UNIVERSITY OF WEST LONDON
The Career University

UWL REPOSITORY
repository.uwl.ac.uk

Evaluating the impact of the Pyramid intervention on the emotional health and school performance of students in early secondary education

Jayman, Michelle ORCID: https://orcid.org/0000-0003-0277-4344, Ohl, Maddie ORCID: https://orcid.org/0000-0003-1956-4220, Hughes, Bronach and Fox, Pauline ORCID: https://orcid.org/0000-0003-0046-4940 (2015) Evaluating the impact of the Pyramid intervention on the emotional health and school performance of students in early secondary education. In: 10th International Child & Adolescent Psychopathology Conference, 20-22 July 2015, London, UK. (Unpublished)

This is the Presentation of the final output.

UWL repository link: https://repository.uwl.ac.uk/id/eprint/2300/

Alternative formats: If you require this document in an alternative format, please contact: open.research@uwl.ac.uk

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

MICHELLE JAYMAN

SCHOOL OF PSYCHOLOGY, SOCIAL WORK & HUMAN SCIENCES, UNIVERSITY OF WEST LONDON, UNITED KINGDOM

Pyramid

UNIVERSITY OF
WEST LONDON

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

❖ 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

Self-esteem

Resilience

Social skills

Children find their 'voice'

Optimism & hope

(Pyramid club leaders handbook, 2012)
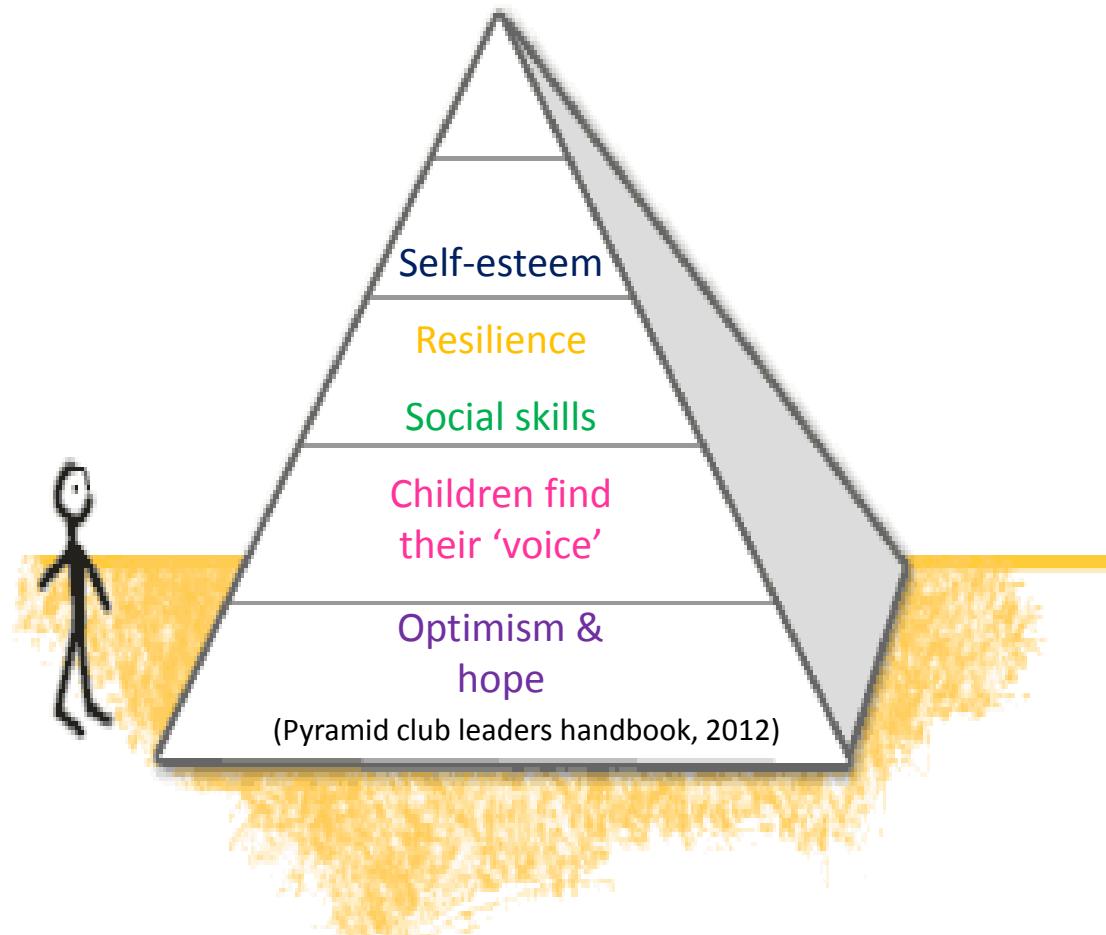
The Pyramid model of change

❖ 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 el 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?

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?

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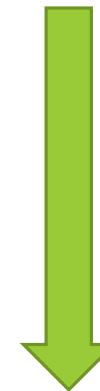
Evidence base to reliably inform future implementation decision making and applied practice

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
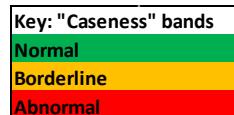
Pilot study results

"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

Estimated Marginal Means of MEASURE_1
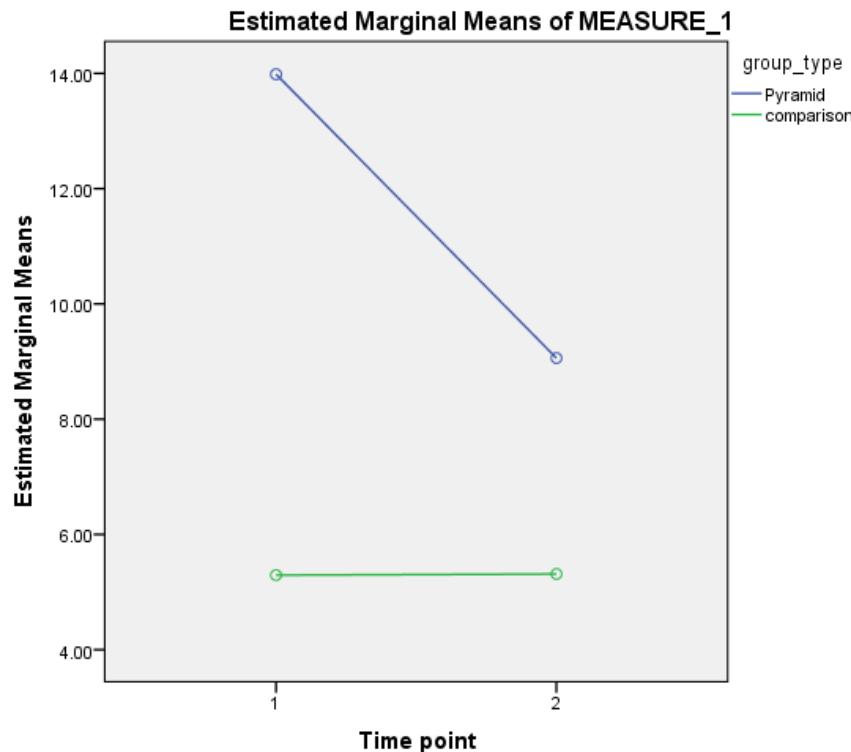
> ➤ The interaction between the two conditions and the change over time was significant:
> F (1, 115) = 28.08, p< .001

> ➤ 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 achievement[1]; increased engagement[2]; impact on performance[3]; impact on group leaders[1]

"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)."

References

Barrett, P.M., Lock, S., & Farrell, L. (2005). Developmental Differences in Universal Preventive Intervention for Child Anxiety. *Journal of Clinical Child Psychology and Psychiatry*,10 (4), p539-555.

Bijstra, J.O. and Jackson, S. (1998) Social Skills Training with Early Adolescents: Effects on Social Skills, Well-being, Self-esteem and Coping. European Journal of Psychology of Education, 13 (4), 569-83.

Blank, L., Baxter, S., Goyder, L., Guillaume, L., Wilkinson. A., Hummel, S., Chilcott, J. (2009). Systematic review of the effectiveness of universal interventions which aim to promote emotional and social wellbeing in secondary school. University of Sheffield.

Caprara, G.V., Barbaranelli, C., Pastorell, C., Bandura, A. and Zimbardo, P.G. (2000). Prosocial foundations of children's academic achievement. *Psychological Science*, 11 (4), 302-306.

Cummings, J., Ponce, N. and Mays, V. (2010). Comparing racial/ethnic differences in mental health service use among high-need adolescent populations across clinical and school-based settings. Journal of Adolescent Health, 46(6), p603-606.

Department for Education (2014). *Mental Health and Behaviour in Schools*: Departmental Advice for School Staff. Department for Education.

Department of Health. (2013). Chief Medical Officer's Annual Report 2012: Our *Children Deserve Better: Prevention Pays.* Department of Health.

Dixon-Woods, M., Bosk, C.L., Aveling, E.L., Goeschel, C.A. and Pronovost, P.J. (2011). Explaining Michigan: *Developing an Ex Post Theory of a of a Quality Improvement Program*. The Millbank Quarterly, 89 (2), p167-205.

Durlak, J.A., Weissberg, R.P., Dymnicki, A.B., Taylor, R.D. and Schellinger, K.B. (2011). The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions. *Child Development. Special Issue*: *Raising Healthy Children*, 82 (1), p405-432.

Fazel M., Hoagwood K., Stephan S. and Ford T (2014). Mental health interventions in schools in high-income countries. The Lancet Psychiatry, 1 (5), p377-387.

House of Commons Health Committee (2014) Third Report Children's and adolescents' mental health and CAMHS [Online]. Available at: http://www.publications.parliament.uk/pa/cm201415/cmselect/cmhealth/342/34202.htm [Accessed 5 November 2014].

References

Goodman R (1997) The Strengths and Difficulties Questionnaire: A Research Note. *Journal of Child Psychology and Psychiatry*, 38, p581-586.

Goodman R, Meltzer H, Bailey V (1998) The Strengths and Difficulties Questionnaire: A pilot study on the validity of the self-report version. *European Child and Adolescent Psychiatry*, 7, p125-130.

Green, H., McGinnity, A., Meltzer, H., Ford, T., & Goodman, R. (2005). *Mental Health of Children and Young People in Great Britain*.

Harrington, R., Fudge, H., Rutter, M., et al (1990) Adult outcomes of child and adolescent depression. 1: Psychiatric status. *Archives of General Psychiatry* (47), p465–473.

Jenkins, R., McCulloch, A., Friedli, L., and Parker, C. (2002). *Developing a national mental health policy*. The Psychology Press. London: TSO.

Kessler, R., C., Berglund, P., Demler, O., Jin, R., Merikangas, K.R. and Walters, E.E. (2005). Lifetime Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry,* 62 (6), p593-602. doi:10.1001/archpsyc.62.6.593.

Kim-Cohen J., Caspi A., Moffitt, T.E., Harrington, H., Milne, B.J. and Poulton R. (2003). Prior Juvenile Diagnoses in Adults With Mental Disorder: Developmental Follow-Back of a Prospective-Longitudinal Cohort. *Archives of General Psychiatry.* 60 (7), doi:10.1001/archpsyc.60.7.709.

Masten, A.S., Gewirtz, A.H. and Sapienza, J.K. (2006). Resilience in development: The importance of early childhood. In: Tremblay, R.E., Boivin, M. and Peters, R. *Encyclopedia on Early Childhood Development* [online].
Available at: http://www.child-encyclopedia.com/documents/Masten-Gewirtz-SapienzaANGxp2.pdf [Accessed 13.01.13]

Mindfull (2013). Alone with my thoughts [Online] Available at : http://mindful.org/static/mf/pdfs/alone_with_my_thoughts.pdf [Accessed 07.07.13]

National Institute for Clinical Excellence (2008*). Promoting Children's Social and Emotional Wellbeing in Primary Education.* NICE.

Layard, R. and Clark, D.M. (2014). *THRIVE: the power of evidence-based psychological therapies.* Allen Lane: London.

Lyons, R. and Woods, K. (2012). Effective Transition to Secondary School for Shy, Less Confident Children: A Case Study Using 'Pyramid' Group Work. Educational & Child Psychology, 29 (3) p8-24.

References

McKenna, Á. E., Cassidy, T. and Giles, M. (2014), Prospective evaluation of the pyramid plus psychosocial intervention for shy withdrawn children: an assessment of efficacy in 7- to 8-year-old school children in Northern Ireland. Child and Adolescent Mental Health, 19: 9–15. doi: 10.1111/camh.12023.

Ohl, M., Mitchell, K., Cassidy, T. and Fox, P. (2008). The Pyramid Club Primary School-Based Intervention: Evaluating the Impact on Children's Social-Emotional Health. *Child and Adolescent Mental Health*, 13 (3), p115-121.

Ohl, M., Fox, P. and Mitchell, K. *(2012), Strengthening socio-emotional competencies in a school setting. Data from the Pyramid project. British Journal of Educational Psychology, doi: 10.1111/j.2044-8279.2012.02074.x*

Rutter, M. and Maughan, B. (2002). School Effectiveness Findings 1979–2002. *Journal of School Psychology*, 40 (6), p451-475.

Shute, R.H. (2012). Promoting Mental Health Through Schools. The Psychologist, 25 (10) p752-759.

The Children's Society (2012). *The Good Childhood Report: A Review of our Children's Well-being.* A Children's Society Publication.

The Children's Society (2014). *The Good Childhood Report 2014.* A Children's Society Publication.

WHO (2009), Mental Health, Resilience and Inequalities [Online]. Available at: http://www.euro.who.int/_data/assets/pfd/oo12/100821/E99227.pdf

Woodward, L.J. and Fergusson, D.M. (2001) Life course outcomes of young people with anxiety disorder in adolescence. *Journal of the American Academy of Child and Adolescent Psychiatry,* 40 (9), p1086-93.

Zins, J.E, Weissberg, R.P., Wang, M.C. & Walberg, H.J. (2004), *Building Academic Success on Social and Emotional Learning*, Teachers College Press.

ANY QUESTIONS?

Building friendships, creating confidence