Camau Cynnar gyda'n Gilydd
Early Action Together

Rhaglen ACEau yr Heddlu a Phartneriaid
Police & Partners ACEs Programme

An evaluation of the Adverse Childhood Experience Trauma Informed Multi-agency Early Action Together (ACE TIME) training:

national roll out to police and partners

Appendix 2

An evaluation of the Adverse Childhood Experience Trauma Informed Multi-agency Early Action Together (ACE TIME) training:

national roll out to police and partners.

Appendix 2

Authors

Dr Freya Glendinning[1], Emma R Barton[2], Annemarie Newbury[2], Dr Hayley Janssen[2], Georgia Johnson[2], Gabriela Ramos Rodriguez[2], Dr Michelle A McManus[2] , Sophie Harker[2], and Professor Mark A. Bellis[2].

[1] Public Health Collaborating Unit, School of Health Sciences, Bangor University

[2] Policy and International Health, WHO Collaborating Centre on Investment for Health & Well-being, Public Health Wales

Acknowledgements

The Home Office funded this work through the Police Transformation fund (ref: PR-105).

We would like to express our gratitude to all of those who participated in the evaluation, including police officers and multi-agency partner staff working across the Dyfed Powys, Gwent, North Wales and South Wales police forces.

Thank you to the National ACE Coordinator Service, Barnardo's Cymru, for allowing the research team full access to all elements of the ACE TIME training.

Thank you to Dyfed Powys, Gwent, North Wales and South Wales police forces, particularly the Local Delivery Teams within each force, for supporting the delivery of the training and providing the research team with the access to carry out the evaluation.

We would like to thank Bethan Jones, Dr Jo Roberts, Dr Catherine Foster and Felicity Morris for their contribution to data collection, and the national programme team for continued support and guidance.

We would like to thank Will Hardy, Bangor University for his quality assurance of the findings reported throughout.

Finally, we would like to thank Professor Karen Hughes and Dr Rebecca Hill for reviewing the report and providing feedback.

Appendix 2

Table 1: Bayes factor evidence categories

Bayes factor	Strength of evidence
> 100	Extreme evidence for a difference (i.e., alternative hypothesis; $\mathcal{H}_1$)
30 - 100	Very strong evidence for a difference (i.e., alternative hypothesis; $\mathcal{H}_1$)
10 - 30	Strong evidence for a difference (i.e., alternative hypothesis; $\mathcal{H}_1$)
3 - 10	Moderate evidence for a difference (i.e., alternative hypothesis; $\mathcal{H}_1$)
1 - 3	Anecdotal evidence for a difference (i.e., alternative hypothesis; $\mathcal{H}_1$)
1	No evidence for a difference (i.e., alternative hypothesis; $\mathcal{H}_1$)
1/3-1	Anecdotal evidence for a difference (i.e., alternative hypothesis; $\mathcal{H}_0$)
1/10 - 1/3	Moderate evidence for no difference (i.e., null hypothesis; $\mathcal{H}_0$)
1/30 - 1/10	Strong evidence for no difference (i.e., null hypothesis; $\mathcal{H}_0$)
1/100 - 1/30	Very strong evidence for no difference (i.e., null hypothesis; $\mathcal{H}_0$)
< 1/100	Extreme evidence for no difference (i.e., null hypothesis; $\mathcal{H}_0$)

Note. This is A descriptive and approximate classification scheme for the interpretation of Bayes factors BF10 (Lee & Wagenmakers 2013; adjusted from Jeffrey's 1961).

3.1. Confidence in understanding of working with vulnerability, ACEs and their impact

Table 2: Paired samples t-test. Mean confidence change from pre to post-training (police sample)

Confidence working with…	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Vulnerability	3.896e+19	Extreme	3.351e-26	-.38	-.46, -.31	3.107e+19	2.348e+19
ACEs	4.977e+228	Extreme	3.050e-232	-1.87	-2.0, -1.74	6.253e+228	7.304e+134

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 3: Paired samples t-test. Mean confidence change from pre to post-training (MA partner sample)

Confidence working with…	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Vulnerability	1418	Extreme	8.198e-9	-.42	-.61, -.23	1155.58	886.67
ACEs	1.778e+29	Extreme	6.664e-36	-1.47	-1.73, -1.23	2.112e+29	2.267e+29

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

3.1.1 Confidence pre to post-training by demographic

Table 4: Independent samples t-test. Pre-training confidence scores by gender (police sample)

Confidence working with…	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior BF_{10}	Ultra wide prior BF_{10}
Vulnerability	.15	Moderate evidence for $_{H0}$	.00	-.08	-.22, .06	.11	.08
ACEs	.12	Moderate evidence for $_{H0}$	.00	-.06	-.20, .08	.09	.06

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 5: Independent samples t-test. Pre-training confidence scores by gender (MA partners sample)

Confidence working with…	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Vulnerability	.33	Moderate evidence for $_{H0}$	.02	-.17	-.60, .24	.24	.18
ACEs	.87	Anecdotal evidence for $_{H0}$	.00	-.34	-.77, .07	.69	.53

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 6: One way ANOVA with repeated measures. Confidence pre to post-training by demographic (police sample)

Confidence working with…	BF_{10} time	Error %	BF_{10} gender	Error%	BF_{10} 2x main effect	Error%	BF_{10} interaction	Error %	Cross product	Evidence for interaction $_{H1}$
Vulnerability	2.901e+19	2.44	5.51	.82	1.731e+20	2.45	6.513e+20	2.45	3.76	Moderate
Confidence working with…	**BF_{10} time**	**Error %**	**BF_{10} force area**	**Error%**	**BF_{10} 2x main effect**	**Error%**	**BF_{10} interaction**	**Error %**	**Cross product**	**Evidence for interaction $_{H1}$**
Vulnerability	4.095e+19	.97	.128	.41	6.091e+18	2.34	5.099e+19	1.57	8.37	Moderate

Note. This analysis utilises the strategy highlighted in Wagenmakers (2018), but instead assesses evidence for the interaction. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 7: Independent samples t-test. Post training confidence scores by gender (police sample)

Confidence working with…	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior BF_{10}	Ultra wide prior BF_{10}
Vulnerability	232.80	Extreme	7.339e-7	-.31	-.45, -.15	179.10	132.64
ACEs	226093	Extreme	7.210e-10	-.42	-.57, -27	183925.13	140867.02

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 8: Independent samples t-test. Post-training confidence scores by gender (MA Partners sample)

Confidence working with…	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Vulnerability	5.43	Moderate	.00	-.57	-1.05, -.12	4.81	3.95
ACEs	64.62	Very strong	5.688e-5	-.80	-1.29, -.34	62.90	55.65

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 9: One-way ANOVA. Pre-training differences in confidence scores by force area (police sample)

Confidence working with…	BF_{10}	Evidence for $_{H1}$	Error %
Vulnerability	4.83	Moderate	8.975e+4
ACEs	.29	Moderate evidence for $_{H0}$	.00

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 10: One way ANOVA post hoc analysis. Pre-training differences in confidence working with vulnerability by force area (police sample)

Force area	Force area comparison	BF_{10} U	Evidence for $_{H1}$	Error %
South Wales	Dyfed Powys	22.97	Strong	3.894e-7
	Gwent	12.66	Strong	4.211e-7
	North Wales	43.38	Very strong	3.926e-7

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.
The "U" in the Bayes factor denotes that it is uncorrected.

Table 11: One-way ANOVA. Pre-training differences in confidence scores by force area (MA partners sample)

Confidence working with…	BF_{10}	Evidence for $_{H1}$	Error %
Vulnerability	.21	Moderate evidence for $_{H0}$	.01
ACEs	.12	Moderate evidence for $_{H0}$	.00

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 12: Post hoc paired t-tests. Pre to post-training for the different genders and force area (police sample)

Confidence working with vulnerability by demographic	BF_{10}	Error%	Evidence for $_{H1}$
Male	4.103e+6	8.011e-10	Extreme
Female	5.468+12	1.701e-16	Extreme
Dyfed Powys	32589.41	2.269e-10	Extreme
Gwent	2.368e+13	1.199e-17	Extreme
North Wales	42091.25	4.828e-9	Extreme
South Wales	.17	5.297e-4	Moderate for $_{H0}$

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 13: One-way ANOVA. Post-training differences in confidence scores by force area (police sample)

Confidence working with…	BF_{10}	Evidence for $_{H1}$	Error %
Vulnerability	.01	Very strong evidence for $_{H0}$	.03
ACEs	.01	Very strong evidence for $_{H0}$	.03

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 14: One-way ANOVA. Post-training differences in confidence scores by force area (MA partners sample)

Confidence working with…	BF_{10}	Evidence for $_{H1}$	Error %
Vulnerability	.27	Moderate evidence for $_{H0}$	1.412e-4
ACEs	.08	Strong evidence for $_{H0}$	.00

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 15: One-way ANOVA. Pre-training differences in confidence scores by job roles (police sample)

Confidence working with…	Pre-training BF_{10}	Evidence for $_{H1}$	Error %	Post-training BF_{10}	Evidence for $_{H1}$	Error %
Vulnerability	.01	Extreme evidence for $_{H0}$	.01	.01	Extreme evidence for $_{H0}$	.04
ACEs	.44	Anecdotal evidence for $_{H0}$	9.326e-8	.05	Strong evidence for $_{H0}$	.01

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 16: One-way ANOVA. Pre-training differences in confidence scores by job sector (MA partner sample)

Confidence working with…	Pre-training BF_{10}	Evidence for $_{H1}$	Error %	Post-training BF_{10}	Evidence for $_{H1}$	Error %
Vulnerability	.10	Moderate evidence for $_{H0}$	.00	.20	Moderate evidence for $_{H0}$	.06
ACEs	1.12	Anecdotal evidence for $_{H0}$	7.831e-5	.85	Anecdotal evidence for $_{H0}$	8.306e-5

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

3.1.2. Confidence submitting vulnerability referrals (police)

Table 17: One-way ANOVA with repeated measures. Pre to post-training confidence about when to submit a vulnerability referral by force area (police sample)

Confidence in understanding about…	BF_{10} Time	Error %	BF_{10} Force Area	Error%	BF_{10} 2x Main Effect	Error%	BF_{10} Interaction	Cross Product	Error%	Evidence for Interaction $_{H1}$
…when to submit a vulnerability referral	145955.88	1.45	155.15	4.36	4.193e+7	1.11	4.681e+10	116.38	1.47	Extreme

Note. This analysis utilises the strategy highlighted in Wagenmakers (2018), but instead assesses evidence for the interaction. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 18: Post hoc paired samples t-tests. Pre to post-training confidence about when to submit a vulnerability referral by force area (police sample)

Confidence in understanding about when to submit a vulnerability referral	BF_{10}	Error%	Effect Size	95% CI	Evidence for $_{H1}$	Wide Prior	Ultra Wide Prior
Dyfed Powys	3.23	5.073e-6	-.26	-.46, -.07	Moderate	2.44	1.79
Gwent	1.461e+10	4.893e-14	-.46	-.58, -.34	Extreme	1.214e+10	9.414e+9
North Wales	.11	.00	-.05	-.20, .09	Moderate evidence for $_{H0}$	BF_{01} = 13.14	BF_{01} = 18.51
South Wales	.09	.00	.02	-.14, .18	Moderate evidence for $_{H0}$	BF_{01} = 14.97	BF_{01} = 21.09

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 19: One-way ANOVA. Pre and post-training differences between the force areas pre and post-training (police sample)

Confidence in understanding about…	Time	BF_{10}	Evidence for H1	Error %
…when to submit a vulnerability referral	Pre-training	870.96	Extreme	.00
	Post-training	2.07	Anecdotal	1.206e-4

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 20: Post hoc analysis differences by force area (pre-training). Confidence about when to submit a vulnerability referral (police sample)

Force Area	Force Area Comparison	BF U	Evidence for H1	Error %
South Wales	Dyfed Powys	244.66	Extreme	3.551e-8
	Gwent	7.96e+03	Extreme	3.596e-7
	North Wales	64.55	Very strong	2.647e-7

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

3.2 Anti-Social Behaviour Scenarios - Professional Judgement/Decision Making

Table 21: Paired sample t-tests. Mean change for professional judgement and decision making (ASB) pre to post-training (police sample)

	BF_{10}	Evidence $_{HI}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Criminal Activity	1.405e +25	Extreme	1.027e-31	-.44	-.52. -.36	1.154e+25	8.889e+24
Youth Responsibility	1.875e+10	Extreme	6.674e-17	.28	.21, .39	1.426e+10	1.048e+10
Repeat Call	1.77	Anecdotal	5.644e-17	.10	.03, .18	1.28	.90
Youth Vulnerability	9.59e+10	Extreme	1.331e-17	-.29	-.37, -.22	7.329e+10	5.4e+10
Future Behaviour	.08	Strong evidence for $_{H0}$	9.902e-6	-.04	.18, .03	.06	.04
Police Matter	690317.77	Extreme	1.616e-12	-.22	-.30,-.15	511429	370568
Seriousness of Incident	8.156e+34	Extreme	1.80e-41	-.53	-.61, .45	7.02e+34	5.57e+34

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 22: Paired sample t-tests. Mean change for professional judgement and decision making (ASB) pre to post-training (MA partner sample)

	BF_{10}	Evidence $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Criminal Activity	84782.50	Extreme	1.386e-10	-.50	-.69, -.32	72015.93	56782.70
Youth Responsibility	2.01	Anecdotal	3.465e-6	.22	.04, .40	1.50	1.10
Repeat Call	1.05	Anecdotal	4.992e-6	-.20	-.38, -.02	.78	.56
Youth Vulnerability	.16	Moderate evidence for $_{H0}$	7.761e-5	-.09	-.26, .09	.11	.08
Future Behaviour	.16	Moderate evidence for $_{H0}$	7.956e-5	-.08	-.26, .09	.12	.08
Police Matter	86.84	Very strong	3.037e-9	-.34	-.52, -.16	67.94	50.84
Seriousness of Incident	36763.17	Extreme	9.02e-08	-.48	-.67, -.30	30910.42	24205.38

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 23: Independent samples t-test. Pre-test differences in professional judgement and decision making scores by gender (police sample)

	BF10	Evidence for H1	Error %	Effect Size	95% CI	Wide Prior	Ultra Wide Prior
Criminal Activity	136.08	Extreme	1.547e-6	.28	.14, .42	103.48	76.11
Youth Responsibility	1.22	Anecdotal	1.657e-4	.17	.03, .31	1.12	1.60
Repeat Call	2.51	Anecdotal	8.216e-5	.19	.05, 33	1.84	1.34
Youth Vulnerability	.82	Anecdotal evidence for $_{H0}$	2.452e-4	-.15	-.30, -.02	.60	.43
Future Behaviour	538.23	Extreme	3.935e-7	.30	.16, .45	413.93	306.42
Police Matter	.09	Strong evidence for $_{H0}$	.02	.02	-.12, .16	.06	.04
Seriousness of Incident	.08	Strong evidence for $_{H0}$	.02	-.02	-.16, .13	.06	.04

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 24: Independent samples t-test. Pre-test differences in professional judgement and decision making scores by gender (MA partner sample)

	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Criminal Activity	.23	Moderate for $_{H0}$	.02	.00	-.41, .43	.17	.12
Youth Responsibility	.24	Moderate for $_{H0}$	.02	.04	-.37, .45	.18	.13
Repeat Call	.24	Moderate for $_{H0}$	.02	.04	-.36, .45	.17	.13
Youth Vulnerability	.72	Anecdotal for $_{H0}$	.01	-.32	-.75, .11	.56	.43
Future Behaviour	.24	Moderate for $_{H0}$	.02	-.05	-.47, .37	.18	.13
Police Matter	.25	Moderate for $_{H0}$	.02	-.08	-.49, .33	.19	.13
Seriousness of Incident	.24	Moderate for $_{H0}$	.02	-.04	-.46, .37	.18	.13

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 25: Independent samples t-test. Post-test professional judgement and decision making scores by gender (police sample)

	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Criminal Activity	1.157e+50/3.801e+50 = .304	Moderate evidence for $_{H0}$	*na*	*na*	*na*	*na*	*na*
Criminal Activity	.09	Strong evidence for $_{H0}$	.00	.02	-.13, .17	.06	.00
Youth Responsibility	.12	Moderate for $_{H0}$	.00	.06	-.09, .21	.08	.06
Repeat Call	.09	Strong evidence for $_{H0}$	.00	.02	-.13, .17	.06	.05
Youth Vulnerability	8.27	Moderate	1.943e-5	-.23	-.39, -.09	6.17	4.49
Future Behaviour	2.553e+50/4.087e+49 ≃ 6.25	Moderate	*na*	*na*	*na*	*na*	*na*
Future Behaviour	.010	Strong evidence for $_{H0}$	.00	-.04	-.18, .11	.07	.05
Police Matter	.13	Moderate evidence for $_{H0}$	.00	-.07	-.22, .08	.09	.07
Seriousness of Incident	1.05	Anecdotal	1.537e-4	-.17	-.33, -.02	.76	.56

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 26: Independent samples t-test. Post-test differences for professional judgement and decision making by gender (MA partners sample)

	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Criminal Activity	.27	Moderate evidence for $_{H0}$	.01	.07	-.36, .51	0.19	0.14
Youth Responsibility	.25	Moderate evidence for $_{H0}$	.01	-.00	-.43, .44	0.18	0.13
Repeat Call	.28	Moderate evidence for $_{H0}$	.00	-.10	-.35, .55	0.21	0.15
Youth Vulnerability	.26	Moderate evidence for $_{H0}$	.00	-.03	-.42, .48	0.19	0.14
Future Behaviour	.36	Anecdotal evidence for $_{H0}$	.00	.19	-.24, .63	0.27	0.20
Police Matter	.34	Anecdotal evidence for $_{H0}$	9.410-4	.18	-.27, .63	0.26	0.19
Seriousness of Incident	.26	Moderate evidence for $_{H0}$	.00	-.05	-.50, .40	0.19	0.14

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 27: One-way ANOVA. Pre and post-training differences for professional judgement and decision making by force area (police sample)

Variable	Pre-Test BF_{10}	Evidence for $_{H1}$	Error %	Method	Post-test BF_{10}	Evidence for $_{H1}$	Error %
Criminal Activity	.16	Moderate evidence for $_{H0}$	.002		.693	Anecdotal evidence for $_{H0}$	1.801e-5
Youth Responsibility	3.40	Moderate	9.519e-4	ANCOVA	7.022e+32/1.577e+35 ≃ .00	Extreme evidence for $_{H0}$	na
Youth Responsibility	na	na	na		.417	No evidence	6.632e-4
Repeat Call	.01	Extreme evidence for $_{H0}$	.033		.069	Strong evidence for $_{H0}$	.007
Youth Vulnerability	73573.99	Extreme	.012	ANCOVA	3.896e+39/6.947e+39 ≃ .56	Anecdotal evidence for $_{H0}$	na
Youth Vulnerability	na	na	na		5412.188	Extreme	.004
Future Behaviour	.014	Very strong evidence for $_{H0}$	.022		.130	Moderate evidence for $_{H0}$	.002
Police Matter	.338	Anecdotal evidence for $_{H0}$	.00		2.173	Anecdotal	7.033e-4
Seriousness of Incident	102.44	Extreme	9.317e-4	ANCOVA	9.699+49/4.465e+51 ≃ .02	Very strong evidence for $_{H0}$	na
Seriousness of Incident	na	na	na		62.65	No evidence	1.801e-5

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 28: One-way ANOVA. Pre and post-training differences in professional judgement and decision making by force area (MA partner's sample)

Variable	Pre-Test BF_{10}	Evidence for $_{H1}$	Error %	Post-Test BF_{10}	Evidence for $_{H1}$	Error %
Criminal Activity	.09	Strong evidence for $_{H0}$	.00	.11	Moderate evidence for $_{H0}$	.00
Youth Responsibility	.08	Strong evidence for $_{H0}$	.00	.14	Moderate evidence for $_{H0}$	8.255e-4
Repeat Call	.09	Strong evidence for $_{H0}$	.00	.12	Moderate evidence for $_{H0}$	.00
Youth Vulnerability	.05	Strong evidence for $_{H0}$	.00	.08	Strong evidence for $_{H0}$	.00
Future Behaviour	.25	Moderate evidence for $_{H0}$	.02	.06	Strong evidence for $_{H0}$	.00
Police Matter	.05	Strong evidence for $_{H0}$	.01	.68	Anecdotal evidence for $_{H0}$	2.231e-5
Seriousness of Incident	.23	Moderate evidence for $_{H0}$	2.289e-4	.23	Moderate evidence for $_{H0}$	2.083e-4

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 29: One-way ANOVA. Pre and post-training differences in professional judgement and decision making by job role (police sample)

Variable	Pre-Test BF_{10}	Evidence for $_{H1}$	Error %	Analysis Method	Post-Test BF_{10}	Evidence for $_{H1}$	Error %
Criminal Activity	182.61	Extreme	.00	*ANCOVA*	2.372e+46/2.355e+49 ≃ .00	Extreme evidence for $_{H0}$	na
Criminal activity	na	na	na		.41	Anecdotal evidence for $_{H0}$	2.584e-4
Youth Responsibility	.04	No evidence	.01		.01	Moderate evidence for $_{H0}$	.03
Repeat Call	4.71	Moderate	.00	*ANCOVA*	3.625e+38/7.833e+40 ≃ .00	Extreme evidence for $_{H0}$	na
Repeat Call	na	na	na		.25	Moderate evidence for $_{H0}$	4.087e-4
Youth Vulnerability	.34	Anecdotal evidence for $_{H0}$	.02		.03	Very strong evidence for $_{H0}$	.01
Future Behaviour	30.10	Very strong	.00	*ANCOVA*	1.076e+44/1.837e+47 ≃ .00	Extreme evidence for $_{H0}$	na
Future Behaviour	na	na	na		.01	Very strong evidence for $_{H0}$	.00
Police Matter	.28	Moderate evidence for $_{H0}$	3.447e-5		.53	Anecdotal evidence for $_{H0}$	1.147e-4
Seriousness of Incident	153.68	Extreme	.01	*ANCOVA*	1.167e+42/3.313e+43 ≃ .04	Strong evidence for $_{H0}$	na
Seriousness of Incident	na	na	na		.66	Anecdotal evidence for $_{H0}$	3.963e-4

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 30: One-way ANOVA. Pre and post-training differences in professional judgement and decision making by job sector (MA partner's sample)

Variable	Pre-Test BF_{10}	Evidence for $_{H1}$	Error %	Method	Post-Test BF_{10}	Evidence for $_{H1}$	Error %
Criminal Activity	.06	Strong evidence for $_{H0}$	.00	ANOVA	.06	Strong evidence for $_{H0}$	.00
Youth Responsibility	.07	Strong evidence for $_{H0}$	.00	ANOVA	.06	Strong evidence for $_{H0}$	.00
Repeat Call	.07	Strong evidence for $_{H0}$	.00	ANOVA	.71	Anecdotal evidence for $_{H0}$	5.754e-5
Youth Vulnerability	2.41	Anecdotal	1.412e-4	ANOVA	.18	Moderate evidence for $_{H0}$	.00
Future Behaviour	2.62	Anecdotal	1.645e-4	ANOVA	23.06	Strong	.00
Police Matter	.16	Moderate evidence for $_{H0}$	5.760e-4	ANOVA	.08	Strong evidence for $_{H0}$	.00
Seriousness of Incident	9.12	Moderate	.01	ANOVA	.19	Moderate evidence for $_{H0}$	.03
Seriousness of Incident	na	na	na	ANCOVA	1.357e+17/1.846e+18 ≃ .07	Strong evidence for $_{H0}$	na

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 31: One way repeated measures ANOVA. Perception of criminal activity pre to post-training by gender (police sample)

Variable	BF_{10} time	Error %	BF_{10} gender	Error%	2x Main effect	Error%	BF_{10} interaction	Cross product	Error%	Evidence for interaction $_{H1}$
Criminal Activity	9.329e+24	1.23	1.14	4.88	1.112e+25	4.39	1.217e+26	10.45	5.56	Strong

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 32: Post hoc paired t-tests. Perception of criminal activity pre to post-training for gender (police sample)

Criminal Activity	BF_{10}	Error%	Effect size	95% CI	Evidence for $_{H1}$	Wide prior	Ultra wide prior
Males	5.705e+8	1.199e-11	-.34	-.44, .25	Extreme	4.462e+08	3.334e+08
Females	2.895e+16	7.290e-21	-.59	-.71, .46	Extreme	2.569e+16	2.085e+16

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 33: One way ANOVA post hoc analysis. Pre-training differences in perception of criminal activity by job role (police sample)

Role	Role comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
PCSO	PC	421.74	Extreme	3.271e-8
PCSO	PS	54.85	Very strong	7.145e-8
PC	DC	4.22	Moderate	1.206e-7
DC	PS	3.81	Moderate	1.762e-6

Note. BF10 = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 34: One way ANOVA post hoc analysis. Pre-training differences in perception of youth responsibility by force area (police sample)

Force area	Force area comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
South Wales	Dyfed Powys	71.17	Very strong	1.137e-7

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 35: One way ANOVA post hoc analysis. Pre-training differences in perception of youth vulnerability by force area (police sample)

Force area	Force area comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
Dyfed Powys	Gwent	28898.20	Extreme	2.487e-8
	North Wales	1.071e+6	Extreme	1.766e-10
	South Wales	360.47	Extreme	7.395e-9

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 36: One way ANOVA post hoc analysis. Post-training differences in youth vulnerability by force area (police sample)

Force area	Force area comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
Dyfed Powys	Gwent	3085.95	Extreme	3.071e-9
	North Wales	21849.25	Extreme	2.094e-10
	South Wales	24859.56	Extreme	3.433e-11

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 37: One way ANOVA post hoc analysis. Pre-training differences in perception of seriousness of incident by force area (police sample)

Force area	Force area comparison	BF_{10} U	Evidence for $_{H1}$	Error %
Dyfed Powys	Gwent	111.16	Extreme	2.449e-8
	North Wales	46.19	Very strong	1.757e-7
	South Wales	2337.20	Extreme	2.741e-9

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 38: One way ANOVA post hoc analysis. Post-training differences in perception of seriousness of incident by force area (police sample)

Force area	Force area comparison	BF_{10} U	Evidence for $_{H1}$	Error %
Dyfed Powys	North Wales	223.176	Extreme	1.216e-8
	South Wales	86.849	Very strong	4.770e-9

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 39: One way ANOVA post hoc analysis. Pre-training differences in perception of incident seriousness by job role (police sample)

Role	Role comparison	BF_{10} U	Evidence for $_{H1}$	Error %
PCSO	PC	8.15	Moderate	1.700e-6
PCSO	DC	1193.68	Extreme	7.216e-9
PCSO	PS	48.93	Very strong	8.695e-8
PC	DC	9.54	Moderate	2.153e-8
DC	Police Staff (including comms/dispatch)	12.39	Strong	2.091e-4

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 40: One way ANOVA post hoc analysis. Pre-training differences in perception of incident seriousness by job roles (MA partner sample)

Role	Role comparison	BF_{10} U	Evidence for $_{H1}$	Error %
Health and well-being	Safeguarding/social care and family support	24.52	Strong	8.578e-7

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check.

3.3 Domestic Abuse Scenarios - Professional Judgement/Decision Making

Table 41: Paired sample t-tests. Mean change for professional judgement and decision making (DA) pre to post-training (police sample)

	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Child Safeguarding	.267	No Evidence	3.941e-6	-.07	-.15, .00	0.19	0.13
Adult Safe Guarding	30.387	Strong	3.151e-8	-.14	.21, -.06	21.92	15.65
Vulnerability of Children	7.634e+10	Extreme	1.607e-17	-.30	-.37, -.23	5.823e+10	4.287e+10
Repeat Call	91541.184	Extreme	1.141e-11	-.21	-.28, -.13	67449.32	48728.49
Leave Current Incident	1.50	Anecdotal	5.733e-7	-10	-.18, -.03	1.071	0.76
Police Matter	.065	Strong evidence for $_{H0}$	1.327e-5	.03	-.04, .12	0.05	0.03
Seriousness	7.925e+9	Extreme	1.580e-16	.28	-.36, .20	6.014e+09	4.415e+09

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 42: Paired sample t-tests. Mean change for professional judgement and decision making (DA) pre to post-training (MA partner sample)

	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Child Safeguarding	3.18	Moderate	2.827e-7	-.24	-.42, -.06	2.38	1.74
Adult Safe Guarding	19.41	Strong	2.796e-8	-.30	-.48, -.12	14.90	11.03
Vulnerability of Children	4.46	Moderate	5.428e-7	-.31	-.46, -.13	21.60	16.02
Repeat Call	28.01	Strong	3.176e-8	-.25	-.43, -.07	3.36	2.46
Leave Current Incident	.24	Moderate evidence for $_{H0}$	3.727e-5	.12	-.06, .30	BF01 = 5.69	BF01 = 7.96
Police Matter	1.37	Anecdotal	1.552e-6	-.21	-.39, -.03	1.01	BF01 = 1.36
Seriousness	81.63	Very strong	2.580e-5	.90	-.52, -.16	63.94	47.88

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 43: Independent samples t-test. Pre-test professional judgement and decision making scores by gender (police sample)

	BF_{10}	Evidence for $_{H1}$	Error %	Effect Size	95% CI	Wide prior	Ultra wide prior
Child Safeguarding	.27	Moderate for evidence for $_{H0}$	7.726e-4	-.11	-.26, .03	0.19	0.14
Adult Safe Guarding	12.08	Strong	1.718e-5	-.23	-.38, -.09	9.00	6.54
Vulnerability of Children	134.47	Extreme	1.566e-6	-.28	-.42, -.13	102.25	75.20
Repeat Call	.08	Strong for evidence for $_{H0}$	.00	-.04	-.19, .10	0.07	0.05
Leave Current Incident	.37	Anecdotal evidence for $_{H0}$	1.566e-6	.13	-.09, .27	0.27	0.19
Police Matter	2.38	Anecdotal	8.686e-5	-.19	-.33, .42	1.75	1.26
Seriousness	44.12	Very Strong	4.777e-6	-.26	-.40, -.11	33.24	24.33

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 44: Independent Samples t-test. Pre-test differences in professional judgement and decision making scores by gender (MA partner sample)

	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Child Safeguarding	.38	No evidence	.02	-.20	-.62, .20	0.29	0.21
Adult Safe Guarding	.32	No evidence	.02	-.16	-.58, .25	0.24	5.76
Vulnerability of Children	1.99	Anecdotal	5.495e-4	-.44	-.88, -.01	1.65	1.30
Repeat Call	1.72	Anecdotal	3.888e-4	-.42	-.86, .01	1.42	1.11
Leave Current Incident	.29	No evidence	.02	.13	-.29, .56	0.22	0.16
Police Matter	.62	No evidence	.01	-.29	-.72, .12	0.48	0.36
Seriousness	1.05	Anecdotal	.00	-.37	-.80, .04	0.84	0.64

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 45: Independent samples t-test. Post-test differences in professional judgement and decision making scores by gender (police sample)

	BF_{10}	ANCOVA	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Child Safeguarding	8308.40		Extreme	1.762e-8	-.37	-.53, .22	6605.25	4987.78
Adult Safe Guarding	1.203e+42/2.203e+39 ≃ 546.07	*ANCOVA*	Extreme	Na	Na	Na	Na	Na
Adult Safe Guarding	70872.70		Extreme	2.029e-9	-.41	-.56, -.26	57316.96	43739.63
Vulnerability of Children	3.109e+43/1.465e+40 ≃ 2122.18	*ANCOVA*	Extreme	Na	Na	Na	Na	Na
Vulnerability of Children	3.801e+6		Extreme	3.687e-11	-.46	-.62, -.31	3.166e+06	2.461e+06
Repeat Call	8.83		Moderate	1.857e-5	-.23	-.39, .09	6.59	4.80
Leave Current Incident	12.76		Strong	1.297e-5	.24	.09, .40	9.56	7.00
Police Matter	7353.28		Extreme	2.025e-8	-.37	-.52, -.21	5838.31	4405.15
Seriousness	113310.247/795992.622≃ .142	*ANCOVA*	Moderate evidence for $_{H0}$	Na	Na	Na	Na	Na
Seriousness	3.005e+6		Extreme	4.605e-11	-.46	-61, -.31	2.499e+06	1.941e+06

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 46: Independent samples t-test. Post-test differences in professional judgement and decision making scores by gender (MA partner sample)

	BF_{10}	Evidence for $_{H1}$	Error %	Effect Size	95% CI	Wide prior	Ultra wide prior
Child Safeguarding	.64	No evidence	.00	-.31	-.77, .13	0.51	0.38
Adult Safe Guarding	.91	No evidence	.00	-.37	-.84, .07	0.74	0.56
Vulnerability of Children	.61	No evidence	.00	-.29	-.77, .14	0.48	0.36
Repeat Call	.93	No evidence	.01	-.37	-.85, .07	0.76	0.58
Leave Current Incident	.56	No evidence	.00	.29	-.15, .77	0.44	0.33
Police Matter	.27	No evidence	.00	-.08	-.54, .38	0.20	0.15
Seriousness	.45	No evidence	3.955e-4	-.24	-.69, .21	0.35	0.26

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 47: One way ANOVA. Pre and post-training differences in professional judgement and decision making by force area (police sample)

	Pre-test BF_{10}	Evidence for $_{H1}$	Error %	Method	Post-test BF_{10}	Evidence for $_{H1}$	Error %
Child Safeguarding	.12	No Evidence	.008		.01	No Evidence	.03
Adult Safe Guarding	.08	No Evidence	.005		.01	No Evidence	.02
Vulnerability of Children	.01	No Evidence	.092		.01	No Evidence	.02
Repeat Call	49.38	Strong	.002	ANCOVA	2.383e+26/1.012e+28 ≃ .02	No Evidence	na
Repeat Call	na	na	na		.07	No Evidence	.01
Leave Current Incident	.59	No Evidence	1.872e-4		.05	No Evidence	.01
Police Matter	.04	No Evidence	.012		.09	No Evidence	.01
Seriousness	.01	No Evidence	.030		.13	No Evidence	.01

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 48: One way ANOVA. Pre and post-training differences in professional judgement and decision making by force area (MA partner sample)

	Pre-test BF_{10}	Evidence for $_{H1}$	Error %	Post-test BF_{10}	Evidence for $_{H1}$	Error %
Child Safeguarding	.14	No evidence	.00	.08	No evidence	.00
Adult Safe Guarding	.08	No evidence	.00	.05	No evidence	.00
Vulnerability of Children	.08	No evidence	7.591e-4	.12	No evidence	7.591e-4
Repeat Call	.35	No evidence	.00	.17	No evidence	.00
Leave Current Incident	.15	No evidence	.04	.21	No evidence	.04
Police Matter	.37	No evidence	.00	.12	No evidence	.00
Seriousness	.09	No evidence	.00	.08	No evidence	.00

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 49: One way ANOVA. Pre and post-training differences in professional judgement and decision making by Job Role (police sample)

	Pre-test BF_{10}	Evidence for $_{H1}$	Error %	Method	Post-test BF_{10}	Evidence for $_{H1}$	Error %
Child Safeguarding	.78	Anecdotal evidence for $_{H0}$	4.093e-4		.01	Very strong evidence for $_{H0}$	.03
Adult Safe Guarding	.72	Anecdotal evidence for $_{H0}$	1.989e-4		.01	Very strong evidence for $_{H0}$	.02
Vulnerability of Children	.03	Very strong evidence for $_{H0}$	.01		.11	Moderate evidence for $_{H0}$	.01
Repeat Call	894.34	Extreme	.00	ANCOVA	4.886e+26/6.627e+27 ≃ .07	Strong evidence for $_{H0}$	Na
Repeat Call	na	na	Na		.02	Very strong evidence for $_{H0}$	.02
Leave Current Incident	.56	Anecdotal evidence for $_{H0}$	2.814e-4		.01	Very strong evidence for $_{H0}$	.08
Police Matter	.04	Strong evidence for $_{H0}$	.01		.03	Very strong evidence for $_{H0}$	.01
Seriousness	.26	Moderate evidence for $_{H0}$	5.267e-5		1.09	Anecdotal	2.583e-4

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 50: One way ANOVA. Pre and post-training differences in professional judgement and decision making by Job Sector (MA partner sample)

	Pre-test BF_{10}	Evidence for $_{H1}$	Error %	Post-test BF_{10}	Evidence for $_{H1}$	Error%
Child Safeguarding	.07	Strong evidence for $_{H0}$	.00	.24	Moderate evidence for $_{H0}$	2.270e-4
Adult Safe Guarding	.29	Moderate evidence for $_{H0}$	8.482e-5	2.29	Anecdotal	.04
Repeat Call	.26	Moderate evidence for $_{H0}$	1.178e-4	27.89	Strong	.00
Vulnerability of children	.10	Strong evidence for $_{H0}$	.00	.39	Anecdotal evidence for $_{H0}$	.00
Leave Current Incident	.18	Moderate evidence for $_{H0}$	.05	.11	Moderate evidence for $_{H0}$	.00
Police Matter	.23	Moderate evidence for $_{H0}$	1.946e-4	.99	Anecdotal evidence for $_{H0}$	4.936e-5
Seriousness	.07	Strong evidence for $_{H0}$	.00	63.23	Very strong	8.253e-4

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 51: One way ANOVA post hoc analysis. Pre-training differences in perception of repeat call by force area (police sample)

Force area	Force area comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
Dyfed Powys	Gwent	2311.33	Extreme	1.759e-9
	North Wales	3.082	Moderate	1.933e-6
	South Wales	9.814	Moderate	9066e-7

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 52: One way ANOVA with repeated measures. Perception of repeat call pre to post-training by force area (police sample)

	BF10 time	Error %	BF10 force area	Error%	2x Main effect	Error%	BF10 interaction	Cross product	Error%	Evidence for interaction $_{H1}$
Repeat Call	116163.044	1.052	1.184	.647	141873.963	1.045	591866.365	4.172	1.303	Moderate

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 53: Post hoc paired t-tests. Perception of repeat call pre to post-training for each force area (police sample)

Criminal activity	BF_{10}	Error%	Effect size	95% CI	Evidence for $_{H1}$	Wide prior	Ultra wide prior
Dyfed Powys	.19	7.265e-5	.11	-.09, .30	Moderate evidence for H0	.14	.10
Gwent	2.525e+43	5.988e-48	1.08	.94, 1.24	Extreme	2.748e+43	2.663e+43
North Wales	30486.63	6.427e-9	.38	.23, .53	Extreme	24314	18393
South Wales	3.709+28	7.94e-35	1.27	1.05, 1.49	Extreme	4.237e+28	4.336e+28

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 54: One way ANOVA post hoc analysis. Pre-test differences in perception of repeat call by job roles pre-training (police sample)

Role	Role comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
PCSO	PC	11610.91	Extreme	1.004e-9
PC	PS	4.96	Moderate	3.026e-7

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 55: One way repeated measures ANOVA. Perception of repeat call pre to post-training by job role (police sample)

	BF_{10} Time	Error %	BF10 Job role	Error%	2x Main effect	Error%	BF10 interaction	Cross product	Error%	Evidence for interaction $_{H1}$
Repeat Call	216252.21	1.08	3.238	1.37	788563.73	3.10	9.022e+6	11.44	2.51	Strong

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707).

Table 56: Post hoc paired t-tests. Pre to post-training perceptions of repeat call for each of the different job roles (police sample)

Repeat call	BF_{10}	Error%	Evidence for $_{H1}$	Effect Size	95% CI	Wide prior	Ultra wide prior
PCSO	7968.27	1.226e-9	Extreme	-.50	-.70, -.29	6760.02	5328.63
PC	.69	.00	Anecdotal evidence for $_{H0}$	-.11	-.21, -.01	0.50	0.35
DC	.20	5.086e-6	Moderate evidence for $_{H0}$	-.08	-.38, .23	0.14	0.10
PS	11.78	2.798e-7	Strong	-.33	-.54, -.11	9.19	6.87
Police Staff inc Comms/Dispatch	2.60	.01	Anecdotal	-.37	-.70, -.05	2.08	1.59

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 57: One way repeated measures ANOVA. Post-test differences in perception of seriousness of incident by Job Sector (MA partner sample)

Force area	Force area comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
Miscellaneous	CYP Education/services	53.47	Very strong	1.092e-6
	Health and well-being	27.70	Strong	2.519e-6
	Housing/community/LA worker	21.70	Strong	2.008e-5
	Safeguarding/social care and family support services	7.06	Moderate	1.892e-5

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

3.4. Measures of attitude and attitude certainty change from pre- to post-training

Table 58: Paired samples t-test. Mean attitude and attitude certainty change from pre-training to post-training (police sample)

	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Attitude message 1	3.710e+14	Extreme	4.001e-21	.35	.27,.43	2.91e+14	2.177e+14
Attitude message 2	9.934e+20	Extreme	1.424e-27	.42	.34,.50	8.091e+20	6.195e+20
Attitude message 3	1.654e+9	Extreme	8.896e-16	.28	.21,.37	1.259e+09	9.263e+08
Certainty message 1	8.729e+51	Extreme	1.653e-58	-.65	-.73,-.57	7.99e+51	6.629e+51
Certainty message 2	4.188e+49	Extreme	1.797e-56	-.68	-.77,.59	3.899e+49	3.277e+49
Certainty message 3	1.659e+34	Extreme	8.728e-41	-.53	-.61,.45	1.429e+34	1.135e+34

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 59: Paired samples t-test. Mean attitude and attitude certainty change from pre-training to post-training (MA partner sample)

	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Attitude message 1	.11	Moderate evidence for $_{H0}$	1.695e-4	-.03	-.21, .14	0.08	0.05
Attitude message 2	.17	Moderate evidence for $_{H0}$	7.287e-5	-.09	-.08, .27	0.12	0.09
Attitude message 3	.10	Moderate evidence for $_{H0}$	1.127e-4	-.02	-.20, .15	0.07	0.05
Certainty message 1	8.64	Moderate	3.480e-6	-.26	-.43, -.09	6.52	4.78
Certainty message 2	151.19	Extreme	1.584e-9	-.35	-.53, -.17	119.03	89.39
Certainty message 3	.76	Anecdotal evidence for $_{H0}$	4.114e-5	-.18	-.35, -.01	0.56	0.40

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 60: Independent samples t-test. Pre-training differences in attitude and attitude certainty scores by gender (police sample)

	BF_{10}	Evidence for $_{H1}$	Error %	Effect Size	95% CI	Wide prior	Ultra wide prior
Attitude 1	4.36	Moderate	4.831e-5	-.21	.07, .35	3.22	2.33
Attitude 2	.36	Anecdotal evidence for $_{H0}$	5.683e-4	.13	-.02, .27	0.25	0.18
Attitude 3	.20	Moderate evidence for $_{H0}$	9.558e-4	.10	-.05, .25	0.14	0.10
Certainty 1	.10	Moderate evidence for $_{H0}$	.00	-.05	-.19, .09	0.07	0.56
Certainty 2	.10	Strong evidence for $_{H0}$	.00	-.04	-.10, .19	0.07	0.05
Certainty 3	.08	Strong evidence for $_{H0}$	.00	.02	-.12, .16	0.06	0.04

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 61: Independent samples t-test. Pre-training differences in attitude and attitude certainty scores by gender (MA partners sample)

	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Attitude 1	.31	Moderate evidence for $_{H0}$	.02	-.16	-.57, .24	0.23	0.17
Attitude 2	.51	Anecdotal evidence for $_{H0}$	.01	-.26	-.70, .15	0.40	0.30
Attitude 3	.25	Moderate evidence for $_{H0}$	.01	-.04	-.47, .39	0.18	0.13
Certainty 1	.38	Anecdotal evidence for $_{H0}$	.02	.21	.21, .62	0.28	0.21
Certainty 2	.27	Moderate evidence for $_{H0}$	.01	.10	-.33, .55	0.20	0.14
Certainty 3	.24	Moderate evidence for $_{H0}$	.02	.05	-.36, .46	0.18	0.13

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 62: Independent samples t-test. Post-training differences in attitude and attitude certainty scores by gender (police sample)

	Method	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Attitude 1	ANCOVA	(6.711e+38 / 2.794e+38 = 2.40)	Anecdotal	na	na	na	na	na
	ANOVA	20.40	Strong	5.977e-6	.26	.12, 42	15.41	11.29
Attitude 2	ANOVA	25.27	Strong	4.604e-6	.27	.11, .43	19.14	14.04
Attitude 3	ANOVA	2.04	Anecdotal	5.991e-5	.20	.04, .36	1.52	1.09
Certainty 1	ANOVA	7.16	Moderate	2.460e-5	-.23	-.38, -.08	5.33	3.88
Certainty 2	ANOVA	54.72	Very Strong	5.991e-5	-.29	-.44, -.13	41.73	30.75
Certainty 3	ANOVA	6.83	Moderate	2.155e-5	-.23	-.38, -.08	5.09	3.71

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 63: Independent samples t-test. Post-training differences attitude and attitude certainty scores by gender (MA partners sample)

	BF_{10}	Evidence for $_{H1}$	Error %	Effect size	95% CI	Wide prior	Ultra wide prior
Attitude 1	1.71	Anecdotal	.01	.48	-.01, .97	1.45	1.16
Attitude 2	1.40	Anecdotal	.00	.46	-.04, .98	1.18	0.13
Attitude 3	.97	Anecdotal evidence for $_{H0}$	.01	.38	-.08, .87	0.79	0.61
Certainty 1	.29	Moderate evidence for $_{H0}$	.01	-.13	-.56, .32	0.01	0.16
Certainty 2	.27	Moderate evidence for $_{H0}$	.00	-.06	-.53, .41	0.20	0.15
Certainty 3	.26	Moderate evidence for $_{H0}$	.00	-.05	-.50, .41	0.19	0.14

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 64: One way ANOVA. Pre and post-training differences in attitude and attitude certainty by force area (police sample)

	Pre BF_{10}	Evidence for $_{H1}$	Error %	Post BF_{10}	Error %	Evidence for $_{H1}$
Attitude 1	16.79	Strong	.00	.24	6.604e-4	No Evidence
Attitude 2	.40	Anecdotal evidence for H0	.00	.10	.01	No Evidence
Attitude 3	.03	Strong evidence for H0	.02	.01	.06	No Evidence
Certainty 1	.18	Moderate evidence for H0	.00	.05	.01	No Evidence
Certainty 2	.11	Moderate evidence for H0	.01	.03	.01	No Evidence
Certainty 3	.17	Moderate evidence for H0	.01	.03	.01	No Evidence

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 65: One way ANOVA. Pre and post-training differences in attitude and attitude certainty by force area (MA partner sample)

	Pre BF_{10}	Evidence for $_{H1}$	Error %	Post BF_{10}	Evidence for $_{H1}$	Error %
Attitude 1	.37	Anecdotal evidence for $_{H0}$	3.826e-5	.13	Moderate evidence for $_{H0}$	.00
Attitude 2	.53	Anecdotal evidence for $_{H0}$	1.635e-5	.10	Strong evidence for $_{H0}$	.00
Attitude 3	.72	Anecdotal evidence for $_{H0}$	5.073e-5	.06	Strong evidence for $_{H0}$	.00
Certainty 1	.14	Moderate evidence for $_{H0}$	8.540e-4	.14	Moderate evidence for $_{H0}$	8.738e-4
Certainty 2	.16	Moderate evidence for $_{H0}$	5.477e-4	.16	Moderate evidence for $_{H0}$	5.477e-4
Certainty 3	.81	Anecdotal evidence for $_{H0}$	7.353e-5	.74	Anecdotal evidence for $_{H0}$	1.417e-4

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 66: One way ANOVA. Pre and post-training differences in attitude and attitude certainty by job role (police sample)

	Pre BF_{10}	Evidence for $_{H1}$	Error %	Post BF_{10}	Error %	Evidence for $_{H1}$
Attitude 1	.03	Very strong evidence for $_{H0}$	.01	2	.02	Very strong evidence for $_{H0}$
Attitude 2	.01	Extreme evidence for $_{H0}$	.00	.06	.01	Strong evidence for $_{H0}$
Attitude 3	.01	Very strong evidence for $_{H0}$	.02	.02	.03	Very strong evidence for $_{H0}$
Certainty 1	.01	Extreme evidence for $_{H0}$	.01	.02	.02	Very strong evidence for $_{H0}$
Certainty 2	.05	Strong evidence for $_{H0}$	.01	.03	.01	Strong evidence for $_{H0}$
Certainty 3	.43	Anecdotal evidence for $_{H0}$	3.599e-4	.01	.01	Very strong evidence for $_{H0}$

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 67: One way ANOVA. Pre and post-training differences in attitude and attitude certainty by job sector (MA partner sample)

	Pre BF_{10}	Evidence for $_{H1}$	Error %	Post BF_{10}	Error %	Evidence for $_{H1}$
Attitude 1	.08	Strong evidence for $_{H0}$	.00	.10	.00	Moderate evidence for $_{H0}$
Attitude 2	.19	Moderate evidence for $_{H0}$	3.005e-4	.15	6.419e-4	Moderate evidence for $_{H0}$
Attitude 3	.18	Moderate evidence for $_{H0}$	.07	.10	.00	Strong evidence for $_{H0}$
Certainty 1	.03	Very strong evidence for $_{H0}$	.01	.10	.00	Moderate evidence for $_{H0}$
Certainty 2	.04	Strong evidence for $_{H0}$	.01	.04	.01	Strong evidence for $_{H0}$
Certainty 3	.04	Strong evidence for $_{H0}$	.01	.24	.01	Moderate evidence for $_{H0}$

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 68: One way ANOVA post hoc analysis. Pre-training differences in attitude (message 1) by force area (police sample)

Force Area	Force Area Comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
South Wales	Dyfed Powys	10.98	Strong	4.982e-7
	Gwent	5.19	Moderate	1.650e-4
	North Wales	125.07	Extreme	1.295e-7

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

3.5. Confidence and competence to respond to vulnerability post-training

Table 69: Differences in confidence and competence in responding to vulnerability using an ACE and trauma informed approach (police sample)

ACE Informed Approach Statements	BF_{10} Force area	Error %	Evidence	BF_{10} Between genders	Error %	Evidence	BF_{10} Between roles	Error %	Evidence
Confidently respond to vulnerability using an ACE-informed approach	.37	.00	Anecdotal evidence for $_{H0}$	6.11	2.348e-5	Moderate	.06	.01	No evidence
Competently respond to vulnerability using an ACE-informed approach	.02	.02	Very strong evidence for $_{H0}$	4.14	3.792e-5	Moderate	.01	.01	No evidence

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 70: Differences in confidence and competence in responding to vulnerability using an ACE and trauma informed approach (police sample)

ACE Informed Approach Statements	BF_{10} Force area	Error %	Evidence	BF_{10} Between genders	Error %	Evidence	BF_{10} Between roles	Error %	Evidence
Confidently respond to vulnerability using an ACE-informed approach	.80	1.210e-4	Anecdotal evidence for $_{H0}$	.29	.01	Moderate evidence for $_{H0}$	.05	.00	Strong evidence for $_{H0}$
Competently respond to vulnerability using an ACE-informed approach	3.61	1.931e-4	Moderate	.60	.00	Anecdotal evidence for $_{H0}$	.05	.01	Strong evidence for $_{H0}$

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis.

Table 71: One way ANOVA post hoc analysis. Differences in competence by force area (MA partner sample)

Force area	Force area comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
North Wales	Dyfed Powys	4.55	Moderate	1.279e-5
	Gwent	4.20	Moderate	9.113e-5

3.6. Post-training understanding of an ACE-informed approach to working with vulnerability

Table 72: Differences in recognition of ACE informed approach to working with vulnerability by demographic (police sample)

ACE Informed Approach Statements	BF_{10} Force area	Error %	Evidence	BF_{10} Between genders	Error %	Evidence	BF_{10} Between roles	Error %	Evidence
Statement 1: Cases should be prioritised based on the number of ACEs scored on a checklist	129.36	.00	Extreme	.10	.00	Moderate evidence for $_{H0}$	.01	.02	Very strong evidence for $_{H0}$
Statement 2: The number of ACEs present is the best indicator of future risk	4.276e+7	.03	Extreme	.13	.00	Moderate evidence for $_{H0}$	1.58	2.853e-4	Anecdotal
Statement 3: The number of ACEs cannot be offset by resilience factors	.12	.00	Moderate evidence for $_{H0}$	.10	.00	Strong evidence for $_{H0}$	3.02	.00	Moderate
Statement 4: Vulnerability should be considered in every part of policing and crime	.03	.01	Very strong evidence for $_{H0}$	2329.29	7.116e-8	Extreme	.26	3.964e-4	Moderate evidence for $_{H0}$
Statement 5: Dealing with ACEs is predominantly the responsibility of social workers	6.204e+6	.02	Extreme	3.77	4.678e-5	Moderate	6.23e+5	.04	Extreme
Statement 6: It is not worthwhile to change the way we work with individuals who have 4 or more ACEs	166.12	.00	Extreme	.89	2.033e-4	Anecdotal evidence for $_{H0}$	.05	.01	Strong evidence for $_{H0}$
Statement 7: It is possible to change a person's life course, regardless of the number of ACES	.05	.01	Strong evidence for $_{H0}$	.26	7.000e-4	Moderate evidence for $_{H0}$	.83	3.934e-5	Anecdotal evidence for $_{H0}$

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 73: Differences in recognition of ACE informed approach to working with vulnerability by demographic (MA Partner sample)

ACE Informed Approach Statements	BF_{10} Force area	Error %	Evidence	BF_{10} Between genders	Error %	Evidence	BF_{10} Between roles	Error %	Evidence
Statement 1: Cases should be prioritised based on the number of ACEs scored on a checklist	36.29	.00	Very strong	11.37	5.320e-4	Strong	.34	5.413e-5	Anecdotal evidence for $_{H0}$
Statement 2: The number of ACEs present is the best indicator of future risk	2.63	2.148e-4	Anecdotal	.89	.00	Anecdotal for $_{H0}$	.45	1.170e-5	Anecdotal evidence for $_{H0}$
Statement 3: The number of ACEs cannot be offset by resilience factors	.40	9.377e-5	Anecdotal evidence for $_{H0}$	3.19	.00	Moderate	1.66	1.216e-4	Anecdotal
Statement 4: Vulnerability should be considered in every part of policing and crime	.90	1.410e-4	Anecdotal evidence for $_{H0}$	.58	.00	Anecdotal evidence for $_{H0}$	4.29	.03	Moderate evidence for $_{H0}$
Statement 5: Dealing with ACEs is predominantly the responsibility of social workers	22.72	.01	Strong evidence for $_{H0}$	2.07	.04	Anecdotal	.05	.01	Moderate evidence for $_{H0}$
Statement 6: It is not worthwhile to change the way we work with individuals who have 4 or more ACEs	.58	2.705e-5	Anecdotal evidence for $_{H0}$	1.30	.00	Anecdotal	.24	1.770e-4	Moderate evidence for $_{H0}$
Statement 7: It is possible to change a person's life course, regardless of the number of ACES	.07	.00	Strong evidence for $_{H0}$	.36	.01	Anecdotal evidence for $_{H0}$	.15	6.518e-4	Moderate evidence for $_{H0}$

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 74: One way ANOVA post hoc analysis. Pre-training differences by force area for ACE informed approach to vulnerability statement 1

Force area	Force area comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
Gwent	North Wales	1509.15	Extreme	3.926e-9

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Table 75: One way ANOVA post hoc analysis. Differences by force area for ACE informed approach to vulnerability statement 2

Force area	Force area comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
North Wales	Gwent	4.560e+7	Extreme	2.391e-13
	South Wales	26843.289	Extreme	4.581e-11

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Table 76: One way ANOVA post hoc analysis. Differences by force area for ACE informed approach to vulnerability statement 5

Force area	Force area comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
Dyfed Powys	Gwent	29.99	Strong	2.475e-7
	South Wales	14701.38	Extreme	2.044e-11
North Wales	Gwent	410.13	Extreme	1.241e-8
	South Wales	878727.22	Extreme	2.672e-12

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Table 78: One way ANOVA post hoc analysis. Differences by force area for ACE informed approach to vulnerability statement 6

Force area	Force area comparison	BF_{10} U	Evidence for $_{H1}$	Error %
South Wales	Dyfed Powys	1434.14	Extreme	1.456e-10
	Gwent	8.93	Moderate	1.866e-6
	North Wales	75.42	Very strong	2.897e-8

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Table 79: One way ANOVA post hoc analysis. Differences by force area for ACE informed approach to vulnerability statement 1 (MA partner sample)

Force area	Force area comparison	BF_{10} U	Evidence for $_{H1}$	Error %
Dyfed Powys	Gwent	3.50	Moderate	1.712e-5
Gwent	North Wales	208.68	Extreme	7.915e-6

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Table 80: One way ANOVA post hoc analysis. Differences by force area for ACE informed approach to vulnerability Statement 5 (MA partner sample)

Force area	Force area comparison	BF_{10} U	Evidence for $_{H1}$	Error %
Gwent	North Wales	26.00	Strong	1.075e-5
North Wales	South Wales	21.25	Strong	1.029e-4

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Table 81: One way ANOVA post hoc analysis. Differences by job role for ACE informed approach to vulnerability statement 3

Job role	Job role comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
PCSO	PC	23270.43	Extreme	4.317e-11
PC	DC	32.14	Very strong	2.2800-7

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Table 82: One way ANOVA post hoc analysis. Differences by job role for ACE informed approach to vulnerability statement 5

Job role	Job role comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
PCSO	DC	45.03	Very strong	2.280e-5
PC	DC	56.06	Very strong	1.353e-7
PC	Police Staff (including comms/ dispatch)	21.02	Strong	3.725e-5

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Table 83: One way ANOVA post hoc analysis. Differences by job sector for ACE informed approach to vulnerability statement 4 (MA partner sample)

Job sector	Job sector comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
Health and well-being	Safe-guarding/social care and family support services	9.62	Moderate	1.949e-5
Health and well-being	Miscellaneous	11.77	Strong	5.652e-5

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Table 84: Differences in participant ratings for the trainings usefulness of increasing knowledge by demographic (police sample)

How useful was the training in increasing your knowledge on…	BF_{10} Force area	Error %	Evidence for a difference $_{H1}$	BF_{10} Between genders	Error %	Evidence for a difference $_{H1}$	BF_{10} Between job sector	Error %	Evidence for a difference $_{H1}$
1.What ACEs are	.01	.05	Extreme evidence for $_{H0}$	.35	4.674e-4	Anecdotal evidence for $_{H0}$	.103	.01	Moderate evidence for $_{H0}$
2.The potential impact of ACEs on the life course	.03	.02	Very strong evidence for $_{H0}$	2.02	7.908e-5	Anecdotal	.09	.01	Strong evidence for $_{H0}$
3.The role of resilience in mitigating the impact of ACEs	.34	.00	Anecdotal evidence for $_{H0}$	.59	2.692e-4	Anecdotal evidence for $_{H0}$	7.48	.00	Moderate
4.The impact trauma can have on brain development	.01	.05	Extreme evidence for $_{H0}$	13.91	1.110e-5	Strong	.46	8.386e-6	Anecdotal evidence for $_{H0}$
5.The benefits of working together with partners to prevent and mitigate ACEs and related trauma	.01	.10	Extreme evidence for $_{H0}$	129.20	1.163e-6	Extreme	.92	.05	Anecdotal evidence for $_{H0}$
6.The consideration of ACEs in understanding root causes of behaviour	.01	.03	Very strong evidence for $_{H0}$	9.63	1.626e-5	Moderate	.81	7.297e-5	Anecdotal evidence for $_{H0}$
7.Breaking intergenerational cycles of abuse through ACE informed approaches	.01	.03	Very strong evidence for $_{H0}$	26.72	5.773e-6	Strong	.72	4.401e-6	Anecdotal evidence for $_{H0}$

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 85: Differences in participant ratings for the trainings usefulness of increasing knowledge by demographic (MA partner sample)

How useful was the training in increasing your knowledge on…	BF_{10} Area of work	Error %	Evidence for a difference $_{H1}$	BF_{10} Between genders	Error %	Evidence for a difference $_{H1}$	BF_{10} Between job sector	Error %	Evidence for a difference $_{H1}$
1. What ACEs are	.20	4.491e-4	Moderate for $_{H0}$	.62	.01	Anecdotal for $_{H0}$	.06	.00	Strong for $_{H0}$
2. The potential impact of ACEs on the life course	.16	7.054e-4	Moderate for $_{H0}$	.48	.00	Anecdotal for $_{H0}$	.07	.00	Strong for $_{H0}$
3. The role of resilience in mitigating the impact of ACEs	.18	4.834e-4	Moderate for $_{H0}$	.54	.00	Anecdotal for $_{H0}$	.16	6.747e-4	Moderate for $_{H0}$
4. The impact trauma can have on brain development	.27	2.525e-4	Moderate for $_{H0}$	.33	.00	Moderate for $_{H0}$	.91	4.147e-5	Anecdotal for $_{H0}$
5. The benefits of working together with partners to prevent and mitigate ACEs and related trauma	.11	.00	Moderate for $_{H0}$	.30	.00	Moderate for $_{H0}$	.16	6.057e-4	Moderate for $_{H0}$
6. The consideration of ACEs in understanding root causes of behaviour	.50	2.591e-5	Anecdotal for $_{H0}$	.26	.00	Moderate for $_{H0}$	.62	2.187e-5	Anecdotal for $_{H0}$
7. Breaking intergenerational cycles of abuse through ACE informed approaches	.10	.00	Moderate for $_{H0}$	.26	.00	Moderate for $_{H0}$	.52	1.295e-5	Anecdotal for $_{H0}$

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check.

Table 86: One way ANOVA post hoc analysis. Difference in the usefulness of the training in increasing knowledge on statement 3 by job role (police sample)

Job role	Job role comparison	BF_{10} U	Evidence for $_{H1}$	Error %
PCSO	PC	98.26	Very strong	9.164e-9

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Table 87: Differences in participant ratings for quality of the training by demographic (police sample)

ACE Informed Approach Statements	BF_{10} Force area	Error %	Evidence for a difference $_{H1}$	BF_{10} Between genders	Error %	Evidence for a difference $_{H1}$	BF_{10} Between job role	Error %	Evidence for a difference $_{H1}$
Organisation of training	.12	.00	Moderate evidence for $_{H0}$	.71	2.424e-4	Anecdotal evidence for $_{H0}$	.32	4.94e-5	Moderate evidence for $_{H0}$
Length of training	1117.53	.02	Extreme	.21	8.240e-4	Moderate evidence for $_{H0}$	122.98	9.804e-4	Extreme
Small group work	.03	.02	Very strong evidence for $_{H0}$	2.42	7.267e-5	Anecdotal	3.45	.00	Moderate
Video clips	.02	.02	Very strong evidence for $_{H0}$	3.68	4.769e-5	Moderate	.79	7.328e-8	Anecdotal evidence for H_0
General discussion	.03	.02	Very strong evidence for $_{H0}$	10.65	1.629e-5	Strong	2.12	7.328e-4	Anecdotal
Lecture format	.09	.01	Strong evidence for $_{H0}$	7.69	2.262e-5	Moderate	1.61	6.222e-4	Anecdotal
Organisational relevance	.08	.01	Strong evidence for $_{H0}$	.30	5.883e-4	Moderate evidence for $_{H0}$	.08	.01	Strong evidence for $_{H0}$
Knowledge of materials	.03	.01	Very strong evidence for $_{H0}$	.55	3.209e-4	Anecdotal evidence for $_{H0}$	.03	.02	Strong evidence for $_{H0}$
Preparedness	.01	.02	Very strong evidence for $_{H0}$	1.95	8.971e-5	Anecdotal	.04	.02	Strong evidence for $_{H0}$
Time used effectively	7.60	.00	Moderate	2.31	7.595e-5	Anecdotal	.39	.00	Anecdotal evidence for $_{H0}$
Ability to translate resources into operational examples	.05	.01	Strong evidence for $_{H0}$	.32	5.622e	Moderate evidence for $_{H0}$	.12	.01	Very strong evidence for $_{H0}$

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check

Table 88: Differences in participant ratings for quality of the training by demographic (MA partner sample)

Quality of the training	BF_{10} Area of Work	Error %	Evidence for a difference $H1$	BF_{10} Between genders	Error %	Evidence for a difference $H1$	BF_{10} Between job sector	Error %	Evidence for a difference $H1$
Organisation of training	.42	1.940e-4	Anecdotal for $H0$	.27	.00	Moderate for $H0$	1.25	1.254e-4	Anecdotal for $H1$
Length of training	.18	5.091e-4	Moderate for $H0$	.30	.01	Moderate for $H0$	.17	.07	Moderate for $H0$
Small group work	.33	1.339e-4	Moderate for $H0$	.25	.01	Moderate for $H0$	.19	.01	Moderate for $H0$
Video clips	.12	.00	Moderate for $H0$	.26	.01	Moderate for $H0$	.11	.00	Moderate for $H0$
General discussion	.42	9.635e-5	Anecdotal for $H0$	.25	.01	Moderate for $H0$	.09	.00	Strong for $H0$
Lecture format	.19	5.104e-4	Moderate for $H0$	.25	.01	Moderate for $H0$	.09	.00	Strong for $H0$
Organisational relevance	.16	6.980e-4	Moderate for $H0$	.30	.01	Moderate for $H0$	.22	2.190e-4	Moderate for $H0$
Knowledge of materials	.12	.00	Moderate for $H0$	.30	.01	Moderate for $H0$	.08	.00	Strong for $H0$
Preparedness	.41	2.284e-4	Anecdotal for $H0$	.80	.00	Anecdotal for $H0$	.06	.00	Strong for $H0$
Time used effectively	.21	5.167e-4	Moderate for $H0$	.50	7.443e-4	Anecdotal for $H0$	.09	.00	Strong for $H0$
Ability to translate resources into operational examples	.17	7.846e-4	Moderate for $H0$	.34	.00	Anecdotal for $H0$	.09	.00	Strong for $H0$

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $H1$ = alternative hypothesis, $H0$ = null hypothesis. Default Cauchy prior used (.707). Bayes factor produced at a wide and ultra wide prior for robustness check

Table 89: One way ANOVA post hoc analysis. Differences in ratings for quality of training length by force area (police sample)

Force area	Force area comparison	BF_{10} U	Evidence for $_{H1}$	Error %
Dyfed Powys	Gwent	3.45	Moderate	2.083e-6
	North Wales	160.65	Extreme	3.718e-8
	South Wales	7192.06	Extreme	1.607e-10
Gwent	South Wales	19.66	Strong	7.944e-7

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Table 90: One way ANOVA post hoc analysis. Differences in ratings for quality of trainers time management by force area (police sample)

Force area	Force area comparison	BF_{10} U	Evidence for $_{H1}$	Error %
Dyfed Powys	North Wales	4.49	Moderate	1.910e-6
	South Wales	4.12	Moderate	9.541e-5
Gwent	North Wales	6.12	Moderate	6.449e-7
	South Wales	4.46	Moderate	3.589e-6

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Table 91: One way ANOVA post hoc analysis. Differences in ratings for quality of length of the training by job role (police sample)

Force area	Force area comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
PCSO	PC	26.16	Strong	6.696e-8
PC	Police Staff (including comms/dispatch)	189.19	Extreme	4.769e-5
DC	Police Staff (including comms/dispatch)	12.71	Strong	6.006e-4

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Table 92: One way ANOVA post hoc analysis. Differences in ratings for quality of small group work by job role (police sample)

Job role	Job role comparison	$BF_{10}U$	Evidence for $_{H1}$	Error %
PCSO	PC	5.24	Moderate	5.263e-7
PC	Police Staff (including comms/dispatch)	12.78	Strong	5.493e-6

Note. BF_{10} = Bayes factor for alternative hypothesis, CI = credible interval, $_{H1}$ = alternative hypothesis, $_{H0}$ = null hypothesis. Bayes factor produced at a wide and ultra wide prior for robustness check. The "U" in the Bayes factor denotes that it is uncorrected.

Camau Cynnar gyda'n Gilydd

Early Action Together

Rhaglen ACEau yr Heddlu a Phartneriaid
Police & Partners ACEs Programme

Early Action Together is a partnership between Public Health Wales, the four Wales Police Forces and Police and Crime Commissioners, Barnardo's, HM Prison and Probation Service Wales, Community Rehabilitation Company Wales and Youth Justice Board Wales.

Contact information

If you have any questions or require any further information, please contact the national team at

earlyactiontogther@wales.nhs.uk

07899 060432 / 07899 060072

@ACEsPoliceWales

Early Action Together Police & Partners ACEs

GIG CYMRU NHS WALES | Iechyd Cyhoeddus Cymru Public Health Wales

Credwch mewn plant Believe in children Barnardo's Cymru

De Cymru Comisiynydd yr Heddlu a Throseddu Police and Crime Commissioner South Wales

Swyddfa Comisiynydd Heddlu a Throseddu Gogledd Cymru Office of the Police & Crime Commissioner North Wales

Swyddfa Comisiynydd Yr Heddlu a Throseddu GWENT Office of Police and Crime Commissioner

Comisiynydd Heddlu a Throseddu Dyfed-Powys Police and Crime Commissioner

Prifysgol Bangor University

HM Prison & Probation Service

Seetec Justice

Youth Justice Board Bwrdd Cyfiawnder Ieuenctid

Cymru Wales Rhan o KSS CRC Part of KSS CRC PRAWF Probation