

Evaluating the impact of Pyramid on the socio-emotional health & school performance of pupils in early secondary education

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Overview



Brief background and rationale



The Pyramid intervention model



Research update and partial results



Summary of key findings



Implications of the current research

Background & rationale

“Mental health problems have important implications for every aspect of young people’s lives.”
(Chief Medical Officer’s Report: Department of Health (DH), 2013, p.78)

- ❖ In the UK, 9.6% (850,000) children and young people have a mental health disorder; 15% ‘at risk’ of developing problems in the future (DfE, 2014).
- ❖ Young people’s self-reports of mental health experiences are equally concerning (Mindfull, 2013).
- ❖ Emotional disorders in children & adolescents have many negative outcomes (Harrington et al, 1997; Bijstra et al, 1998; Caprara et al, 2000; Woodward & Fergusson, 2001).
- ❖ Childhood mental health problems are precursors to adult mental health problems (Kim-Cohen et al, 2003; WHO 2005; Kesler et al, 2005).
- ❖ Improving child mental health is an important public health objective (Layard & Clark, 2014; DH, 2013; DfE, 2014).



The role of schools in promoting mental health and well-being





- ❖ Potential impact of school interventions is considerable (Rutter & Maughan, 2002; Blank et al, 2007; Shute 2012).
- ❖ In the USA and Australia schools are a common access point for mental health services (Cummings, Ponce & Mays, 2010).
- ❖ In the UK, benefits of embedding mental health services within schools increasingly recognised (DH, 2013; HCHC, 2014; Fazel et al, 2014).
- ❖ Focus on education, prevention and early intervention (Layard & Clark, 2014; Mindfull 2012; Fazel et al, 2014).
- ❖ Schools often “overwhelmed” by range of emotional well-being interventions available (Shute, 2012).





What is a Pyramid club?

-  Preventative intervention to support children's social and emotional development
-  Targeted at children who internalise their difficulties and are often under-achieving in school



-  Therapeutic activity group for children
-  Manualised programme with built in flexibility
-  Typically delivered as an after-school club
-  Primary, Transition and Secondary club variants





What is a Pyramid club ?

Circle Time

Speaking, listening & turn-taking skills

Art and craft

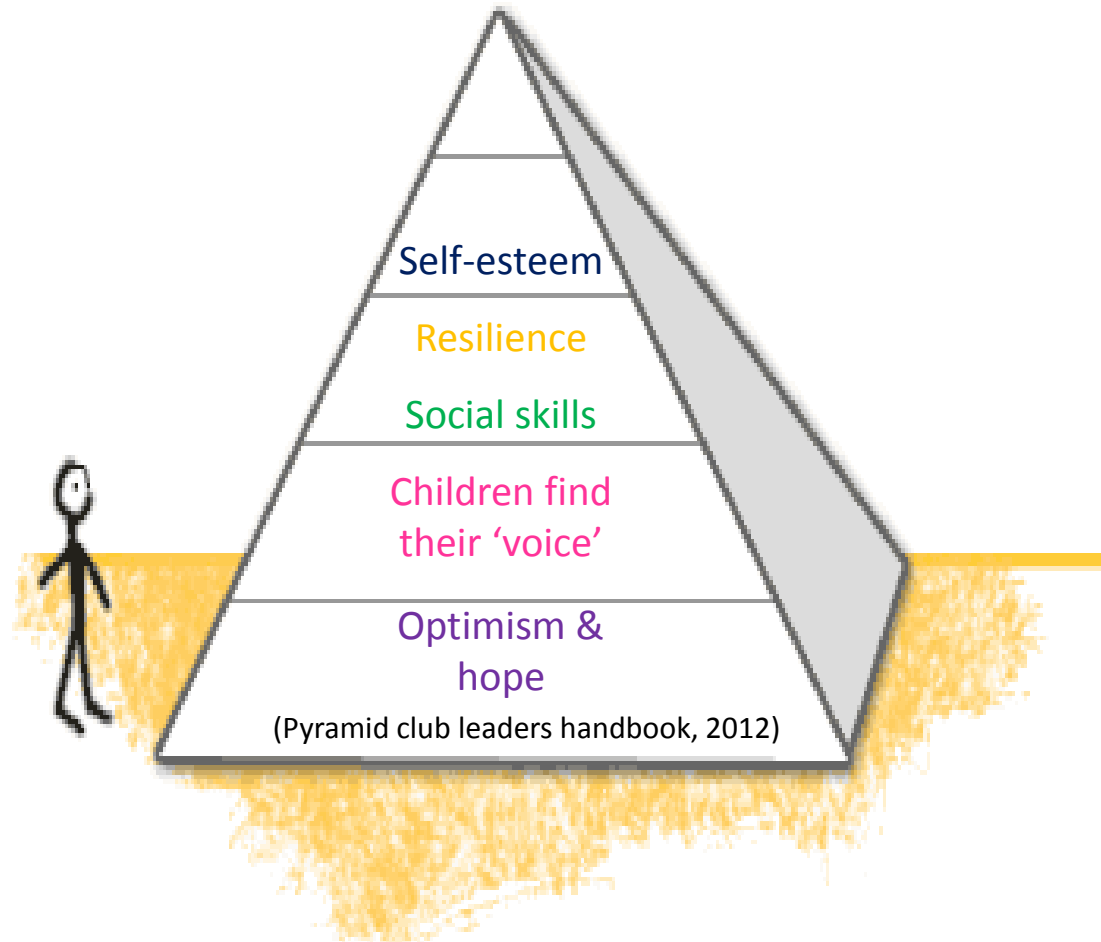
Self-expression, developing cognitive & relationship skills

Games

Social skills & co-operation

Food

Nurturing, sharing, & informal conversations




The Pyramid model of change

- ❖ Pyramid clubs in primary schools have demonstrated improvements in SE well-being by equipping attendees with coping and resilience skills (Ohl et al, 2008; 2012; Lyons et al 2013; McKenna et al, 2014).
- ❖ Early Intervention Foundation (EIF) grade 3 intervention (2015).
- ❖ A “critical age” for intervention effectiveness? (Barrett et al, 2005).
- ❖ Does SE well-being impact on other domains, e.g. school performance? (Zins et al, 2004; Durlak et al, 2011).
- ❖ Developmentally appropriate theoretical model to inform intervention practice and guide policy.




Addressing the research questions


“Programmes designed to promote emotional health & well-being need to be rigorously evaluated.” (NICE, 2008)


 How effective is the Pyramid intervention on the emotional health of pupils in early secondary education?



Mixed Methods Design

 Does Pyramid impact on school performance?

 What are the elements involved in Pyramid that might bring about change?

 Is there a ‘critical age’ for Pyramid to be an effective intervention?



Evidence base to reliably inform future implementation decision making and applied practice



Pilot study results

Table 1: Pyramid group SDQ mean scores (teacher-rated) T1 and T2 (N=6)

Scale	Base-line Mean (SD)	Post-Club Mean (SD)	Difference: Baseline to post
Emotional difficulties	7.67 (1.5)	4.17 (.98)	-3.5
Peer difficulties	5.67 (3.78)	2.83 (2.48)	-2.84
Pro-social (strength)	6.5 (1.87)	6.83 (1.94)	0.33
Conduct difficulties	.67 (.82)	.67 (.82)	0
Hyperactivity difficulties	3.83 (2.04)	3.67 (2.58)	-0.16
Total Difficulties	17.83 (4.79)	11.33 (5.28)	-6.5

Table 2: Pyramid and Comparison TD scores (teacher-rated) T1, T2 and T3 (N=12)

	Mean	Standard Deviation
Pyramid group (T1)	17.83	(4.79)
Comparison group (T1)	5.67	(3.98)
Between groups difference	12.16	
Pyramid group (T2)	11.33	(5.28)
Comparison group (T2)	6.67	(4.13)
Between groups difference	4.66	
Pyramid group (T3)	13.17	(7.73)
Comparison group (T3)	10.67	(8.47)
Between groups difference	2.50	

Key: "Caseness" bands

Normal

Borderline

Abnormal



Pilot study results

*“Understanding how and why programs work, not simply whether they work, is crucial.”
(Dixon-Woods et al, 2011)*

Pyramid attendees’ responses post-club to **how they think Pyramid has changed them as a person:**

“I find it easier to talk to people,” “I’m more likely to get involved in activities,” “I’m more confident now.”

Deductive thematic analysis: **club users; group leaders**

Theme: Delivering outcomes. Subtheme: acquiring new socio-emotional skills.

“It helped me with my confidence, for making new friends and stuff like that.”

(Jessica, L221)

Theme: Making a difference. Sub-theme: individual success stories

“...he was the one, right at the front who introduced the whole assembly.

To think, would he have done that before? Probably not.” (GL1, L13-14)



Post-test analysis from 8 participating schools

Table 3: Pyramid group SDQ mean scores (teacher-rated) T1 and T2 (N=66)

Scale	Base-line Mean (SD)	Post-Club Mean (SD)	Difference: Baseline to post
Emotional difficulties	5.03 (2.58)	3.09 (2.35)	-1.94
Peer difficulties	4.67 (2.33)	2.73 (2.40)	-1.94
Pro-social (strength)	6.12 (2.38)	7.24 (2.28)	1.12
Conduct difficulties	0.88 (1.26)	0.64 (1.03)	-0.24
Hyperactivity difficulties	3.42 (2.52)	2.80 (2.0)	-0.62
Total Difficulties	13.98 (4.88)	9.06 (5.37)	-4.92

Key: "Caseness" bands

Normal

Borderline

Abnormal

- Significant difference in Total Difficulties scores at baseline and post-club: $t(65) = 7.62, p < .001$

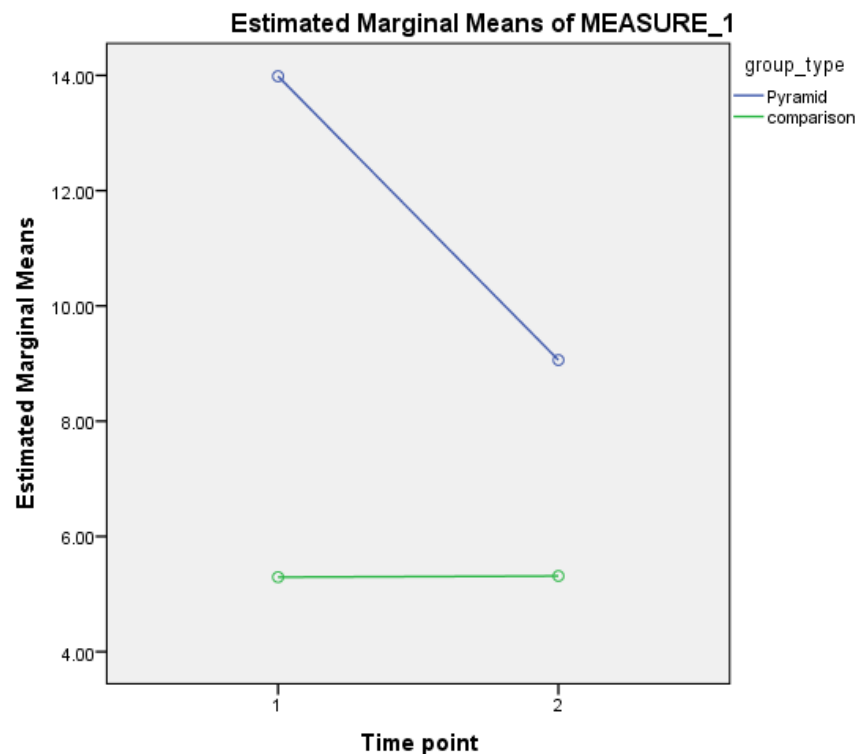
Subscale analysis:

- Significant difference in emotional difficulties scores at baseline and post-club: $t(65) = 6.35, p < .001$
- Significant difference in peer difficulties scores at baseline and post-club: $t(65) = 6.68, p < .001$
- Significant difference in prosocial behaviour scores at baseline and post-club: $t(65) = -4.07, p < .001$

ASL = 0.125

Post-test analysis from 8 participating schools

Graph 1: Teacher-rated mean TD scores T1 and T2 for Pyramid and comparison group



- The interaction between the two conditions and the change over time was significant:
 $F(1, 115) = 28.08, p < .001$
- The mean TD score from T1 ($M = 13.38, SD = 4.88$) to T2 ($M = 9.06, SD = 5.37$) was significantly different for the Pyramid group:
 $t(65) = 7.62, p < .001$
but not for the comparison group:
 $t(50) = -.03, p > .05$



Focus group data analysis



One of the key main themes elicited from a deductive thematic analysis

(focus group data from **club members** and **group leaders**):

Theme: Pyramid legacy

Sub-themes: sense of achievement¹; increased engagement²; impact on performance³; impact on group leaders¹

“I’ve achieved what I hoped for which is confidence in lessons.”¹ (School 3, CR7, L199)

“Usually like, I don’t participate but now I join in more stuff.”² (School 2, Hermionie, L332)

“ [Before] in class you wouldn’t usually talk, you’d be shy to talk and say it in front of everyone and stuff but now when you go to class you usually put your hand up.”³ (School 8, Ariana, L315-7)

“I think it helped my confidence as well as the children’s.”¹ (School 3, GL5, L314)






“I’ve definitely gained something from it.”¹ (School 2, GL1, L143)



Summary of key findings

- ❖ Both quantitative and qualitative measures indicate an improvement in the socio-emotional well being of vulnerable young people who attended a Pyramid club.
- ❖ Significant reduction in Total Difficulties scores for the Pyramid group compared to (non-problem), no-intervention group.
- ❖ Success of Pyramid clubs facilitated by: a supportive group environment; structure and consistency within a flexible programme; small pupil to adult ratio and well-trained group leaders.
- ❖ Barriers to optimum programme delivery: practical issues; lack of robust procedures to ensure the most suitable pupils are selected and/or attend; attrition across the duration of the programme.
- ❖ Focus group data analysis identified an impact on school engagement and performance.
- ❖ Academic levels in Maths and English recorded at T1 and T2 (and to be collected at T3) to examine any secondary impact in this domain.

Implications and future directions

-  Shifting focus to early detection and prevention of MH concerns.
-  More evidence-based interventions delivered in educational settings.
-  Links between emotional well-being, school performance and outcomes.
-  Developmentally appropriate theoretical models; real-world implications.
-  Enabling emotionally healthy children and young people achieve their potential.



***“I used to get bullied and stuff which basically put me inside of a shell but Pyramid helped to break that shell.”
(Year 7 Pyramid club member, 2015).”***

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ANY QUESTIONS?

