

***Case Study 2: An Evidence-Based Practice Review Report***

***Theme: School Based Interventions for Emotional and Behavioural Development***

***How effective is Zippy's Friends for developing the coping skills of young children?***

**Summary**

Zippy's Friends is a 24 week programme that targets the development of coping skills in young children. The universal programme is delivered by teachers and consists of six illustrated stories, involving a group of friends and their pet insect Zippy, and participatory activities which cover six themed modules.

This literature review aimed to evaluate how effective Zippy's Friends is for the development of coping skills of young children. A systematic literature search was undertaken using six databases. Five selected studies were analysed using Kratochwill's (2003) coding protocol and the weight of evidence was established according to Gough's (2007) Weight of Evidence Framework. The review found that Zippy's Friends can be effective in developing coping skills in young children. However, the significant methodological limitations are discussed and further research should be conducted before full confidence in the programme's effectiveness in this domain can be established. Recommendations are given for future research.

## **Introduction**

### **What is Zippy's Friends?**

Zippy's Friends is a 24 week programme targeting the development of coping skills in young children aged 5 to 8. Social-emotional skills are also taught in partnership. This universal programme is delivered weekly, in 45 minute sessions, by a trained teacher. The sessions cover six themed modules which contain specific goals and participatory activities. The module themes are: Feelings; Communication; Making and Breaking Relationships; Conflict Resolution; Dealing with Change and Loss; and We Cope. There are also six illustrated stories involving a group of children and their pet insect Zippy. These stories show the characters confronting issues that are familiar to young children. During each session the teacher begins by reading part of a story. The children then participate in activities such as drawing. These aim to explore and understand their feelings and behaviours. The programme structure is repetitive and contains weekly reviews which are designed to reinforce learning. Teacher training is compulsory and involves an explanation of: the philosophy and theoretical basis of Zippy's Friends; the concept of coping and its implications for the well-being of children; the programme structure; and the rationale behind the activities.

The programme is distributed internationally by the non-profit organisation Partnership for Children. It currently is being run in: Argentina, Brazil, Canada, China (Hong Kong, Beijing and Shanghai), Denmark, England, Iceland, India, Ireland, Lithuania, Mauritius, Mexico, Netherlands, Norway, Panama, Poland, Singapore and USA. In the UK school clusters of the Local Authority (LA) take on the license to run Zippy's Friends and coordinate training.

**Psychological Basis**

Zippy's Friends was first developed in 1998-1999 as a mental health programme aimed at the prevention of adjustment problems. After initial testing in Denmark, the programme was revised to include a greater emphasis on coping skills (Mishara & Ystgaard, 2000). For this reason this review focuses on the development of coping skills in young children.

Zippy's Friends is underpinned by Lazarus and Folkman's (1984) coping model; that coping is the effort to manage stressful demands and the regulation of emotional response to stress. This leads to adaptional outcomes. They emphasised that no one strategy is better than another and that the effectiveness of a strategy can be judged on its immediate and long term impact.

The programme developers highlight the significance of Boekaerts' (1996) work. She describes a model of coping which includes the child's perception of the situation, their coping repertoire which is developed through experience and modelling, and the individual's generalised coping skills. The implications of this for interventions are that pupils should be provided with an opportunity to practise and review their responses.

The programme developers also highlight Sandler, Braver, and Gensheimer's (2000) chapter as significant in their thinking. They describe stress as a transactional process where individual variables such as coping skills can reduce the impact of environmental stressors. They also highlight the causal chain of stress, where different types of stress affect each other becoming a cycle of stress. This psychological theory underpins the early intervention rationale of Zippy's Friends; it

is important to prevent this cycle of stress by developing young children's coping skills.

The curriculum style design of Zippy's Friends is equally supported by psychological theory. Greenberg et al. (2003) discuss the *Social and Emotional Learning* (SEL) conceptual framework and the ability of SEL programmes to target the underlying causes of problem behaviour. They describe how social and emotional skills can be learnt in similar ways to academic skills; the development of initial skills over time, dealing with increasingly complex situations. Finally they discuss the importance of co-ordinated social and emotional learning which begins in preschool and continues through to high school.

## **Rationale**

In 2009 there were 154,440 children with behavioural, emotional and social difficulties (BESD) as their primary SEN, making up 22.8% of all pupils with SEN (Cole & Knowles, 2010). Some of these children often cause challenging disruption in lessons and extreme and long-lasting stress to staff, others who are withdrawn can often be overlooked (Cole & Knowles, 2010). As a result schools require guidance about effective ways of dealing with this wide range of difficulties.

Moreover, EP work with schools is distinctive due to their focus on evidence-based practice (Cameron, 2006).

Research has shown that children with inadequate coping skills develop more emotional and behavioural problems. Inappropriate coping also leads to underachievement, violent behaviour and affects psychological development (Kraag et al., 2006). These outcomes highlight the importance of developing children's adaptive coping skills. Furthermore, since Every Child Matters (ECM: DfES, 2003),

government strategy for SEN has focused on early intervention and universal, preventative services. With these considerations in mind this systematic literature review provides an appraisal of the evidence base for a universal preventative programme which targets the development of coping skills of young children.

### **Review Question**

How effective is Zippy's Friends for developing the coping skills of young children?

### **Critical Review of the Evidence base**

#### **Literature Search**

An initial search for studies was carried out during February and March 2013 using the electronic databases: PsychINFO, ERIC (Educational Resource Index and Abstracts), Web of Science, Medline and Scopus. 'Zippy's Friends' was the search term used to locate the relevant studies for the literature review. The search was conducted in 'All Fields'. Google scholar was then used for a supplementary search. Again, 'Zippy's Friends' was the search term used. Pages of 10 results were searched until no relevant search result was found on a page. The fourth page contained no relevant reference to Zippy's Friends according to the criteria in Table 1 (see below). Therefore, the first 3 pages were screened for appropriate articles using the criteria (Table 1). This initial search derived 32 articles from all databases for further analysis.

#### **Including and excluding studies using criteria**

The criteria shown in Table 1 were used as a reference to obtain the included papers. For most articles inclusion or exclusion was clear through careful screening of the title and abstract. For those articles where it was unclear the full text was

reviewed. In this process 27 articles were excluded, the reasons for these are given in Appendix 1. After the exclusion process, five papers were selected for critical analysis. These are listed in Table 2 below.

	<b>Inclusion Criteria</b>	<b>Exclusion Criteria</b>
<b>Type of Publication</b>	The study must be in a peer reviewed journal, with the exception of Doctoral theses. This ensures methodological rigour, as theses and peer reviewed journals have been assessed using similarly stringent criteria.	The material is not in a peer-reviewed journal (including books and conference papers).
<b>Language</b>	The study is written in English, due to unavailability of resources for translation.	The study is not written in English.
<b>Type of Study</b>	The study must contain primary empirical data. To ensure originality of findings.	The study does not contain primary empirical data e.g. Literature reviews and meta-analyses
<b>Intervention</b>	The study implements Zippy's Friends as part of the study. To ensure integrity.	The study does not implement Zippy's Friends as part of the study.
<b>Dependent variables (measures) Analysis</b>	The study measures the efficacy of Zippy's Friends in reference to coping skills. To ensure integrity. The study reports quantitative analysis. This allows confounding variables to be separated out and ensures a focus on the development of coping skills.	The study does not measure the efficacy of Zippy's Friends in reference to coping skills. The study only reports qualitative analysis.
<b>Year of Publication</b>	The study is published post 1999. It uses the new version of Zippy's Friends.	The study is published pre 1999. It uses the old version of Zippy's Friends: Reaching Young Europe

Table 1. List of Inclusion and Exclusion Criteria.

Included Studies
Mishara, B. L. & Ystgaard, M. (2006). Effectiveness of a mental health promotion program to improve coping skills in young children: Zippy's Friends. <i>Early Childhood Research Quarterly</i> , 21(1), 110-123.
Wong, M. (2008). Helping young children to develop adaptive coping strategies. <i>Journal of Basic Education</i> , 17(1), 119-144.
Clarke, A. M. (2011). An Evaluation of Zippy's Friends, an Emotional Wellbeing Programme for Children in Primary Schools (Doctoral dissertation, National University of Ireland).
Dufour, S., Denoncourt, J., & Mishara, B. L. (2011). Improving Children's Adaptation: New Evidence Regarding the Effectiveness of Zippy's Friends, a School Mental Health Promotion Program. <i>Advances in School Mental Health Promotion</i> , 4(3), 18-28.
Holen, S., Waaktaar, T., Lervåg, A., & Ystgaard, M. (2012). The effectiveness of a universal school-based programme on coping and mental health: a randomised, controlled study of Zippy's Friends. <i>Educational Psychology</i> , 32(5), 657-677.

Table 2. List of Included Studies.

## Comparison of Selected Studies

The five studies selected were summarised (Appendix 2) and then compared on key features. Of the selected studies, three were quasi-experimental designs (Mishara & Ystgaard, 2006; Wong, 2008; Dufour, Denoncourt, & Mishara, 2011) and two studies used experimental designs (Clarke, 2011; Holen, Waaktaar, Lervag, & Ystgaard, 2012). Four studies used quantitative data to measure coping skills and one study (Clarke, 2011) contained both quantitative and qualitative data.

The UCL Educational Psychology Literature Review Coding Protocol, adapted from APA Task Force on Evidence Based Interventions in School Psychology (Kratochwill, 2003) was used to assess the quality of the methodology (Appendix 3) for the quantitative data in all the studies. This looked at the quality of measures, comparison group and analysis. The completed coding protocols can be found in

Appendix 3. Since the four other studies included in this review only used quantitative measures, only the quantitative data used in Clarke (2011) will be used in order to facilitate the comparison of the studies.

The Weight of Evidence Framework developed by Gough (2007) was used to determine each studies contribution to answering the review question. This framework weights three aspects of each study: *Quality of Methodology*, *Relevance of Methodology* and *Relevance of Evidence to the Review Question*. These weightings were then averaged to establish the *Overall Weight of Evidence*. This framework enables an objective judgement to be made about the value of each study in relation to the review question. The Weight of Evidence Framework is shown in Table 3 below. The weight of evidence given to each study can be found in Table 4. Further information about the use of this framework is detailed in Appendix 4.

<b>Weight of Evidence A</b>	<b>Weight of Evidence B</b>	<b>Weight of Evidence C</b>	<b>Weight of Evidence D</b>
Generic judgement about the coherence and integrity of the evidence ( <i>Quality of Methodology</i> )	Review-specific judgement about appropriateness of the evidence for answering the review question ( <i>Relevance of Methodology</i> )	Review-specific judgement about the relevance of the focus of the evidence for the review question ( <i>Relevance of evidence to the review question</i> )	Overall assessment of the extent to which the study contributes evidence to answer a review question ( <i>Overall weight of evidence</i> )

Table 3. Weight of Evidence Framework (Gough, 2007)



Study	Quality of Methodology (A)	Relevance of Methodology (B)	Relevance of evidence to the review question (C)	Overall Weight of Evidence (D)
Mishara, B. L. & Ystgaard, M. (2006).	Medium	Medium	High	<b>Medium</b>
Wong, M. (2008).	Low	Low	Medium	<b>Low</b>
Clarke, A. M. (2011)	Low	Medium	High	<b>Medium</b>
Dufour, S., Denoncourt, J. & Mishara, B. L. (2011).	Low	Low	High	<b>Medium</b>
Holen, S., Waaktaar, T., Lervåg, A., & Ystgaard, M. (2012).	Medium	Medium	High	<b>Medium</b>

Table 4. Details of the Weight of Evidence for each study

## Critical Review

### Participants

The studies were carried out in different countries: Lithuania and Denmark, Hong Kong, Ireland, North America and Norway. Zippy's Friends was carried out either in kindergarten or first grade classes in all the studies. The age of the participants ranged from a mean of 5.49 (Wong, 2008) to 7.5 (Mishara & Ystgaard, 2006). The recruitment of participants was based upon: availability of easy access (Mishara & Ystgaard, 2006), voluntary basis dependent on fulfilment of criteria (Clarke, 2011) and voluntary basis with no criteria (Dufour et al., 2011; Holen et al., 2012).

Participant recruitment was not made clear in one study (Wong, 2008). The number of participants in each study ranged from 267 pupils (Wong, 2008) to 1315 pupils (Holen et al., 2012). There were similar numbers of pupils in the intervention and control groups in four of the five studies (Wong, 2008; Clarke, 2011; Dufour et al., 2011; Holen et al., 2012). Gender and socioeconomic backgrounds were matched

between control and intervention groups within three studies (Mishara & Ystgaard, 2006; Clarke, 2011; Holen et al., 2012). One study matched gender but did not report socioeconomic status (Dufour et al., 2011) and one study did not report gender or socioeconomic background (Wong, 2008).

The good sample size and diversity of countries indicates that the results can be generalised. However, generalisation must occur with some caution as not all the studies used matched groups and participant recruitment is varied. In the studies where the groups were unmatched the results may be due to gender or to differences in socioeconomic background. Where participants were recruited on a voluntary basis, there may be other confounding variables which have not been considered. These cautions affected the weightings for the 'Relevance of Methodology' category (Category B).

### Research Design

All five studies used similar designs. They compared an intervention group to control group with a pretest-posttest design. The assignment of participants to intervention or control groups was made clear in four of the five studies. In one of the studies (Wong, 2008) there was only moderate confidence in the judgement on how participants were assigned. There were a few variations to research design: In one study (Mishara & Ystgaard, 2006) the post-test coping observations were not conducted in the Denmark control group. In one of the studies (Clarke, 2011) the 24 week program was implemented over two academic years. In the second academic

year some of the teachers were new and had been more recently trained. Teachers also took part in interim focus group review sessions. This may have had an impact on the implementation of the sessions. The variations in research design contributed to the low-medium weightings given for all the studies in the 'Relevance of Methodology' category (Category B).

### Control Group

One study (Mishara & Ystgaard, 2006) used a wait list intervention as their comparison group. In two studies the comparison groups were given 'treatment as usual' intervention (Clarke, 2011; Holen et al., 2012). However, it was not made clear what the usual treatment was for the schools in these control groups. In two studies it was not possible to identify what type of comparison group was used (Wong, 2008; Dufour et al., 2011). The weightings given for the 'Comparison Group' affected the 'Quality of Methodology' weighting (Category A), with one study (Wong, 2008) not meeting the criteria in this category.

### Intervention

The 'Relevance of Evidence to the Review Question' (Category C) weightings were high for four of the five studies. This was because all of the studies used Zippy's Friends in its entirety including the provision of teacher training before starting. The studies carried out the programmes in mainstream schools. Only one study (Clarke, 2011) targeted a special population; schools which were 'designated disadvantaged'. However, the children were not identified as having any learning or behaviour difficulties. Furthermore, four of the five studies evaluated the effectiveness of the implementation of Zippy's Friends. These four studies all received high ratings in

category B. The study (Wong, 2008) that did not report the effectiveness of implementation received a medium weighting in this category.

### Measures

The initial study (Mishara & Ystgaard, 2006) developed a measure of coping from the Schoolagers' Coping Strategies Inventory (SCSI) (Ryan-Wenger, 1990). The study stated that the reliability and validity of the SCSI had been evaluated; however Mishara and Ystgaard (2006) did not report the results of their adapted measure. Therefore, the reliability and validity of the SCSI used in this study must not be assumed. Mishara and Ystgaard (2006) used the Social Skills Questionnaire (Gresham & Elliot, 1990) as a secondary measure which has good reliability.

The subsequent studies aimed to replicate the original findings and continued to use the SCSI as the primary measure. Wong (2008) did not report further details about the reliability of this measure and as a result has received a low weighting in the 'measures' section (Category A). Clarke (2011) and Dufour et al. (2011) also continue to use the SCSI measure, reporting the reliability but not the validity. Holen et al. (2012) is the first study to use an alternative quantitative measure; the Kidcope questionnaire (Spirito, Stark, & Williams, 1998). Previous research has found this measure to be a reliable measure, however, this research was based on a sample of children aged 10-18. This is not appropriate for the sample in the included study. Furthermore, the implementation of the questionnaire in the included study was adapted due to the participants' young age and inability to read. This format was piloted to ensure participant understanding but not to ensure reliability. They do not report the validity. For this reason, this study (Holen et al., 2012) also received a low weighting in the 'measures' section (Category A).

Four studies used a multi-source method to collect data: Two studies used child and teacher reports (Mishara & Ystgaard, 2006; Wong, 2008) and two studies used child and parent reports (Dufour et al., 2011; Holen et al., 2012). One study relied on child reports (Clarke, 2011). The accuracy of self-reports from such young children questions the reliability of the data in this study. The reliability of the teacher reports can also be questioned as the same teachers who implemented the programme provided information about the children's coping skills. Their reports are therefore subject to bias and must be interpreted with caution (Mishara & Ystgaard, 2006; Wong, 2008). Only one study explicitly stated the use of assessors blind to the participant group assignment to carry out the assessment measures (Clarke, 2011).

### Analysis

Two studies used repeated measure ANOVA analysis including the within-subject factors of Pre-Post and the between-subject factor of Group (Intervention/Control) (Mishara & Ystgaard, 2006; Clarke, 2011). The first of these (Mishara & Ystgaard, 2006) was conducted in Denmark and Lithuania but only collected control group coping data in Lithuania. The lack of a control group for half the data collected means that confounding variables were not accounted for. One study (Wong, 2008) found skewed data in their preliminary analyses and so they used a non-parametric test, Wilcoxon Signed-Rank Test, for data analysis. Another study (Holen et al., 2011) used a different measure and so analysed the data using latent variable regression models including exploratory structural equation model (ESEM) analysis. This method was appropriate as previous research recommends an exploratory approach to determine what factors best fit the data for each study. Four of the

studies received medium weightings for the 'Analysis' section (Category A), however, the different analyses used in the studies makes it more difficult to compare the findings. One study (Dufour et al., 2011) did not give information about the type of analysis conducted and so did not meet the criteria for the 'Analysis' weighting (Category A).

### Findings

Four of the five studies found Zippy's Friends to be effective in increasing young children's use of coping strategies. Dufour et al. (2011) was the only study that did not find Zippy's Friends to be effective in increasing children's use of coping strategies. Table 5 below shows a summary of the effect sizes and the overall quality for each of the studies.

Study	Measures	Effect sizes	Overall Quality Rating
Mishara & Ystgaard (2006)	SSQTF (Gresham & Eliot, 1990)	Number of coping strategies: partial eta squared = 0.068 ( <b>small-moderate</b> ) and 0.008 ( <b>small</b> )	Medium
	SCSI (Ryan-Wenger, 1990)	Number of strategies x helpfulness: partial eta squared = 0.023 ( <b>small</b> )	
Wong (2008)	SCSI (Ryan-Wenger, 1990)	Coping strategies used: cohen's d reported as <b>medium</b> and <b>small</b>	Low
Clarke (2011)	SCSI (Ryan-Wenger, 1990)	No effect sizes reported and insufficient data to calculate.	Medium
Dufour, Denoncourt, & Mishara (2011)	SCSI (Ryan-Wenger, 1990)	No significant outcomes.	Medium
Holen, Waaktaar, Lervag, & Ystgaard (2012)	Kidcope (Spirito, Stark, & Williams, 1988)	Oppositional Coping strategies: Cohen's d = -0.380 ( <b>medium</b> ) Active coping strategies: Cohen's d = 0.186 ( <b>small</b> )	Medium

Table 5. Summary of effect sizes and overall quality of studies

Of the four studies that found significant positive effects on coping skills, three of these studies achieved a medium weighting for overall quality (Mishara & Ystgaard, 2006; Clarke, 2011; Holen et al., 2012). However, Clarke (2011) does not report effect sizes regarding coping skills and does not provide sufficient information to calculate them. Therefore, there are only two studies in this review that have found Zippy's Friends to be effective, reported appropriate results and which are of medium quality. These studies (Mishara & Ystgaard, 2006; Holen et al., 2012) have only found small and moderate effects. From these findings therefore, there is limited evidence that suggests that Zippy's Friends is an effective intervention to develop coping skills in young children.

The studies by Mishara and Ystgaard (2006) and Holen et al. (2012) were both found to be of medium overall quality. The quality and relevance of their methodologies were also rated medium, but both studies were found to be highly relevant to the review questions. Given the quality of these studies more weight can be given to their findings. Mishara and Ystgaard (2006) reported a small effect size for the number of coping strategies and a small-moderate effect sizes for the helpfulness of these. Holen et al. (2012) reported a significant reduction in oppositional coping strategies in the intervention group which had a medium effect size. They also reported an increase in active coping strategies which had a small effect size. These studies provide the best evidence of the effectiveness of Zippy's Friends on the development of coping skills in young children.

The study by Clarke (2011) also received a medium rating for overall quality. The methodology while of medium relevance was found to be of low quality. However, as the study was highly relevant to the review question this brought the overall quality rating up to medium. With this overall quality rating the results of the study can be

given more weight, however, for her significant findings Clarke (2011) does not report effect sizes. She reported that there was little change pre-post intervention in relation to the frequency of coping strategies, but that there was a significant increase in certain strategies. The overall effect size for the frequency and the perceived efficacy of coping strategies is not reported and only the mean and standard deviations are used to illustrate that one strategy was rated more highly by the intervention group. While of medium quality, the lack of effect sizes limits the usefulness of these findings.

The study by Wong (2008) was of low overall quality. While it was of medium relevance to the review question, the quality and relevance of the methodology was found to be low. The study reported medium and small effect sizes for some of the coping strategies used as reported by teachers. They reported that the children in the intervention group did not identify a change in their coping strategies from pre-test to post-test. There was insufficient data to calculate the effect sizes for the coping strategies as reported by the children. However, considering the low quality of the study the findings reported in the study are of less value.

Finally, the study by Dufour et al. (2011) reported that there was no significant difference in coping strategies between the groups but did not present any data to support this. This study was of medium overall quality suggesting that this lack of significance should be carefully considered when evaluating the effectiveness of Zippy's Friends regarding the development of coping skills. However, the study was brought up to medium quality because it was highly relevant to the review question. The quality and relevance of its methodology were given low ratings. This provides an explanation for the lack of significant findings and suggests that Zippy's Friends



may still be effective at developing the coping skills of young people when appropriately measured.

## **Conclusion and Recommendations**

### **Conclusion**

Four of the five studies reviewed suggest that Zippy's Friends is somewhat effective in developing the coping skills of young children. Of the four effective studies; three (Mishara & Ystgaard, 2006; Clarke, 2011; Holen et al., 2012) were awarded medium and one (Wong, 2008) was awarded low for the 'Overall Weight of Evidence' (Category D). These four 'medium' studies were given medium-high weightings for their relevance to the review question (Category C). However, the choice of measures and comparison group, and reporting of results were limitations and pulled down the 'Overall Quality of Methodology' (Category A).

The studies are limited due to the questionable reliability and validity of the measurements for coping skills in young children and due to their reliance on child self-reports. The initial study (Mishara & Ystgaard, 2006) used the SCSI (Ryan-Wenger, 1990) to measure coping skills. Despite the questionable reliability of this measure it was used in three of the subsequent studies. Holen et al. (2012) tried to overcome this limitation by measuring coping skills using the Kidcope Questionnaire (Spirito, Stark, & Williams, 1998). However, the reliability of this measure, as reported in the study, has not been shown with this population.

Four of the studies used multiple sources to collect data; either children and parents or children and teachers. Only one solely relied on the use of child self-report (Clarke, 2011). Child self-report, as reported by two of the studies, reduces the reliability of the results because children this age usually underestimate the difficulty of tasks and rate their ability as high (Harter, 2003). The questionable reliability of measures for coping skills and dependence on child self-report limits the findings of these studies.

Zippy's Friends is used as a universal programme in all the selected studies. However, the studies focus on effects of the intervention with respect to the development of coping skills. While it is appropriate to use individuals as the unit of analysis, this does not take account of the multiple levels in these designs. The authors have not accounted for all the possible effects, for example, the impact of different schools and different classrooms. Therefore, the findings of these studies must be interpreted with caution.

Teacher training is a requirement of this programme and occurred in all studies. However, the impact of teacher training was not evaluated. The education and development of teachers' skills and knowledge about coping may have been a factor which affected the development of children's coping skills. This was not controlled for in the comparison group and so it is not known whether the positive effect on coping is due to the programme itself or the teacher training.

This review has found that Zippy's Friends can be effective in developing coping skills in young children. However, the limitations of the studies, as discussed, have contributed to the 'low' to 'medium' weightings for the Overall Weight of Evidence in Gough's (2007) Weight of Evidence Framework. Based on this review it is necessary

to conclude that while Zippy's Friends can develop young children's coping skills, it is only appropriate to recommend the use of Zippy's Friends at this time with prudence. This is due to the lack of comparison to an appropriate alternative programme and other study limitations discussed above. Further research is needed before the programme can be fully recommended by EPs for this purpose. Furthermore, this review has focused on the development of coping skills. It must be recognised that these conclusions cannot be generalised to the other areas assessed in these studies such as emotional literacy.

## **Recommendations**

Several recommendations can be made for future research:

All the studies selected used measures of coping skills which had questionable reliability. Future studies would benefit from the use of a measure of coping skills which has good reliability for this age group and is not open to child self-report or teacher bias.

These studies only evaluated the effects of the programme at an individual level. Future studies could use multi-level analysis to establish effects at classroom and school level.

The studies in this review did not use active comparison groups. The effectiveness of Zippy's Friends should be compared to another intervention which is designed to develop coping skills in young children.

The selected studies did not assess the impact of the teacher training element of Zippy's Friends. This may have had a significant impact on the development of coping skills and should be assessed in future studies. If effective, this would be a more cost-effective approach compared to the implementation of a 24-week programme.

As discussed this review focused on the development of coping skills. A review of other areas impacted by Zippy's Friends, for example, emotional literacy would be useful.

## **References and Appendices**

Boekaerts, M. (1996). Coping with stress in childhood and adolescence. In Zeidner, M., & Endler, N. S. (Eds.). *Handbook of coping: Theory, research, applications*. New York: John Wiley and Sons.

Cameron, R. J. (2006). Educational psychology: The distinctive contribution. *Educational Psychology in Practice*, 22(4), 289-304.

Cole, T., & Knowles, B. (2010). How to Help Children and Young People with Complex Behavioural Difficulties: a guide for practitioners working in educational settings. Jessica Kingsley Pub.

Clarke, A. M. (2011). An Evaluation of Zippy's Friends, an Emotional Wellbeing Programme for Children in Primary Schools (Doctoral dissertation, National University of Ireland).

Department for Education and Skills. (2003). *Every Child Matters*. London: The Stationery Office.

Dufour, S., Denoncourt, J., & Mishara, B. L. (2011). Improving Children's Adaptation: New Evidence Regarding the Effectiveness of Zippy's Friends, a School Mental Health Promotion Program. *Advances in School Mental Health Promotion*, 4(3), 18-28.

Gough, D. (2007). Weight of Evidence: A Framework for the Appraisal of the Quality and Relevance of Evidence. *Research Papers in Education*, 22, 213-228.

Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H., & Elias, M. J. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American psychologist*, 58(6/7), 466-474.

Gresham, F. M., & Elliot, S. N. (1990). *Social skills rating system*. Circle Pines, MN: American Guidance Service.

Harter, S. (2003). *The development of self-representations during childhood and adolescence*. New York: Guilford.

Holen, S., Waaktaar, T., Lervåg, A., & Ystgaard, M. (2012). The effectiveness of a universal school-based programme on coping and mental health: a randomised, controlled study of Zippy's Friends. *Educational Psychology*, 32(5), 657-677.

Kraag, G., Zeegers, M. P., Kok, G., Hosman, C., & Abu-Saad, H. H. (2006). School programs targeting stress management in children and adolescents: A meta-analysis. *Journal of School Psychology*, 44(6), 449-472.

Kratochwill, T. R., & Steele Shernoff, E. (2004). Evidence-Based Practice: Promoting Evidence-Based Interventions in School Psychology. *School Psychology Review*, 33, 34-48.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer Publishing Company.

Mishara, B., & Ystgaard, M. (2000). Exploring the potential for primary prevention: Evaluation of the Befrienders International Reaching Young Europe pilot program in Denmark. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 21 (1), 4-5, 7.

Mishara, B. L., & Ystgaard, M. (2006). Effectiveness of a mental health promotion program to improve coping skills in young children: Zippy's Friends. *Early Childhood Research Quarterly*, 21(1), 110-123.

Ryan-Wenger, N. (1990). Development and psychometric properties of the Schoolagers Coping Strategies Inventory. *Nursing Research*, 39(6), 344–349.

Sandler, I. N., Braver, S., & Gensheimer, L. (2000). Stress theory, research and action. In Rappaport, J., & Seideman, E. (Eds). *Handbook of community psychology* (p.187-213). New York: Kluwer Academic/Plenum.

Spirito, A., Stark, L.J., & Williams, C. (1988). Development of a brief coping checklist for use with pediatric populations. *Journal of Pediatric Psychology*, 13(4), 555–574.  
*doi:10.1093/jpepsy/13.4.555*

Wong, M. (2008). Helping young children to develop adaptive coping strategies.

*Journal of Basic Education*, 17(1), 119-144.