'Regain Momentum' Animal-Assisted Therapy for Youth Programme (RM) – Phase III

Programme Evaluation Report

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Introduction

1. In January 2013, the Chinese Evangelical Zion Church received bi-annual funding from the Fu Tak Iam Foundation Limited to launch an animal-assisted therapy (AAT) programme for socially withdrawn youth aged 15-24. This document reported findings of the third phase[1] of the RM programme launched from 1st January 2017 to 31 December 2018.
2. During this period, a total of 101 cases have been served and 25 entries were excluded from the analysis. Breakdown and reason for exclusion were as follows:
    - Seven cases were carried forward from the previous phase and their data have already been analysed;
    - Ten cases have joint the programme for less than four months when the data was analysed and the impact of the intervention was deemed not comparable with the other cases; and
    - Eight cases have lost contact.
3. A total of 76 cases have completed the pretest and posttest questionnaire and were included in the analysis.
4. The methodology and measures used in phase III was the same as that employed in the previous two phases. In gist, a pre-test / post-test quantitative research design was used to collect data using a structure questionnaire to assess changes in the behavioural and psychosocial well-being of the participants. The outcome measures used include:
    - Social withdrawal behaviour
    - (re)-engagement in the community (study and work)
    - Rosenberg Self-Esteem Scale (RSES) (Rosenberg., 1965)[2]
    - Interaction Anxiousness Scale (IAS) (Leary, 1983)[3]
    - Perceived Employability Self-efficacy Scale (PES) (Houser & Oda, 1990) [4]
5. To assess the attitude of the participants towards dogs in general and the therapy dog(s)

[1] Prior to the three phases launched with funding from the Fu Tak Iam Foundation Ltd., a pilot trial was conducted in 2010-2012 under a different funding.
[2] Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.
[3] Leary, M. R. (1983). Social anxiousness: The construct and its measurement. Journal of Personality Assessment, 47, 66-75.
[4] Houser, R., & Oda, E. A. (1990). The perceived employability scale. Honolulu: University of Hawaii, Department of Counselor Education.

used in the programme in particular, two scales were included in the questionnaire, they are:

- Attitude toward dogs Scale (ADS) (Kakestani et al, 2011)[5]
- Pet Bonding Scale (PBS) (Johnson, 2003)[6]

Findings

Profile of the participants

6. In this sample, the gender ratio between male and female was around 6:4, which was consistent with studies on social withdrawn youth in Hong Kong and *hikihomori* in Japan.[7] A majority of them were in the younger age cohort of less than 15 years old[8] (31.6%) and 15-19 years old (42.1%); and more than half of them had reached junior secondary school (52.6%) and around one-third had attained senior secondary education (31.6%). (Table 1)

Table 1: Sociodemographic characteristics of participants

Variable		*f*	*%*
Gender			
	Male	45	59.2
	Female	31	40.8
Age			
	<15	24	31.6
	15-19	32	42.1
	20-24	11	14.5
	25-29	9	11.8
Education			
	Primary	5	6.6
	Junior secondary	40	52.6
	Senior secondary	24	31.6
	Post-secondary	7	9.2
N=76			

[5] Lakestani, N., Donaldson, M., Verga, M. et al. (2011). Attitudes of children and adults to dogs in Italy, Spain, and the United Kingdom. *Journal of Veterinary Behavior*, 6, 121-129.
[6] Johnson, M. (2003). Center for the study of animal wellness: Pet Bonding Scale, CSAWPBS. In Anderson, D.C.Assessing the human-animal bond: a compendium of actual measures. United States of America: Purdue University.
[7] Wong et al. (2015). The prevalence and correlates of severe social withdrawal (hikikomori) in Hong Kong: a cross-sectional telephone-ased survey study. International journal of social psychiatry, 61(4), 330-342.
[8] Though the targeted service recipients were those aged 15-24, similar to circumstance explained in Phase I and Phase II, due to the lack of appropriate services in Hong Kong, young persons outside this age range were also accepted if they were assessed to be suitable for service.

7. In terms of their occupation, in view of the 9-year compulsory education in Hong Kong, normally, people who are under 15 years of age are expected to be attending school compulsorily. In this sample, among the 24 respondents who were aged under 15, only 3 (12.5%) were reported to be studying full-time; a large majority of them (87.5%) were persistent absentees at school and/or dropout/completed school. For respondents who were aged 15 and above, a quarter of them were reported to be absent from school persistently. Only 4 respondents (7.7%) held a part-time job and 42.3% stated that they for looking for work.

Table II: Participants by studying and work status

Study/ Work status	***Less than 15 n=24***		***15 and above n=52***	
	f	*%*	*f**	*%*
Study status				
Full-time study	3	12.5	10	19.2
Part-time study or distance learning programme	0	0	0	0
Completed school / dropout	3	12.5	28	53.8
Registered at school but persistently absent	18	75	13	25
Missing	0	0	1	1.9
Work status				
Had paid job, average working hours ≥35 hours	---	---	---	---
Had paid job, average working hours ≤35 hours	---	---	4	7.7
Looking for work	1	4.2	22	42.3
Unable to work due to health problem			3	5.8
Other	2	8.3	3	5.8

8. All participants were living with their family and around 1/3 were from single parent family, either with or without sibling (32.9%). Nearly 40% of the participants were from a typical nuclear family.

Table III: Participants by living status

Family composition	***f***	***%***
Living alone	0	0
Living with family	**76**	**100**
parents only	*13*	17.1
parents and sibling	*30*	39.5
father/mother only	*16*	21.1
Mother and sibling(s)	*9*	11.8
other	*8*	10.5
Total	**76**	

Social withdrawal behaviour

9. The four items of the social withdrawal behaviour were adopted from the research diagnostic criteria used by a study on social withdrawal behaviour in Hong Kong[9]. Participants were asked the extent of their agreement to each of the statement concerning problematic social behaviour on a Likert scale of 5 points. A higher score reflected a higher level of agreement to the accuracy of the statement in describing their situation. Table IV showed that the statement with the highest score was 'spending most of the day and nearly every day confined at home' (3.97) and 'feeling embarrassed in social situation' (3.26), indicating a definite agreement to the statement. Respondents seemed to be less definite to the other two statements 'persistently avoiding social situations' (2.86) and 'not leaving the room or place of residents for school and/or work' (2.64).

   Table IV: Participants by withdrawn status at pretest

Social withdrawn status	***N=76***	
	mean	***SD***
Spending most of the day and nearly every day confined at home	3.97	.923
Persistently avoiding social situations (such as going to school or working, making friends and contact with family members)	2.86	1.029
Not leaving the room or place of residence for school and/or work	2.64	1.055
Feeling embarrassed in social situation	3.26	1.038
Average mean	3.18	0.71

10. In this sample, it seemed that participants were more likely to seek help the longer they were in a 'withdrawn' state. Around 43.4% of the respondents reported that their social withdrawn behaviour had lasted for 6 months or more. Participants who reported to have experienced the problem for less than 3 months comprised less than 20% (18.4%) (Table V)

    Table V: Participants by duration of problem

Duration of problem	***f***	***%***
Less than one month	5	6.6
>1 month and ≤ 3 months	9	11.8
>3 month and ≤ 6 months	8	10.5
>6 month and ≤ 1 year	8	10.5
>1 year and ≤ 2 years	19	25.0
>2 years and ≤ 3 years	6	7.9
>3 years	21	27.6
Total	**76**	**100.0**

11. With regard to help seeking behaviour prior to participation in the RM-AAT programme, a majority of the participants (61.8%) did not receive any service from both social service and training institutes, around one-third had received counselling services from school social worker, NGO or crisis centre and only 4 (5.3%) had received any training (Table VI). This supported the assumption that there were probably barriers to

[9] Wong et al. (2015). The prevalence and correlates of severe social withdrawal (hikikomori) in Hong Kong: a cross-sectional telephone-based survey study. International journal of social psychiatry, 61(4), 330-342.

seeking help among this group of withdrawn youths. Even those who have received counselling service from school social worker or NGOs, specialized service is probably needed to deal with the issue.

Table VI: Participants by previous training or social services received

Training / social services received	*f*	*%*
Social Services	25	32.9
Training	4	5.3
Nil	47	61.8

Mental health status

12. In addition to social withdrawal behaviour, some of the cases might experience other mental health issues. In this sample, 14 cases (18.4%) reported to have diagnosed as having mental health issue. Among them, a large majority (13 cases) stated that they were diagnosed as having depression or anxiety and one reported to have attention deficit (Table VII)

Table VII: Participants by ever diagnosed as having mental health problem

	f	*%*
Mental Health problems	14	18.4
depression/anxiety	*13*	*92.9*
Attention deficit	*1*	*7.1*
No mental health problems	62	81.6
Total	**76**	**100.0**

Experiences with companion animals

13. A majority of the participants reported that they have kept companion animal(s) either currently (30.3%) or previously (38.2%). Only 31.6% of the participants stated that they had never had a companion animal in the household. As compared with the figures by the Census and Statistics Department conducted in 2006 and 2011 (12.6% and 10.6% respectively)[10][11][12], this sample tended to skew toward people who have had experience with companion animals. Table VIII illustrated the breakdown of participants who had experience with companion animals (current and previous) and their preference to participate in the AAI component of the programme. Figures showed that participants with current/previous experience with companion animals are considerably more likely to prefer the AAI component.

[10] Census and Statistics Department, H. (2006). Thematic household survey report no. 26, Keeping of pets by households. HKSAR. Retrieved from: http://www.statistics.gov.hk/pub/B11302262006XXXXB0100.pdf
[11] Census and Statistics Department, H. (2011a). Keeping of dogs and cats. Retrieved from http://www.statistics.gov.hk/pub/B11302482011XXXXB0100.pdf.
[12] The 2006 survey collected data on eight types of animals while the 2011 survey only asked for information on cats and dogs.

Table VIII: Experience with companion animals by preference in AAI component

Experience with companion animal	AAI preferred		AAI not preferred		Total	
	f	*%*	*f*	*%*	*f*	*%*
current / previous	34	65.4	18	34.6	52	100
Never	11	45.8	13	54.2	24	100

14. In terms of type of animals, among those with current or previous experience with companion animals, the most common type kept was fish (64.3%), followed by tortoise (46.2%), cat (34.6%) and hamster (28.8%). Comparatively, dog keeping was not very common among this client sample (26.9%). This was not surprising given the likelihood of the respondents residing in subsidized housing and the 'no dog policy' in housing estates in Hong Kong.

Programme protocol

15. The RM programme was an individually tailored multimodal intervention programme comprising various components including individual and group counselling, as well as an AAI component. Participants were informed of the AAT component at intake and they were free to join voluntarily. Eventually, 59.2% (n=45) of the participants joint the AAI components of the programme and 40.8% (n=31) of the participants participated in the traditional worker to client approach.

Outcome measures

16. Two categories of outcomes were assessed at the end of the intervention period; first, behavioural changes with respect to with social withdrawn behaviours and their (re)-engagement in the community.

Behavioural changes

17. Social withdrawn behaviours: Changes in the extent of the agreement to four statements on social withdrawn behaviours were illustrated in Table IX. Participants showed a statistically significant reduction in social withdrawn behaviour in all the four statements, suggesting a significant improvement in their presenting problems.

Table IX Participants by differences in social withdrawn behaviours

	Mean		Std. Deviation		95% confidence level	
	T0	*T1*	*T0*	*T1*	*t*	*Sig.(2-tailed)*
A	3.97	2.71	0.923	1.263	7.016	0.000***
B	2.86	2.36	1.029	0.976	3.551	0.001**
C	2.64	2.14	1.055	0.89	3.649	0.000***
D	3.28	2.79	1.034	0.963	3.461	0.001**

*p<0.05, **p<0.005, ***p<0.0005

A: spending most of the day and nearly every day confined at home
B: persistently avoiding social situations (such as going to school or working, making friends and contact with family members)

C: not leaving the room or place of residence for school and/or work
D: Feeling embarrassed in social situation

18. Re-engagement in community: Behaviourally, (re)-engagement of the participants in the community was assessed by their participation in studying and at work. Table X illustrated the differences before and after the RM intervention. Considerable improvement were also observed in participants in (re)-engaging into the community. For participants less than 15 years old, percentage of those who went back to school or had found some occupation has increased from 12.5% to 75%. For participants who were 15 years old and above, the percentage of community participation has increased from 26.9% to 86.5%.

Table X Participants by difference in study and /or work status

Study/ Work status*	***Less than 15 n=24***				***15 and above n=52***			
Study status	*To*		*T1*		*To*		*T1*	
	f	*%*	*f*	*%*	*f**	*%*	*f**	*%*
Full-time study	3	12.5	14	58.3	10	19.2	16	30.8
Part-time study or distance learning programme	0	0	2	8.3	0	0	9	17.3
Completed school / dropout	3	12.5	4	16.7	28	53.8	25	48.1
Registered at school but persistently absent	18	75	4	16.7	13	25	2	3.8
Missing	0	0	--	--	1	1.9	--	--
Work status	*To*		*T1*		*To*		*T1*	
	f	*%*	*f*	*%*	*f**	*%*	*f**	*%*
Had paid job, average working hours ≥35 hours	---	---	1	4.2	--	--	11	21.2
Had paid job, average working hours ≤35 hours	---	---	1	4.2	4	7.7	9	17.3
Looking for work	1	4.2	3	12.5	22	42.3	21	40.4
Unable to work due to health problem	---	---	---	0.0	3	5.8	--	0.0
Other	2	8.3	1	4.2	3	5.8	1	1.9

*The total number in each column may be different from the number of cases since some participants have reported to be both working / studying, e.g. part-time study and part-time work

Psycho-social outcomes

19. Table XI reported the changes in the three psycho-social measures before and after the RM intervention. Positive changes were observed in the mean scores of all the three measures, i.e. participants had a higher self-esteem, lower social anxiety and a better perceived employability after the RM intervention. Statistical significant improvements were found in the area of self-esteem and perceived employability but was short in interaction anxiousness.

Table XI Participants by changes in RSES, IAS and PES scores

	Mean		Std. Deviation		95% confidence level	
	T0	*T1*	*T0*	*T1*	*t*	*Sig.(2-tailed)*
RSES	24.45	27.00	4.44	4.77	-4.924	0.000***
IAS	49.64	47.93	10.04	9.43	1.501	0.138
PES	45.87	49.43	8.61	7.92	-3.499	0.001**

**p<0.005, ***p<0.0005

Comparison between those had and had not participated in the AAT component(s)

Characteristics of AAT participants

20. Among the 76 participants, the ratio of AAT participation was around 6:4. At the beginning of the programme, 45 (59.2%) participants intended to participate in one or more AAT components. Among them, more than one third (n=17, 37.8%) stated that they would not or might not joint the RM programme at all if there were no AAT component. The figure was slightly different at the end of the programme. When the same set of question was asked again at posttest, eventually, 48 participants (63.2%) of the participants joint RM and 13 (27.1%) participants still considered the AAT component a prerequisite / possible prerequisite for them to join the programme.

21. For participants who have joint the AAT components, pet grooming was the most common (66%) followed by individual counselling (63.8%), group activities (40.9%), home visits (14.9%) and pet caring (14.9%).

22. To explore if there were any difference in impact on participants who have / have not participated in the AAI components, participants were categorized into the AAT (A) and non-AAT (B) groups. Only participants who have participated in at least two AAT-related sessions were categorized as the AAT group. The number of participants in Group A and Group B was thus 47 and 29 respectively.

Behaviour changes

23. Only the four statements on social withdrawn behaviours were analysed by AAT and non-AAT groups. Data on changes in (re)-engagement in the community was not included in the current analysis as the number in each type of situation was too small for any meaningful interpretation.

Social withdrawn behaviours

24. Table XII reported the differences in social withdrawn behaviour by AAT participation. To simplify the comparison and discussion, the mean score of the four statements were averaged. Both group A and group B participants showed a statistically significant improvement in their social withdrawn behaviour; with AAT group at significant level of $p<0.0005$ and non-AAT group at $p<0.005$.

Table XII: Respondents by difference in social withdrawn behavior mean score by participation in AAT component.

		Mean		*SD*		*95% confidence level*	
Withdrawn		*T0*	*T1*	*T0*	*T1*	*t*	*Sig.(2-tailed)*
status	A=47	3.31	2.53	0.72	0.85	4.750	0.000***
	B=29	3.02	2.46	0.66	0.65	4.236	0.002**

**p<0.005, ***p<0.0005 A=AAT group; B=non-AAT group

Psychosocial outcomes

25. In terms of the difference between the two groups in their changes in self-esteem, social anxiety and perceived employability, positive changes in the mean score was observed in both groups in all the three psychosocial aspects. However, statistical significant results was found only in measures in self-esteem and social anxiety for both AAT and non-AAT groups (Table XIII).

Table XIII: Respondents by difference in psychosocial mean scores by participation in AAT programmes

		Mean		*SD*		*95% confidence level*	
		T0	*T1*	*T0*	*T1*	*t*	*Sig.(2-tailed)*
RSES	A=47	24.1	27.1	4.52	4.94	-3.87	0.000***
	B=29	25	26.9	4.32	4.59	-3.373	0.002**
IAS	A=47	51.1	49.8	10.0	9.47	0.895	0.376
	B=29	47.3	45	9.77	8.71	1.271	0.214
PESES	A=47	46.6	49.9	8.59	8.33	-2.718	0.009*
	B=29	44.8	48.7	8.68	7.27	-2.176	0.038*

*p<0.05, **p<0.005, ***p<0.0005 A=AAT group; B=non-AAT group

Attitude towards dogs

26. The Attitude Towards Dogs Scale (ADS) was used to assess the attitude of all participants towards dogs. The mean score ranges from 1 to 3, a higher score indicates a more positive attitude. In this sample, participants appeared to have a rather positive attitude towards dogs when they join the programme (mean score 2.43). This was not surprising given the fact that a majority of them (68.5%) already had experience with companion animals. There was also a slight positive increase in attitude towards dogs at the end of the programme (mean score = 2.5).

Role of therapy dog

27. Among participants who have participated in the AAT component(s), a Pet Bonding Scale (PBS) was used to assess their perceived role of the therapy/ visiting dogs which was conceptualized into: unconditional acceptance from the animal (UA), feelings of reciprocity (RC), and positive feelings / attachment to the therapy/visiting dog (PA). A Likert Scale of 1 to 5 were used with 1 = more often true to 5 = more often false. A lower mean score indicated a more positive attitude.

28. Statements that ranked the highest in participants' perception on the role of the therapy dog were: "The visiting dogs/therapy dog are (not) boring" (PA) (2.3); 'The visiting dogs/therapy dog makes me feel happy'. (PA)(2.4); 'The visiting dogs/therapy dog doesn't judge me' (UA) (2.4); "The visiting dogs/therapy dog accepts me just the way I am" (UA) (2.6); "The visiting dogs/therapy dog likes me: (UA) (2.6); "The visiting dogs/therapy dog makes me feel better" (PA) (2.6); "I will remember the visiting dogs/therapy dog after the programme" (PA)(2.6). (Table XIV). Overall, perception on the role of the visiting dogs/therapy dog as showing 'unconditional acceptance' (mean=2.7) and inducing 'positive feelings/ attachment. (mean=2.7) were considered more prominent. Similar pattern with regard to how the therapy dog was perceived was also found in the previous two phases, indicating that in the RM programme, the therapy dog(s) have played a consistent function in facilitating changes.

Table XIV. Mean score of Pet Bonding Scale

Pet Bonding Scale	Mean
Unconditional acceptance	
The visiting dogs/therapy dog likes me 來探訪的犬隻或治療犬喜歡我。	2.6
The visiting dogs/therapy dog is always glad to see me. 來探訪的犬隻或治療犬見到我，總是很高興的樣子。	2.8
The visiting dogs/therapy dog prefers me to others. 來探訪的犬隻或治療犬對我特別好。	3.0
The visiting dogs/therapy dog has become my friend. 來探訪的犬隻或治療犬和我已成為朋友。	3.2
The visiting dogs/therapy dog doesn't judge me. 來探訪的犬隻或治療犬不會批判我。	2.4
The visiting dogs/therapy dog accepts me just the way I am. 來探訪的犬隻或治療犬無條件地接納我。	2.6
Subscale score	**2.7**
Reciprocity	
I talk to the visiting dogs/therapy dog. 我有對來探訪的犬隻或治療犬說話。	3.1
I confide in the visiting dogs/therapy dog. 我有對來探訪的犬隻或治療犬傾吐心事。	3.7
The visiting dogs/therapy dog understands what I say. 來探訪的犬隻或治療犬明白我的說話。	3.2
The visiting dogs/therapy dog knows when I feel bad 若我不開心，來探訪的犬隻或治療犬是知道的。	3.2
The visiting dogs/therapy dog knows when I feel happy. 若我開心，來探訪的犬隻或治療犬是知道的。	3.0
The visiting dogs/therapy dog tries to comfort me. 來探訪的犬隻或治療犬會安慰我。	3.1
Subscale score	**3.2**
Positive feelings / attachment	
I look forward to getting up in the morning on days when I will see the visiting dogs/therapy dog. 有犬隻或治療犬來探訪的日子，我都會充滿盼望，早上很快便會起床。	3.2
I tell others about the visiting dogs/therapy dog. 我會告訴別人關於來探訪的犬隻或治療犬的事。	3.1
I would like to have the visiting dogs/therapy dog come to my home. 我希望來探訪的犬隻或治療犬也可以到我家中。	2.9
I will remember the visiting dogs/therapy dog after the	2.6

Pet Bonding Scale	Mean
programme. 活動完結之後，我仍會記著來探訪的犬隻或治療犬。	
The visiting dogs/therapy dog make me feel better 犬隻探訪或治療犬活動令我心情較好。	2.6
The visiting dogs/therapy dog are boring. 犬隻探訪或治療犬活動令人感到沉悶。(recoded)	2.3
I feel attached to the visiting dogs/therapy dog. 我覺得對來探訪的犬隻或治療犬有強烈的感情。	3.0
The visiting dogs/therapy dog give me energy. 犬隻探訪或治療犬活動令我更有活力。	2.9
I miss the visiting dogs/therapy dog between visits 我會記掛著來探訪的犬隻或治療犬。	2.8
I look forward to the visiting dogs/therapy dog sessions. 我期待犬隻探訪或治療犬活動。	2.7
The visiting dogs/therapy dog makes me feel happy. 犬隻探訪或治療犬活動令我感到愉快。	2.4
I make the visiting dogs/therapy dog feel happy. 我令來探訪的犬隻或治療犬快樂。	2.8
The visiting dogs/therapy dog takes my mind off my troubles. 來探訪的犬隻或治療犬令我忘掉煩惱。	2.7
The visiting dogs/therapy dog helps me feel secure. 來探訪的犬隻或治療犬令我有安全感。	2.7
Subscale score	**2.7**
Total Scale	2.8

Discussion and conclusion

29. In this sample, a very noticeable feature in the profile of the participant was the high percentage of cases who were under 15 years of age (31.6%). As compared with the participants in the previous phases, the percentage of this group is almost triple on average (10.4%, 16.2% and 11.5% during pilot and phase I & II). We did not have enough information to interpret this phenomenon. One possible explanation was that that potential referrers have become more aware of the phenomenon of social withdrawal and have make referrals at an earlier stage when social withdrawn symptoms were manifested. Another possibility that should worth our further attention was that the issue of social withdrawal might have manifested at an earlier age.

30. In terms of programme outcome measures, it was found that the programme was effective in improving the behavioural and psychosocial heath of the participants. Behaviourally, participants showed significant improvement in their problematic social behaviour ($p<0.0005$) and a majority of them have re-engaged in the community by either going back to school or engaged in gainful employment (from 26.3%[13] at pretest

[13] This is calculated by adding the number of participants who have reported to engage in full-time /part-time study, distance learning, had a full-time/part-time job and those who claimed to have health problem: T0= (3+10+4+3)/76*100= 26.3%;

to 75%[14] at posttest.)

31. In line with the general trend in previous phases, it was found that the programme was effective in improving the self-esteem, social anxiety and perceived employability of the participants and statistical significant changes were found in the aspect of self-esteem and perceived employability.

32. Again, consistent with the trend found in other phases, the inclusion of the AAI component was an incentive for some in taking the first step to seek help. In each of the phases, around 20% to a quarter of the participants stated that they would not or may not joint the programme at all if there no AAI component.

33. In sum, across the three phases between the periods of 2012-2018, a total of 190 socially withdrawn youths have participated in the pre-post quantitative study[15] using a multimodal intervention approach. Service recipients were found to have benefited from the intervention in terms of their reduction in socially withdrawn behaviour, increasing community engagement and an improvement in their self-esteem and confidence in gainfully employed (perceived employability). Service recipients were found to be socially less anxious after the RM programme though the results were short of statistical significance.

34. Again, in all the three phases, the inclusion of AAT component in the intervention model was proved to be critical for this target group. Many took the first step to seek help because they were attracted by the opportunity to interact with a dog. Although more in-depth studies are needed to explore further the use of AAT as an alternative intervention approach for this target group, preliminary findings suggested its positive value for those who might otherwise be left without any help at all.

[14] T1=(14+16+2+9+11+1+9) - 5 (those who have dual status) /76*100 = 75%
[15] Phase I: 68; Phase II: 46; Phase III: 76