
Appendix 1: Pilot Gang Affiliation Risk Measure (58 item P-GARM)

The Questionnaire

Researcher prompt: Thank you for agreeing you fill in this questionnaire. I am going to read the questions out. If there are any you want me to read again, please just ask me to. If there are any you don't understand, please ask me to explain a bit more and I will. Then you will have the option of answering 'yes' or 'no'. Remember that your answers will help us to assist much younger children who may be at risk of joining gangs. It is really important that you answer the questions honestly, as your information will shape how we offer support to 'at risk' young people in XXX (the local area). Your answers will be kept confidential and will not be shared with anyone else. We are just a research team trying to find out the best ways of keeping young people in XXX safer. You can help us with that by allowing us to better understand the difficulties some of these young people might have faced in the past. You can do this by answering this questionnaire.

The questionnaire is trying to find out more about experiences **you had before you started secondary school**, so please try to think back to the last year of primary school when you are answering the following questions. Ok, are you ready to start? The first chunk of questions will be about family.

Part 1: Family

1. Had you witnessed violence at home?
 - Yes
 - No

2. Did the people who lived with you sort out problems using violence?
 - Yes
 - No

3. Did you usually tell your family where you were going, when you went out?
 - Yes
 - No

4. When you got home from school, did anyone ask you how your day had been??
 - Yes
 - No

5. Was your biological father living at home with you?
 - Yes
 - No

6. Did you have a family member in a gang?
 - Yes
 - No

Researcher prompt: Some of these questions might feel hard to answer honestly. For some of the more personal questions, there is a 'prefer not to say' option. Please feel free to choose this if you are uncomfortable answering any of the more personal questions. Remember to think back to when you were at your last year of primary school when you are answering the following questions.

7. Do you think that kids should be treated how you were treated at home?

- Yes
- No

8. Had you experienced harsh discipline at home?

- Yes
- No
- Prefer not to say

9. Did your parents work?

- Yes
- No

10. Did you feel protected from harmful or dangerous adults?

- Yes
- No
- Prefer not to say

11. Had you experienced sexual abuse?

- Yes
- No
- Prefer not to say

12. Was your mum under the age of 20 when she had you?

- Yes
- No

13. Did you have a social worker?

- Yes
- No
- Prefer not to say

Researcher prompt: How are you doing? Okay? These ones are a little less personal and more about your time at school. Remember to think back to when you were at your last year of primary school when you are answering the following questions. Okay?

Part 2: Education

14. Did you get kicked out of school at any point?

- Yes
- No

15. Did your teachers care if you did well at school?

- Yes
- No

16. Did your parents care if you did well at school?

- Yes
- No

17. Did you think that if you worked hard at school you'd get a good job?

- Yes
- No

18. Did you regularly bunk off school?

- Yes
- No

19. Did you like most of your teachers?

- Yes
- No

Researcher prompt: Okay? Enough about school. These questions are more about the area you grew up in. Remember to think back to when you were at your last year of primary school when you are answering the following questions. Okay, here we go.

Part 3: Community

20. Were you aware of post code gangs in your area?

- Yes
- No

21. Had you witnessed violence in your area?

- Yes
- No

22. Did you think it was easier to make money on the roads than getting a job?

Note to researcher: 'on the roads' is involvement in illegal activity such as drug dealing

- Yes
- No

23. Did you often have a feeling of fear when leaving your front door?

- Yes
- No

24. Did your friends seem to have more money than you?

- Yes
- No

25. Were there areas you'd avoid you'd witnessed, experienced or heard about violence?

- Yes
- No

26. Were there areas you could go to that felt calm, and not too hot for you?

Note to researcher: 'not too hot for you' means not too unsafe for you

- Yes
- No

27. Were most of your friends on the roads?

Note to researcher: 'on the roads' is involvement in illegal activity such as drug dealing

- Yes
- No

28. Were most of your friends in a gang?

- Yes
- No

29. Did you know many people in gangs?

- Yes
- No

30. Had you regularly heard about people being shot, stabbed or killed in your area?

- Yes
- No

31. Were drugs available in your area?

- Yes
- No

32. Did you know of shottng going on in your area?

Note to researcher: 'shotting' refers to drug dealing.

- Yes
- No

Researcher prompt: Ok? These questions are more about health now. We're about half way through. Remember to think back to when you were at your last year of primary school when you are answering the following questions. Ok, let's continue.

Part 4: Health

33. Had you smoked weed?

- Yes
- No

34. Had you been badly beaten up?

- Yes
- No

35. Had you been in trouble for fighting or hurting other people?

- Yes
- No

36. Had you got drunk?

- Yes
- No

37. Had you been bullied?

- Yes
- No

38. Did you find it easy to make friends with people who behaved well at school?

- Yes
- No

Researcher prompt: Okay, only one more chunk to go now. These questions are about emotional health. Remember to think back to when you were at your last year of primary school when you are answering the following questions. Ok?

Part 5: Emotional Health

39. Did you often have aggressive thoughts?

- Yes
- No

40. Did you regularly have nightmares?

- Yes
- No

41. Did you have the sense that life would be short?

- Yes
- No

42. Was your area so hot for you that you had to look over your shoulder all the time, to stay safe?
- Yes
 - No
43. Did unpleasant thoughts or images come into your mind unexpectedly; related to violent things you'd seen or heard?
- Yes
 - No
44. Could you imagine yourself growing old?
- Yes
 - No
45. Did you feel good about yourself?
- Yes
 - No
46. Did you feel people respected you?
- Yes
 - No
47. When things went wrong in life, would you blame others?
- Yes
 - No
48. Did you worry a lot about things before you did them?
- Yes
 - No
49. Did you ever experience a racing heart, shaking, shortness of breath and the sense that something bad might happen?
- Yes
 - No
50. Did you experience thoughts that you'd be better off dead?
- Yes
 - No
51. Did you get angry easily?
- Yes
 - No
52. When you got angry, did it take you a long time to calm down?
- Yes
 - No
53. Did you find it hard to concentrate?

- Yes
- No

54. Did you often do or say things in the moment, which you later regretted?

- Yes
- No

55. Had you ever heard voices which didn't seem to belong to anyone around you?

- Yes
- No

56. Had it seemed like your thoughts or behaviour was controlled by something other than you?

- Yes
- No

57. Sometimes people hurt themselves when they feel stressed. Is this something you had done?

- Yes
- No

58. Had you been able to talk to someone about your feelings, like a counsellor or psychologist?

- Yes
- No

Researcher Prompt:

That's great. Well done sticking with it 'til we got all the way through to the end. The last chunk was quite long wasn't it? You've done really well and your answers will help us to help young people in the area, in the future so **thank you**. We have some last questions about how you found it. I hope you wouldn't mind answering these before we end.

Prompt for exit interviews also ensure think-alouds have been noted on spare page.

Appendix 2: 26-item UK Gang Affiliation Risk Measure

The Questionnaire

Researcher prompt: Thank you for agreeing to filling in this questionnaire. I am going to read the questions out. If there are any you want me to read again, please just ask me to. If there are any you don't understand, please ask me to explain a bit more and I will. After that, you will have the option of answering 'yes' or 'no'. Remember that your answers will help us to assist much younger children who may be at risk of joining gangs. It is really important that you answer the questions honestly, as your information will shape how we offer support to 'at risk' young people in XXX (name of Local Authority Borough removed for safeguarding). Your answers will be kept confidential and will not be shared with anyone else. We are just a research team trying to find out the best ways of keeping young people in XXX (name of Local Authority Borough removed for safeguarding) safer. You can help us with that by allowing us to better understand the difficulties some of these young people might have faced in the past. You can do this by answering this questionnaire.

The questionnaire is trying to find out more about experiences you had before you started secondary school, so please try to think back to the last year of primary school when you are answering the following questions. Ok, are you ready to start? The first chunk of questions will be about family.

Part 1: Family

59. Had you witnessed violence at home?

- Yes
- No

60. Did the people who lived with you sort out problems using violence?

- Yes
- No

61. Did you usually tell your family where you were going, when you went out?

- Yes
- No

62. When you got home from school, did anyone ask you how your day had been?

- Yes
- No

63. Was your biological father living at home with you?

- Yes
- No

64. Did you have a family member in a gang?

- Yes
- No

65. Was your mum under the age of 20 when she had you?

- Yes
- No

Researcher prompt: How are you doing? Okay? These ones are a little less personal and more about your time at school, and the area you grew up in. Remember to think back to when you were at your last year of primary school when you are answering the following questions. Okay, here we go.

Part 2: Education

66. Did you get kicked out of school at any point?

- Yes
- No

Part 3: Community

67. Were you aware of post code gangs in your area?

- Yes
- No

68. Had you witnessed violence in your area?

- Yes
- No

69. Did you think it was easier to make money through gang involvement rather than getting a job?

- Yes
- No

70. Did you often have a feeling of fear when leaving your front door?

- Yes
- No

71. Did your friends seem to have more money than you?

- Yes
- No

72. Were there areas you'd avoid because you'd witnessed, experienced or heard about violence?

- Yes
- No

73. Were there areas you could go to that felt calm and safe?

- Yes
- No

74. Had you regularly heard about people being shot, stabbed or killed in your area?

- Yes
- No

Researcher prompt: Ok? These questions are more about health now. We're about half way through. Remember to think back to when you were at your last year of primary school when you are answering the following questions. Ok, let's continue.

Part 4: Health

75. Had you been badly beaten up?

- Yes
- No

76. Had you been in trouble for fighting or hurting other people?

- Yes
- No

Part 5: Emotional Health

77. Did you *often* have aggressive thoughts?

- Yes
- No

78. Did you *regularly* have nightmares?

- Yes
- No

79. Did you have the sense that life would be short?

- Yes
- No

80. In your area, did you feel that you had to look over your shoulder all the time, to stay safe?

- Yes
- No

81. Did unpleasant thoughts or images come into your mind unexpectedly; related to violent things you'd seen or heard?

- Yes
- No

82. Did you ever experience a racing heart, shaking, shortness of breath and the sense that something bad might happen?

- Yes
- No

83. When you got angry, did it take you a long time to calm down?

- Yes
- No

84. Had it seemed like your thoughts or behaviour was controlled by something other than you?

- Yes
- No

Researcher Prompt: Lastly, it is useful for us to know which category to put you in, so that we know what the risks really are for young people in our research. Remember that the results will all come out like numeric data and charts. It won't be clear who has answered which question. Remember also, that this is confidential. When answering this question, you don't need to tell me any specific information, but can you tick which statement below applies best to you? I'll give this to you to do yourself. Please be honest-it will help us in our analysis of the results.

As far as you are concerned, have you ever been involved in a gang in any of the following ways? (Please tick the one that best applies to you):

- I have been a member of a gang
- I have been loosely involved in a gang
- I hang around with lots of other people who are gang-affiliated, but I am not really in a gang myself
- I have never had anything to do with any one in a gang and I have never been involved in a gang myself

Researcher Prompt:

That's great. Well done sticking with it 'til we got all the way through to the end. You've done really well and your answers will help us to help young people in the area, in the future so **thank you**.

Appendix 3: T-GARM

T-GARM

- 1 Do you usually tell your family where you are going, when you go out?
Yes=0 No=1
- 2 Is your biological father living at home with you?
Yes=0 No=1
- 3 Have you been kicked out of school at any point?
No=0 Yes=1
- 4 Have you witnessed violence in your area?
No=0 Yes=1
- 5 Do you think it is easier to make money through gang involvement rather than getting a job?
No=0 Yes=1
- 6 Have you been badly beaten up?
No=0 Yes=1
- 7 Have you been in trouble for fighting or hurting other people?
No=0 Yes=1
- 8 Do you have the sense that life will be short?
No=0 Yes=1
- 9 In your area, do you feel that you have to look over your shoulder all the time, to stay safe?
No=0 Yes=1
- 10 When you get home from school, does anyone ask you how your day has been?
Yes=0 No=1
- 11 Have you witnessed violence at home?
No=0 Yes=1
- 12 Do you often have aggressive thoughts?
No=0 Yes=1
- 13 Do the people who you live with sort out problems using violence?
No=0 Yes=1
- 14 Have you regularly heard about people being shot, stabbed or killed in your area?
No=0 Yes=1
- 15 Are you aware of post code gangs in your area?
No=0 Yes=1

A total score of 7 or more would indicate risk of gang affiliation, and would suggest early intervention support is provided

Appendix 4: Chi-square Test Results for Individual Items Between Groups

Table 8

Chi-square Test Results for Individual Items Between Groups

Item number	Variable	χ^2 (2)	P
1	Witnessing domestic violence	12.00***	.00
2	Social modelling of problem solving using violence	10.16**	.01
3	(Lack of) parental supervision A	39.94***	.00
4	(Lack of) parental supervision B	12.65***	.00
5	Absence of biological father	15.57***	.00
6	Familial gang membership	5.65	.59
7	Mother under 20	1.71	.43
8	Suspension or exclusion from school	37.87***	.00
9	Awareness of postcode gangs	7.59*	.02
10	Witnessing community violence	16.62***	.00
11	Perception that it's easier to make money through gang involvement than other routes	41.57***	.00
12	Fear in community setting	1.22	.55
13	Perception of comparative poverty (to peers)	5.20	.07
14	Avoidance in community	.07	.97
15	Lack of safe space in community	1.62	.45
16	Hearing about community violence	10.34***	.00
17	Victim of violent assault	17.87***	.00
18	Perpetrator of violent assault	28.96***	.00
19	Frequent aggressive thoughts	11.57***	.00
20	Regular nightmares	1.75	.42
21	Sense of foreshortened future	16.61***	.00
22	Hypervigilance	14.12***	.00
23	Intrusive thoughts and images of violent material	2.62	.27
24	Anxiety	2.18	.34
25	Lack of ability to self-regulate	3.66	.16
26	Thoughts and behaviour controlled by something other than themselves	5.93	.52

*p < .05, **p ≤ .01, *** p = <.005

Although it was acknowledged that statistical multiple comparisons can inflate the chances of a Type I error (Benjamini & Hochberg, 1995; Simes, 1986), the primary aim of this analysis was to guide a decision on the most promising items. The risk of applying a stringent correction for p-values would have risked the chances of a Type 2 error. Therefore, Clark-Carter's (1997) approach was taken in accepting uncorrected p-values at this stage. However, in subsequent analysis using total scores, a Bonferroni calculation has been applied.

Appendix 5: Eigenvalues for Items Across Seven Factors

No.	Items	Factors						
		1	2	3	4	5	6	7
1	Witnessed domestic violence	.47	-.44	.45	-.04	.00	.23	.18
2	Social modelling of problem solving using violence	.53	-.40	.48	-.09	-.05	.23	.16
3	Parental supervision expectation from young person	-.61	.33	-.13	.20	.22	.04	-.01
4	Parental supervision from parent	-.37	.25	-.41	.09	.23	.09	.09
5	Presence of biological father	-.39	.16	.09	-.08	-.13	-.07	.53
6	Familial gang membership	.42	-.18	-.15	.13	.22	-.21	-.35
7	Mother under 20 when they were born	.17	.09	.34	.17	.52	.34	-.27
8	Suspension or exclusion from school	.53	-.31	-.22	-.05	.15	-.05	.09
9	Awareness of postcode gangs in community	.33	.16	-.24	-.43	.40	.08	.33
10	Witnessed community violence	.54	.00	-.21	-.42	.22	.03	.11
11	Perception of ease of financial gain in comparison to gaining employment	.64	-.13	-.27	-.28	-.03	.06	.06
12	Presence of fear in community	.41	.49	.33	.03	.11	-.09	.11
13	Perception of comparative poverty (to peers)	.46	.27	.01	.13	-.40	.15	.18
14	Avoidance in community related to violence	.35	.58	-.00	-.17	-.02	.19	-.03

15	Lack of safe spaces in community	.15	.04	-.31	.11	-.23	.76	-.19
16	Regular hearing of community violence	.59	.12	-.15	-.10	-.04	-.04	.02
17	Victim of violent assault	.63	-.01	.09	-.09	.10	-.08	-.34
18	Perpetrator of violent assault	.39	-.39	-.51	.20	-.05	.11	.06
19	Frequent aggressive thoughts	.64	-.00	-.08	.34	.11	.00	.29
20	Regular nightmares	.43	.13	.20	.42	.12	.03	.16
21	Sense of foreshortened future	.61	-.03	.05	-.13	-.15	-.34	-.17
22	Hypervigilance	.64	.31	.05	-.16	.01	-.06	-.15
23	Intrusive thoughts and images of violence	.63	.25	-.04	.19	-.11	.07	-.01
24	Anxiety	.53	.40	.07	.14	-.13	-.14	-.05
25	Lack of ability to self-regulate after angry episode	.38	-.14	-.14	.48	.33	-.18	.21
26	Thoughts or behaviour controlled by something other than yourself	.42	-.02	-.23	.20	-.37	-.18	-.03

Items with loadings of 0.45 or above shown in bold