplace and broader community [17,19,22,23].

**METHODOLOGY:****Study Design:**

Based on previous FWB pilots in the context of UPNG public health training [13], the study adopted an exploratory mixed-methods design in which quantitative measures were administered to complement qualitative workshop evaluation data. Two main research questions guided the present study: 1) What is the level of wellbeing in the communities identified as potential sites for the FWB feasibility study? 2) How feasible is the Australian FWB as an interpersonal violence intervention in a PNG community setting? Wellbeing among study participants was assessed using three measures: a) perceived levels of safety and violence in participants' social environments; b) psychosocial empowerment; and c) subjective wellbeing. FWB feasibility in the community setting was assessed using standardized FWB qualitative workshop evaluation questions.

**Participants and Setting:**

The study was part of the UPNG problem-based learning approach to public health education. The FWB Empowerment and Change course was designed to train students to assess community needs with regards to FWB and to facilitate and evaluate the program in a community setting. Two groups were selected for the quantitative wellbeing survey through a process of convenience sampling. Firstly, each of 10 public health students

administered the wellbeing survey to 5 participants in their workplace, providing a group of 50 survey participants working in various health facilities in the National Capital District (NCD) and Central Province. Secondly, in response to invitations by community and church leaders interested in the FWB program, a research group made up of 14 public health students led by a lecturer in the Division of Public Health (DPH) in School of Medicine and Health Sciences (SMHS) UPNG administered the wellbeing survey to a total of 50 local participants at Bereina station, in the Kairuku-Hiri District of Central Province. The Bereina community survey was followed by FWB pilot workshops for community leaders and youth, facilitated by members of the DPH research group. A total of 50 people, 27 (54%) men and 22 (44%) women attended the FWB community workshop, while 1 (2%) was a missing data. Half the survey participants thus came from outside the community where the FWB pilot workshop was conducted.

**Measures:**

The quantitative component was a cross-sectional survey of the 100 participants. The sample size was calculated to allow for comparison of the prevalence of violence between females and males. After reviewing the literature by Ganster-Breidler [24] it was estimated that 65% of women and potentially 20% of men would have experienced physical violence. Using a sample size calculator for

80% power and alpha error of 0.05, the samples size of 44 participants was obtained to detect a statistically significant difference in the prevalence of violence between females and males with 95% confidence. However, the sample size was increased to 100 to cover for unexpected non-response rate and sample errors. Three quantitative measures of wellbeing were included in the survey. The first uses five questions taken from the Australian Bureau of Statistics (ABS) Personal Safety Survey (PSS), designed to measure perceived levels of violence in the participants' social environment. Three questions use a nominal scale (yes/no answers); two use an ordinal scale ranging from 1 (very unsafe) to 5 (very safe). For the purposes of this survey, violence was defined as any incident involving the occurrence, attempt or threat of either physical or sexual assault experienced by a person during the 12 months prior to the survey [13]. Psychosocial empowerment is measured by the Growth and Empowerment Measure (GEM14) developed specifically to evaluate psychosocial empowerment among FWB participants [25]. This tool consists of 14 items, and has three subscales: the 'Inner Peace' subscale (items 2, 3, 4, 10, 11, 12, 13, and 14); the 'Self-Capacity' subscale (items 5, 6, 7, and 9); and "other" (items 1 and 8) which address strength, happiness, and connectedness. All items on the GEM14 are rated on a 5-point scale between two extremes. For example, for item 1, which asks about knowledge, the lowest

point on the scale is "I feel like I don't know anything", while the highest is "I am knowledgeable about things important to me". The measure provided an overall score (maximum score =70), as well as scores for each of the three subscales [13]. The final measure, the Australian Unity Well-Being Index, is a scientific measure of "subjective wellbeing" [26] which asks people to rate their satisfaction from 0 (completely dissatisfied) to 10 (completely satisfied), across eight aspects of their personal life: health, personal relationships, safety, standard of living, achieving in life, community connectedness, spirituality or religion and future security. An overall score was calculated for this index (maximum score = 80) [13]. Qualitative data to assess the feasibility of FWB in a PNG community setting were obtained using a workshop evaluation questionnaire administered to participants immediately after the 1-day FWB workshop. As well as collecting demographic data (age and gender), the qualitative questionnaire asked participants to provide feedback on what they liked and/or disliked about the program; the extent to which their expectations were met; how they intended to use FWB skills in family, workplace, and broader community settings; and to suggest ways to improve the program [13]. The workshop evaluation feedback was supplemented by the head of the DPH research team's diary reflections regarding his efforts to support the Bereina community leaders to

implement priority issues arising from the pilot workshop.

### **The FWB intervention:**

Prior to the FWB community workshop, the DPH research team undertook several planning visits to the Bereina community and trained 10 community and church leaders in the FWB program. As well as building potential local facilitator capacity, the aim was to give opinion leaders the opportunity to provide judgements regarding the cultural appropriateness of FWB prior to piloting the program with the broader community. The 10 community and church leaders, in collaboration with members of the DPH research team, then facilitated a 1-day FWB workshop targeting the youth of the Bereina community. Key FWB topics covered in the workshop include group agreement, human qualities, basic human needs, understanding relationships, life journey and conflict resolution; understanding emotions and crisis, loss and grief, beliefs and attitudes and understanding interpersonal violence. Following the workshop, the DPH research team members supported the community over 5 months towards translating issues arising from the workshop discussions and evaluation into action.

### **Ethical approvals:**

The study was approved by the Human Research Ethics Committee at James Cook University (JCU), Australia and the UPNG

School of Medical and Health Sciences (SMHS) Research and Ethics Committee. Consent was also obtained from the community leaders. The purpose of the questionnaires was explained to the participants. They were also told that completion of the questionnaire represented their consent to participate in the study, that participation was voluntary and that participants were free to withdraw from the study at any time.

### **Data analysis:**

The approach to the quantitative data analysis was largely descriptive. Answers to survey questions were cross tabulated according to the participants' gender, age-group (<24, 25-34 or 35-54 years) and socioeconomic status (employment and education). The statistical significance of differences in violence rates between females and males was assessed with 95% confidence intervals (CIs) and  $\chi^2$  test. Rates, rate differences and the 95% CIs were calculated with continuity correction according to the Wilson [27] procedure using the online calculator [vassarstats.net](http://vassarstats.net). Differences between females' and males' scores on continuous variable scales were tested by conducting a series of independent sample t-tests.  $P < 0.05$  was reported for significance of results.

Qualitative responses to the FWB workshop were analysed thematically. The analytic process was based on the six steps recommended by Braun & Clarke [28]: 1)

familiarize ourselves with the data; 2) search for codes; 3) create themes; 4) review themes; 5) name and define themes; and 6) write the report [16].

## RESULTS:

### Quantitative measures:

One hundred participants consented to the study but 98 completed questionnaires were returned; of these 54 were male and 44 female participants. Two questionnaires were not completed because the participants did not specify their gender, age or employment status. The gender distribution, age groups, employment status and educational level of the participants are presented in Table 1.

Of the 100 participants 46% reported being victims of physical violence or threats in the previous 12 months; 10% had been victims of actual or attempted break-in and 32% reported that another person had made them fearful. Of all episodes of abuse, the majority of the victims (73%) knew the person who harmed or threatened them or made them fearful and 60% knew the person who broke in or attempted to do so (Table 2). Physical violence or threats affected males more often than females ( $\chi^2(1, N = 98) = 11.01, p < .001$ ), Table 2. 47.8% of the victims of physical violence or threats were aged 24 or younger.

**Table 1:** Victims' profile by the type of abuse

Variable	Total n=100†	A victim of physical or threatened violence *n=46				A victim of an actual or attempted break-in*n=10				Been made fearful by another person* n=32			
		Female		Male		Female		Male		Female		Male	
		n	%	n	%	n	%	n	%	n	%	n	%
Female/Male	44/54	12	27.3	34	63.0	4	9.1	6	11.1	14	31.8	18	33.3
<b>Age group</b>													
≤ 24	42	6	13.6	16	29.6	2	4.5	2	3.7	8	18.2	14	25.9
25 to 34	36	4	9.1	14	25.9	0	0.0	4	7.4	4	9.1	4	7.4
35 to 54	20	2	4.5	4	7.4	2	4.5	0	0	2	4.5	0	0.0
<b>Employment</b>													
Employed (FT & PT)	16	4	9.1	4	7.4	0	0.0	0	0.0	0	0.0	2	3.7
Unemployed	56	8	18.2	20	37.0	2	4.5	2	3.7	8	18.2	10	18.5
Student	8	0	0.0	4	7.4	2	4.5	2	3.7	2	4.5	4	7.4
Retired	6	0	0.0	0	0.0	0	0.0	0	0.0	4	9.1	0	0.0
Other	12	0	0.0	6	11.1	0	0.0	2	3.7	0	0.0	2	3.7
<b>Education</b>													
Grades 1-6	22	4	9.1	10	18.5	0	0.0	4	7.4	2	4.5	4	7.4
Grades 7-10	58	4	9.1	20	37.0	2	4.5	2	3.7	8	18.2	12	22.2
Grades 11-12	2	2	4.5	0	0.0	2	4.5	0	0.0	2	4.5	0	0.0
Vocational	8	0	0.0	2	3.7	0	0.0	0	0.0	0	0.0	2	3.7
University	4	2	4.5	0	0.0	2	4.5	0	0.0	2	4.5	0	0.0

† - Two participants did not specify their gender, age and employment status; six participants did not specify their education; \*In the last 12 months; \*\* The highest proportions were marked in bold for female and male independently, except for gender; FT – full time; PT – part time



Table 2: Prevalence of abuse by gender

	Female (n = 44)		Male (n = 54)		Rate difference		p-value ( $\chi^2$ male vs female)
	N (%)	95% CI*	N (%)	95% CI*	%	95% CI**	
A victim of physical or threatened violence in the last 12 months	12 (27.3)	15.4 to 43.0	34 (63.0)	48.7 to 75.4	35.7	14.4 to 52.8	<0.001
A victim of an actual or attempted break-in in the last 12 months	4 (9.1)	2.9 to 22.6	6 (11.1)	4.6 to 23.3	2.1	-13.0 to 15.7	NS
Been made fearful by another person over the past 12 months	14 (31.8)	19.0 to 47.7	18 (33.3)	21.5 to 47.6	1.5	-18.3 to 20.6	NS

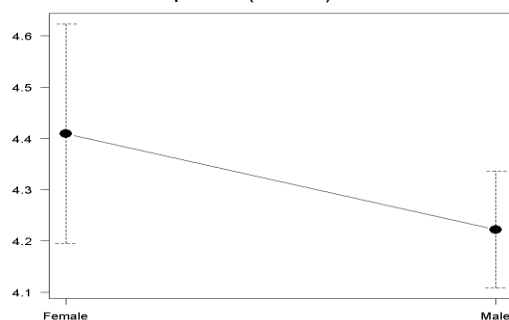
NS - Not statistically significant

\*95% confidence interval of a proportion including continuity correction; \*\*95% confidence interval for the difference between two independent proportions including continuity correction

Figure 1: Average Response Safety at Home

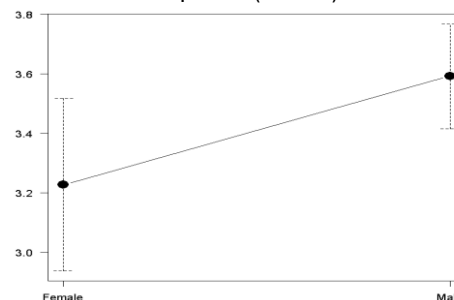
How safe do you feel at home when you are alone during the day? Response range: min 0 (very unsafe) to max 5 (very safe)

Mean  $\pm$  SD: response (overall): 4.32  $\pm$  1.13



How safe do you feel at home when you are alone during the night? Response range: min 0 (very unsafe) to max 5 (very safe)

Mean  $\pm$  SD: response (overall): 3.46  $\pm$  1.61



\*Error bars represent standard errors (SE). When SE bars overlap, the difference between the two mean scores is not statistically significant ( $p > 0.05$ ); Y-axis represents average score ranging from 0 (very unsafe) to 5 (very safe); SD: standard deviation

Both genders felt less secure at home when alone during the night compared to during the day (Figure 1). Females tend to feel safer during the day when alone, compared to males, who reported feeling more secure during the night. These differences were not statistically significant.

The mean scores obtained for survey participants' wellbeing are presented in Table 3. The questionnaire used and the format of the response options are presented in Annex 1. Even though the differences between scores for the female and male participants were not statistically significant, some findings are worth highlighting. The level of overall satisfaction

and wellbeing appeared to be marginally higher among females compared to males ( $p > 0.05$ ). Both men and women scored the least satisfaction with their standards of living (Q2) and the most satisfaction with spirituality (Q8) ( $p > 0.05$ ). Women were less satisfied with

personal relationships (Q6) and future security (Q9) when compared to men ( $p > 0.05$ ). Men, on the other hand, were most unhappy about life as a whole, their achievements in life, safety, being a part of the community and health.

**Table 3:** Wellbeing survey results

	Q 1 Life	Q2 StandL	Q3 Hlth	Q4 Ach	Q5 Rel	Q6 Safe	Q7 Comm	Q8 SpR	Q9 Sec	Overall
Females, Mean(SD)	6.80 (2.52)	6.50 (2.95)	7.76 (2.54)	6.73 (2.37)	7.04 (3.64)	7.09 (2.87)	7.23 (2.69)	7.44 (2.90)	6.93 (3.03)	7.06 (2.72)
Males, Mean(SD)	6.67 (2.17)	6.18 (2.64)	7.00 (2.19)	6.85 (2.29)	7.15 (2.70)	6.95 (2.20)	6.98 (2.54)	7.53 (2.45)	6.96 (2.38)	6.92 (2.39)
p-value	0.778	0.573	0.140	0.796	0.851	0.774	0.638	0.875	0.951	0.416

\*The result is not significant at  $p > 0.05$

**Table 4:** GEM survey results

Questions	Female, Mean (SD)	Male, Mean (SD)	p- value
Q1. I feel like I don't know anything	4.27 (1.05)	4.09 (1.02)	0.401
Q2. I feel like I don't know how to do much of anything	4.09 (1.18)	4.02 (1.28)	0.774
Q3. I feel slack, like I can't be bothered to do things even when I want to	4.14 (1.15)	4.13 (1.10)	0.977
Q4. I feel unhappy with myself and my life	4.04 (1.38)	4.24 (1.10)	0.433
Q5. I am held back from what I could do, there are no opportunities for me	3.68 (1.57)	3.76 (1.33)	0.780
Q6. I feel that other people don't admire or value me	3.96 (1.26)	3.76 (1.17)	0.433
Q7. Have no voice. I can't express myself. Nobody listens to me	4.00 (1.19)	3.98 (1.16)	0.939
Q8. I feel isolated and alone, like I don't belong	4.16 (1.38)	4.49 (0.79)	0.131
Q9. I am not hopeful that anything will change for me	4.60 (0.86)	4.47 (0.79)	0.444
Q10. Mostly I feel shame or embarrassed	3.93 (1.47)	4.22 (1.18)	0.285
Q11. I do things for other people all the time. I am not looking after myself or my family well	4.51 (1.30)	4.24 (1.05)	0.654
Q12. I am always worrying and nervous. I can't relax or slow down	3.93 (1.13)	4.18 (1.00)	0.246
Q13. I live in fear of what's ahead	3.64 (1.49)	4.02 (1.15)	0.160
Q14. I feel a lot of anger about the way my life is	3.51 (1.46)	3.87 (1.16)	0.169
Q15. If I was threatened by another person, I have no-one close to me who would help and support me	4.00 (1.28)	4.15 (0.89)	0.506
Q16. If I was threatened by someone I knew, I would not know what to do	4.02 (1.37)	4.35 (0.93)	0.163
Overall	4.03 (1.28)	4.12 (1.07)	0.514

\*The result is not significant at  $p > 0.05$

The data in table 4 show the mean scores for the GEM survey. The questionnaire used and the format of the response options are presented in Annex 1. Difference between

genders was not statistically significant. The lowest mean scores among women were received for Feeling anger about the way my life is (Q14) and for men Holding back from

what I could do (Q5). The highest mean scores for women were Being unhelpful that anything will change for me (Q9) and for men Feeling isolated and alone (Q8).

#### **Qualitative measures:**

Four main themes emerged from the analysis of the data obtained from FWB pilot program participants. These themes are relevance of program content; acceptability of the delivery process; personal and community change; and sustainability. To ensure anonymity, quotes are not identified by the names of participants, but rather by numbers in brackets.

#### **Relevance of Program content:**

Community participants could see that the program content was relevant to the day-to-day issues they faced. Program topics such as basic human needs provided a framework for people to better understand the nature of their problems. For example, one person referred to the “importance of our basic needs in life” (4) while another said they learnt “many good things that will help me in my future life” (16). Community participants could see how program ideas were appropriate for healing and strengthening community relationships: comments such as “reunite families, youths- and the community”, and “It will help me to solve problems in the family and the community” (7) were frequently found in program feedback. The topic of conflict resolution was seen as particularly valuable as

it gave people ideas about how they could start to address family violence. For example, one person said: “Helping us to understand violence and help to resolve conflict... and bring up a better family” (12).

#### **Acceptability of the Delivery Process:**

Community participants clearly appreciated the process through which FWB was delivered. They liked having the opportunity to participate within a safe environment that encouraged openness. For example one person said “What I found was useful was doing group discussions and participating in the session” (19); while another said “Well actually the whole course was useful, but in particular was group discussion- openness in participants” (29). Several people commented on the quality of the program facilitators. One participant said “I think the training was just pleasant, and the facilities [facilitators] were just very active, and the way they present was just amazing” (17). However one person would have preferred external rather than local facilitators: “If ever there should be other courses why not other facilitator rather than our own people” (19). Despite this criticism this person was still very positive about their learning: “But otherwise, I really am happy with this course” (19). Other criticisms of the delivery related to lack of time and program resources. Some felt that the one day wasn’t long enough to cover all of the material: “We should learn more over two days” (24); “Every topic I find useful, but need more

time in presentations” (28). For one participant the program felt rushed: “Everything was alright but just that we need to really look into time management- we had to rush because time had caught up with us” (29). Another person suggested that “...more exercises be conducted so that we could understand better” (10). Community participants also recommended that more resources be provided and developed for the local context; for example they suggested: “... making some small booklets or hand sheets.” (28), “... manuals and handouts of our own” (21).

#### **Personal and Community Change:**

Participation in FWB led to change in a number of ways. Some said that the program gave them a sense of hope that life could be better in the future. For example, one person said “I thank you for coming to our forgotten generation to help in building in them the hope for a better FAMILY LIFE in their community” (12). Community participants spoke of how the program had an important impact on their life: “I enjoyed and learned a lot of notes for physical and spiritual education. It’s the great privilege for all of us as Bereina youths, have experienced how effective the programme” (19); “...it had a very big impact in my life, and also I have learnt a lot...” (19). One area of learning was self-care; for example one person said: “I learnt about how to look after myself and my family members” (20); Some people spoke of taking on leadership roles, including

building skills in FWB program facilitation: “I’m looking forward to improve my skills in facilitating the given sessions.” (14); “This is my first time to be a Facilitator. Thank God for your heart; to save the youths of Bereina district” (32).

#### **Program Development and Sustainability:**

The transfer and acceptance of FWB into this community was a first step; the next challenge is how to develop and sustain the program. Community participants clearly wanted more opportunities to participate in the program and to continue learning. They said, for example: “My suggestions is that we should have more of this course so that we could learn more and help our community to change to become a better people in our community” (5); “This is the first of its kind that we had in our District, to equip our youths in order to prevent them from involving themselves in doing wrong things. This training will help them in the Family Wellbeing.” (28). Several community participants were keen to expose other groups, such as married couples, to the program ideas: “More participants especially young married youth.” (27); “I suggested that if I am married; we should come as couples to attend this training course. Reason: So my partner will know and understand each other in this training.” (7). Some community participants had suggestions for organizing the program: “We need to set up proper time for next training: - advise all other participants to attend;” (11).

There were ideas for integrating FWB into existing community programs such as the spiritual development activities run by the church. For example, one community participant said: “I suggest that the course could be improved by teaching the youth more of spiritual lessons and drama activities” (1). Others gave thought to how those who had done the training might sustain their learning and distract themselves from problems such as drug abuse. Several people suggested starting small farming projects, for example: “We should have some projects like farming looking after animals and projects like making gardens so that we the youths come together so we can do away with drugs and us to become good to the community and also to help in our needs and wants of our family.” (5); “I should make good things after this course like projects farming making gardens, and help our community and work together” (6).

Leadership support was seen as critical to program sustainability. This could be achieved in a number of ways, such as encouraging village elders and chiefs to participate in the course or by training more people to be program facilitators. One participant said “If possible could you arrange for this course for village elders and chiefs. After this training for other community leaders would be very useful” (27); another suggested “Train the Facilitators...before training participants” (28).

The workshop feedback was largely confirmed by the leader of the DPH research team

reflections on his follow up activities designed to support the community implement priority issues arising from the workshops. He observed workshop participants using the basic human-needs topic to identify the many difficulties they face, including poverty and access to health care, education, housing, clean water and vegetables. They found the solution-focused emphasis of the FWB program useful for planning how to address some of these difficulties and they wanted more sessions to be run. The community went to significant lengths to enable the program to continue, highlighting the community’s perception of the relevance and importance of the program. The community lacked a training centre where the program could be delivered, so the young people were organised to build a shelter from local materials. FWB participants then contributed money and bought a brick-making machine to make bricks to build permanent homes and classrooms at the local school. Further, with the assistance of the DPH team leader, community leaders developed an activity plan to address some of the other local problems. This plan included small projects such as growing vegetables, cooking food for sale or sewing clothes and selling these at the local market.

#### **DISCUSSION:**

The study aims to assess the need for the Aboriginal Family Wellbeing empowerment program (FWB) and the feasibility of

transferring the program from a PNG university setting to broader community contexts to address the problem of endemic interpersonal violence and to generate pilot data to inform future community wellbeing interventions in PNG. The findings highlight the very real social challenges confronting PNG and the relevance and applicability of programs such as FWB at community levels. The fact that study participants experience their social environment as stressful and unsafe cannot be overstated. As many as one in four females and more than one in two males reported being a victim of physical or threatened violence in the last 12 months. Nearly half of the victims were aged 24 or younger, and knew their abusers. Both men and women were least satisfied with their standards of living and the most satisfied with spirituality. The extent to which spiritual beliefs and attitudes serve as internal resources for individuals and communities to cope with the day-to-day stresses of life requires further investigation. There is little doubt that the FWB program has much to offer the ubiquitous problem of interpersonal violence in PNG. Community members who participated in the workshops could all see the potential for FWB as a tool for addressing community concerns. Outcomes included providing a process for identifying basic community needs and offering skills for young people to better address needs such as food, shelter, education and interpersonal relationships that are based on respect. Engaging young people in meaningful

activity will in the long run improve community safety and wellbeing [27]. Despite the clear relevance of the program and the calls for FWB to be continued and expanded, the reflections of the DPH team leader on the enthusiasm generated by the FWB workshop and his attempts to support the community channel such enthusiasm into action highlight a particular dilemma often confronted in community programs. When offered external support and new opportunities, community members are often keen to begin on a process of improving conditions in their community and it is by working with communities that researchers learn most and can help to bring about lasting change. However, this requires time that university staff and students do not usually have and they cannot always be there to support local initiatives. In Bereina, this problem can be overwhelming for the external facilitators as they question their capacity to meet community needs and expectations. How should an external community development facilitator balance raising hopes and aspirations with what can realistically be achieved? This conundrum highlights the need to tread carefully and take a strategic approach to change. Arguably, the most important and realistic role universities can play is to remain focused on their core business, in this case, the training of public health students. These students, as the health workforce and opinion leaders of the future, are the ones most suitable to take their new knowledge back to

the community. Opportunities for ongoing university support and mentoring, refresher training courses and the utilization of local or online communities of practice could also be explored (although internet infrastructure is very variable in PNG). As it is a pilot study, the results of this research cannot be generalised to other settings. Studies have demonstrated however that small pilot studies can contribute and provide information to national planning [29, 30]. The PNG government is committed to addressing interpersonal violence, and in 2014 the PNG National Department of Health (NDoH) launched a policy platform which incorporates a rights-based and empowerment approach. This policy, the National Health Gender Policy (NHGP) states “Today, the policy environment in gender and health is ripe. The health sector provides opportunities for integrating a gender perspective both organizationally within the NDoH and in health sector policies and plans” [12]; While the policy environment may be ripe, the greatest challenge lies in implementing and evaluating such policies [11]. Integrating practical interventions such as FWB in routinely available community education, health and other development programs and services provide a potentially valuable way forward.

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## Annex 1: SURVEY QUESTIONNAIRES:

Table I: Growth and Empowerment Measure (GEM survey questions)

#	Question
Q1	I feel like I don't know anything
Q2	I feel like I don't know how to do much of anything
Q3	I feel slack, like I can't be bothered to do things even when I want to
Q4	I feel unhappy with myself and my life
Q5	I am held back from what I could do, there are no opportunities for me
Q6	I feel that other people don't admire or value me
Q7	Have no voice. I can't express myself. Nobody listens to me
Q8	I feel isolated and alone, like I don't belong
Q9	I am not hopeful that anything will change for me
Q10	Mostly I feel shame or embarrassed
Q11	I do things for other people all the time. I am not looking after myself or my family well
Q12	I am always worrying and nervous. I can't relax or slow down
Q13	I live in fear of what's ahead
Q14	I feel a lot of anger about the way my life is
Q15	If I was threatened by another person, I have no-one close to me who would help and support me
Q16	If I was threatened by someone I knew, I would not know what to do

Table II: Australian Unity Wellbeing Index survey questions

#	Question
	Thinking about your own life and personal circumstances:
Q1	How satisfied are you with your life as a whole?
Q2	How satisfied are you with your standard of living?
Q3	How satisfied are you with your health?
Q4	How satisfied are you with what you are achieving in life?
Q5	How satisfied are you with your personal relationships?
Q6	How satisfied are you with how safe you feel?
Q7	How satisfied are you with feeling part of your community?
Q8	How satisfied are you with spirituality or religion?
Q9	How satisfied are you with your future security?

Table III: Personal Safety survey (PSS) questions

#	Question
Q1	Have you been a victim of physical or threatened violence in the last 12 months?
Q1a	IF YES to previous question, did you know the person who harmed or threatened you?
Q2	Have you been a victim of an actual or attempted break-in in the last 12 months?
Q2a	IF YES to previous question, did you know the person who broke-in or attempted to break-in?
Q3	Has another person made you fearful over the past 12 months?
Q3a	IF YES to previous question, did you know the person who made you fearful?
Q4	How safe do you feel at home when you are alone during the day?
Q5	How safe do you feel at home when you are alone during the night?