

The Effectiveness of Youth Mentoring Programmes in New Zealand

Susan P. Farruggia, *The University of Auckland*

Pat Bullen, *The University of Auckland*

Joy Davidson, *The University of Auckland*

Ann Dunphy, *Youth Mentoring Network*

Frank Solomon, *Youth Mentoring Network*

Efeso Collins, *Youth Mentoring Network*

This systematic review examines the effectiveness of youth mentoring programmes in New Zealand, an area that has had tremendous growth in the past 20 years. Of the 74 potential studies identified in searches, 26 met the inclusion criteria. Overall, 88% of the included programmes showed some level of effectiveness, although these results are tentative due to the varied quality of the research. Further, programmes that focused on psychological and interpersonal goals were more effective than programmes focused on educational, behavioural, vocational or cultural goals. Programme characteristics that appeared to moderate effectiveness included: dissemination, age of programme, history of evaluation, utilising principles of best practice, component programme, type of mentoring relationship, use of peers as mentors, level of structure, expected length of mentor-mentee relationship, SES of youth, and researcher-practitioner relationship.

Most young people in New Zealand experience positive well-being and adjustment (Fortune, Watson, Robinson, Fleming, Merry, & Denny, 2010). Over 90% reported having at least one parent who cared a lot about them and 83% felt safe at school all or most of the time. However, while most young people are doing well, there is a non-trivial group of vulnerable youth in New Zealand society requiring preventative interventions. Areas of vulnerability for these youth are seen in educational, health and social domains. These issues tend to be particularly pertinent for children and youth living in low socio-economic areas (St. John & Wynd, 2008).

Educationally, around 12% of all youth leave school with little or no qualifications (Ministry of Education, 2007). Further, disparities in educational achievement and attainment are apparent at both secondary and university level. Māori and Pasifika youth are more likely to leave school without qualifications, achieve lower GPA scores, and not

gain university entrance compared to Asian and European youth. (Ministry of Māori Affairs, 2000; Ministry of Pacific Island Affairs, 2003; Ministry of Youth Development, 2003; Shulruf, Hattie, & Tumen, 2008). It is however acknowledged that both Māori and Pasifika are more likely to be affected by poverty, which is associated with underachievement (Biddulph, Biddulph, & Biddulph, 2003; Gilbert, 2005).

Health-wise, there is a relatively high prevalence of mental illness among New Zealand youth, with suicide being the second most common cause of death for this sector of the population (Ministry of Youth Development, 2003). The Youth '07 study (Fortune et al., 2010) found that 11% of secondary school students had significant depressive symptoms, with rates being particularly high for females (15%) and Asian students (14%). In terms of delinquency and problem behaviour, they also found that 15% of male students and 9% of female students reported having been in trouble with the police in the previous

12 months (Clark et al., 2009). Further, in the previous year 8% of students reported they had stolen something worth more than \$50, 10% of students reported they had tagged or painted graffiti on someone else's property, and 40% of male students and 27% of female students reported that they had hit or physically harmed another person (Clark et al., 2009). In terms of family, almost half of all New Zealand children experience the separation or divorce of their parents, with just over 25% of all children and youth living in single parent families (Ministry of Youth Development, 2003).

While it is important to acknowledge the challenges some youth face, it is equally important to point out that every young person has potential. That is, with the right tools and nurturing environments, all youth have the ability to direct their lives in a positive way, facilitating what is referred to as positive youth development (Farruggia & Bullen, 2010; Larson, 2000). A key concept of PYD is that positive change is possible through positive intervention (Lerner & Castellino, 2002), or the promotion of developmental assets (Search Institute, 2003), such as caring families and communities that provide social support. One common means of promoting positive youth development among young people, both in New Zealand and internationally, is mentoring (Larson, 2006).

Mentoring in New Zealand

There is general agreement that

youth mentoring was well-established in New Zealand before the term came into use. Māori traditions of Tuakana/Teina, where older whānau members supported younger members, pre-date European contact. Formal youth mentoring programmes appear to have started in New Zealand in the 1980s, when the peer support model was imported from Australia and adopted by almost all secondary schools. Interestingly, the term “mentor” was first used in New Zealand in the business sector. Mentoring was not applied to the youth sector until the early 1990s, when the first formal youth mentoring programmes began in the South Island with the Buddy Programme.

The pioneer of this programme, Jill McDonald, with the support of others, organised New Zealand’s inaugural Youth Mentoring Conference in 2000. At the end of that conference, a steering group was elected to develop the concept of a national mentoring organisation, the Youth Mentoring Association of Aotearoa New Zealand (YMAANZ). In 2001, the YMAANZ steering group organised a second national conference that took place in Blenheim. The Association was ratified by the attendees and a wider group of programme providers was elected to the committee.

Elsewhere, initially unaware of the YMAANZ initiative, an Auckland group of interested non-programme providers formed the Auckland Youth Mentoring Association (AYMA). This group had the advantages of the country’s major population base, and as non-providers were free to focus on more modest regional needs, such as running seminars. Meanwhile, the development of the internet made access to international knowledge more accessible, and programme providers continued to promote youth mentoring in New Zealand. Two clear strands of specialist youth mentoring programmes thus became well known: locally-developed models such as the Buddy Programme and Project K, and New Zealand versions of notable international programmes such as Big Brothers Big Sisters. There was considerable growth in programmes of both types, largely due to philanthropic funding.

In 2005, the AYMA was re-

established as a trust, now known as the Youth Mentoring Network (YMN), launching their national website in 2006, and then holding the first North Island-based conference on youth mentoring in 2007. With funding from the Ministry of Youth Development (MYD), the *Guide to Effective Practice in Youth Mentoring New Zealand* (GYM; Youth Mentoring Network, 2009) was developed. This document provided clear links between youth mentoring in New Zealand, the Youth Development Strategy Aotearoa (Ministry of Youth Development, 2002), and international good practice models. In August 2009, another national conference was held in Auckland. Today, YMN works collaboratively with the Australian Youth Mentoring Network, sharing resources and aligning respective national conferences in alternate years.

The Effectiveness of Youth Mentoring

Involvement in youth mentoring programmes has been found to be associated with more positive attitudes toward school, greater well-being, a more positive reaction to situations involving drugs, improved interpersonal relations, and less likelihood to start using illegal drugs and alcohol, less engagement in aggressive behaviour, decreases in wagging school, and less lying to parents (Eby, Allen, Evans, Ng, & DuBois, 2008; Grossman & Tierney, 1998; Karcher, 2005; LoSciuto, Rajala, Townsend, & Taylor, 1996; Tolan, Henry, Schoeny, & Bass, 2008).

In addition, much research is being done to investigate what particular aspects of mentoring contribute to these improvements. For example, DuBois and colleagues (2002) conducted a meta-analysis examining the effectiveness of one-to-one mentoring programmes in the United States. Reviewing 55 evaluations of youth mentoring programmes, they identified characteristics of the most effective programmes, or principles of best practice, including: strong relations between youth and mentors, using mentors from “helping” backgrounds, providing ongoing training and support to the mentors, involving parents, programmes that are based on both theory and research, and targeting at-risk (versus typical) youth. They found that

matching on gender, race or interest, as are commonly practiced among many mentoring programmes, did not impact the effectiveness of the programme. Other elements of best practice include having an adequate infrastructure, screening mentors and having clear selection criteria for mentees, having standards for monitoring the match, and programmes that engage in sound evaluation (Allen & Eby, 2008; Sipe, 2002).

Much of the research on mentoring has taken place in the United States, where many wide-reaching mentoring programmes have been implemented, such as the Big Brothers Big Sisters programme. In examining the New Zealand context of mentoring, it has been suggested that practices of mentoring in the United States do not necessarily fit with the New Zealand familial/social structure (Evans & Ave, 2000; Evans, Jory, & Dawson, 2005). While the programmes based in the United States typically involve one-to-one relationships, this may not be appropriate for youth in New Zealand where this practice may conflict with social and cultural structures. Mentoring for young people in New Zealand needs to account for the cultural needs and practices of its youth. Further, the American emphasis on mentoring programmes for at-risk youth may be too narrow within the New Zealand context, as many programmes have been established for low-risk youth (Farruggia, Bullen, Dunphy, Solomon, & Collins, 2010).

The Current Study

Given the effectiveness of mentoring and its establishment as a social intervention in New Zealand, it is important that mentoring be systematically evaluated. Yet, the wide use of mentoring in New Zealand has yet to be matched with this sort of thorough evaluation. Therefore, there is a current national priority and policy interest in the area of mentoring to conduct formal research seeking to establish effectiveness of mentoring programmes within New Zealand. This systematic review aims to 1) examine the effectiveness of youth mentoring programmes in New Zealand; 2) identify the characteristics of successful programmes; and 3) to identify gaps in

the literature and recommend directions for future research.

Method

Inclusion Criteria

Studies needed to meet all criteria to be included in the review. Inclusion criteria, adapted from Littell et al. (2008) and Tolan et al. (2008), fell into four main categories including: 1) effects assessed; 2) types of participants; 3) programme type; and 4) research design. *Effects assessed:* Studies were required to examine the effectiveness of the programme and to address outcomes in at least one of the following areas: emotional/psychological, problem/high-risk behaviour, academic/educational, career/employment, and social competence. *Types of participants:* The review was limited to studies whose participants were over the age of 6 years and under the age of 24 years, with the mean age for the sample to be under 20 years. This upper age was selected as the Ministry of Youth Development definition of youth goes to 24 years (Ministry of Youth Development, 2002). The review was also limited to programmes set in New Zealand. *Programme type:* Studies were required to involve a formal mentoring programme; this could include one-to-one, group, team, peer or e-mentoring, but could not focus on informal or natural mentoring. *Research design:* Due to the limited literature on the topic, studies with less rigorous methodologies were included, but bias was identified. In addition, both qualitative and quantitative studies were included, as long as they met the following criteria. For qualitative studies to be included they needed an indicator of effectiveness reflecting change; post-test only was acceptable if change was discussed. For quantitative studies to be included, there needed to be an indicator of effectiveness including an indication of change or difference (e.g., pre-test/post-test change or the use of a comparison group; post-test only with an indicator of effect).

Search Strategy

The search strategy for relevant literature was conducted in four primary ways. Firstly, a contact at the YMN approached all youth

mentoring organisations that were part of the Network to request copies of any evaluation reports on their particular programme. It is believed that all established, active mentoring programmes in New Zealand were on their database. Secondly, an extensive database search was conducted including: education databases (i.e., ERIC, A Plus Education, Education Sage, Professional Development Collection, and Proquest Education Journals); psychological and medical databases (i.e., PsycInfo, MEDLINE, Psychological and Behaviour Sciences Collection, Web of Science, and Science Direct); social science databases (i.e., FAMILY, Proquest Social Science Journals, Social Services Abstracts, and SAGE Sociology); New Zealand databases (i.e., Index New Zealand and Te Puna); and other databases (i.e., Proquest Dissertations and Theses, all New Zealand university theses and dissertation databases, and the Cochrane Library). The list of search terms developed with the assistance of a subject librarian included: mentor*, role model, youth, young*, child*, teen*, adolescen*, juvenile, program*, evaluat*, and intervent*. 'Zealand' was added as a term to all searches. Thirdly, an internet search was conducted which covered National research sites, Ministerial websites, Google and Google Scholar. Lastly, reference lists of retained reports were checked for further reports that had not been identified by the above methods.

Selection of Studies

A total of 13,292 studies (unduplicated citations) were identified during the search. Of the studies identified during the search, two were unobtainable and two more studies were not included in this review as they were in progress. A total of 74 were deemed to be relevant to the review based on the citation and abstract. All relevant full-text reports that were retained during the literature search were coded using inclusion criteria described previously and were coded as either met or unmet for each study. This inclusion coding was done by two independent coders; the inter-rater agreement was 83%.

A total of 26 studies were coded as meeting the inclusion criteria for the review and are included in this study.

Excluded studies (48) did not meet criteria for the following non-mutually exclusive reasons: 36 did not test for programme effects, 12 were not a formal mentoring programme, 7 had mentees outside the age range, 4 had the same data presented in another included study, 2 examined mentor, not mentee, effects, and 1 was not based in New Zealand. Figure 1 shows a flow chart of the selection process.

Data Extraction and Management

Guided by Littell and colleagues (2008), a data extraction coding sheet was developed for the purpose of extracting relevant information for the review from the included studies. In addition, previous literature reviews and meta-analyses were also consulted during the development of the coding sheet (i.e. DuBois et al., 2002; Tolan et al., 2008). These were then adapted to fit the New Zealand context (see Farruggia et al., 2010 for the coding sheet).

The data extraction coding sheet covered aspects of report/research characteristics and methodologies, programme features, youth and mentee characteristics, outcome goals and measures (i.e., educational, psychological, behavioural, interpersonal, vocational, and cultural adjustment) adverse effects, timing of intervention, and quantitative and qualitative outcomes. An important difference in this study's coding scheme, in comparison to Tolan et al. (2008) and DuBois et al. (2002), was the classification of mentoring type. This study opted to categorise programmes as being one-to-one, group, or mixed as it seemed to better fit the New Zealand context. Further, the relationship types were categorised as being adult, peer, university student, or mixed. Another important difference was that the level of risk was coded for, and was not a criteria for exclusion, including: typical/low (typical or community youth with little or no risk and no non-normative problems), at-risk (youth with risk factors associated with poverty, school problems, family problems and/or low self-esteem, but no severe problems), high risk (youth who are offenders, have substance problems, clinical/mental health problems, severe family problems, or educational failure, and/or are living in an institutional setting)

or mixed-risk (different youth in the programme have different levels of risk).

Again, using the same process as for study inclusion, two independent coders extracted data; the inter-rater agreement was 80%.

For a number of studies, there was very limited information on programme characteristics. In cases where the study was evaluating a programme that fell under the umbrella of the Youth Mentoring Network, the Network contacted each individual programme to request additional information; this was then recorded on the code sheet. SPSS was used to organise the analyses.

Measures of Treatment Effect

Treatment effects were measured in a number of ways as both quantitative and qualitative data were included in this review. Further, many of the studies that utilised quantitative data did not conduct statistical tests to determine effect and/or significance. As such, a variety of approaches were taken to determine the treatment effects. Individual effect indicators were determined for each outcome reported. For all approaches, coding continued to be completed by two people with agreement ratings as previously described.

For quantitative studies that provided statistical results, an effect size (Cohen's *d*) for each measure was calculated. If raw data were provided without any statistical tests, means and standard deviations were calculated from which effect sizes were calculated. Effect sizes of below .20 were seen as signifying unsuccessful outcomes; those with effect sizes between .20 and .35 were seen as indicating moderately successful outcomes, and effect sizes above .35 indicated successful outcomes. Once effect sizes were calculated, results were recoded for each goal domain (i.e., educational, psychological, behavioural, interpersonal, vocational, and cultural) as not effective, mixed or moderately effective, or effective so that results could be combined with qualitative studies. Mixed effects reflected multiple indicators within the same goal domain, but with inconsistent results. When programme studies indicated adverse effects, this was taken into consideration when determining the effectiveness of

the programme. Programmes could be coded as effective in one goal domain and not effective in a different goal domain.

An effect size could not be calculated for all studies reporting quantitative data, for reasons such as proportions, rather than raw data, had been provided. Quantitative studies, for which an effect size could not be calculated, were coded for effectiveness based on the output they provided. The effects were coded using the same scale as above (i.e., not effective, mixed or moderately effective, or effective). This rating took into account the occurrence of any adverse outcomes. Again, if studies had more than one programme goal (e.g., educational and psychological) effectiveness was coded for each goal domain.

For qualitative studies, outcomes were coded in the data extraction code sheet for effectiveness, using the response choices not effective, mixed results, and effective. To be coded as effective, all or most of the qualitative results needed to have indicated a positive effect. To be coded as mixed, some of the results needed to be effective. To be coded as not effective, none or very few of the results were effective. Again, this rating took into account the occurrence of any adverse outcomes. This coding was part of the overall data extraction. Once individual outcomes were assessed for effectiveness, data were aggregated by domain, taking into account adverse effects. Again, different goal domains could allow for different effectiveness ratings.

At the end of these processes results from quantitative and qualitative data were merged as both were now on the same scale. Merging of the of data allowed for a more complete examination of the effectiveness of youth mentoring, as traditional systematic reviews typically focus on quantitative data only. Based on the combination of quantitative and qualitative results across goal domains, programmes were then coded for overall effectiveness in the following categories: not effective (not effective in any domain or using either methodology; very few effects found), mixed/moderately effective (effects found in some domains or had moderate effects across domains),

effective (effective in many domains, possibly some minor variation by research methodology), or very effective (consistent, strong effects across domains and methodology).

Results

The results are divided into two sections. The first section is a description of mentoring programmes in New Zealand that were included in this review. The second section is an analysis of the effectiveness of mentoring programmes, examining variation by programme characteristics. A summary of the mentee/mentor and programme characteristics for each study included in this review can be found in Tables 1 and 2. Table 3 reflects the percentages across programmes on key descriptives.

Youth Mentoring Programmes in New Zealand

This review includes 26 evaluations covering 22 different mentoring programmes in New Zealand. (Note: one of these evaluations covered multiple programmes, but was assessed as a whole, as enough details of individual programmes were not provided). One study did not provide a sample size as it was reviewing multiple programmes; excluding this study, the number of mentees in this review was 2363. Of the programmes included in this review, 8 fell within the umbrella of the Youth Mentoring Network; the remaining programmes were independent, one-off programmes, generally run in schools ($n = 9$), or the community ($n = 5$). According to the Network, there were 23 active programmes in New Zealand at the time of this review which meant that only 35% of the current programmes had evaluations of effectiveness for mentees.

The following paragraphs describe overall characteristics of programmes included in this review. Due to the fact that not all evaluations provided full details on the programmes, percentages were calculated based on programmes with known characteristics and, therefore, were reported for valid cases only. For some programme features, there was a large amount of missing information. General programme characteristics tended to be more complete, whereas

programme delivery information, such as the average length of the relationship, had substantial missing information.

The majority of programmes included in the review were independent (48%), with 32% being regional multi-site programmes, and 20% being national programmes. The vast majority of programmes were located in urban areas (80%) and over half of the programmes were based at schools (65%). Seventy percent of these programmes were established programmes, while 30% were relatively new (i.e., 2 years prior to the review). The majority of programmes did not have a history of evaluation (70%). All but one of the programmes were based on at least some principles of good practice.

From the studies included in this review, mentoring tended to be a component of a larger programme (64%), rather than a stand-alone programme. When mentoring was a component, mentoring made up varying proportions of the programme, with some programmes having the majority of services as mentoring (39%). Of component programmes, apart from mentoring, the most common components were educational (94%) or life skills (67%).

Mentoring tended to be one-to-one for most programmes (73%), few having group or mixed mentoring. Programmes typically used established criteria for matching mentees and mentors, 56% of these programmes also matched on gender, and 21% matched on ethnicity. The most commonly reported mentor was an adult (72%), who was a volunteer (84%). Most programmes screened (95%) and trained (91%) their mentors. In terms of support, once the mentorship had begun the largest proportion of programmes (61%) offered monthly ongoing support, while 22% offered this weekly, and 17% offered it every 2-4 months or less frequently. Further, 22% provided weekly supervision of the match, while 44% provided monthly, and 33% provided supervision every 2-4 months or less frequently.

Programmes tended to have some structure with 39% highly structured; only 17% had little or no structure. Most programmes expected the mentors to meet weekly with mentees. There was a wide range (i.e., 2 to 48 months)

in expected lengths of the relationship across programmes, with an average expected length of 11.37 months ($SD = 9.91$). The most frequent expected length was 12 months, expected by 42% of programmes; 11% of programmes had expectations for the relationship to last longer than 12 months. Programmes tended to have minimal or no contact with families (71%).

Programmes most typically targeted low Socio-Economic Status (SES) youth or mixed SES youth, as well as at-risk youth (56%). Most programmes had both male and female mentees. When examining ethnicity of the mentees, 54% had a significant proportion of Māori and 19% had a significant proportion of Pasifika youth with 62% having Māori or Pasifika youth as there was an overlap on some programmes. The remaining programmes typically were almost all NZ European (including Pākehā and youth of European origin), with a small number having a different ethnic group.

All but one programme (96%) identified at least one programme goal and most programmes had more than one goal (i.e., 8% of programmes only had one goal, 40% had 2 goals, 12% had 3 goals, 20% had 4 goals, and 20% had 5 goals). Almost all programmes (96%) had educational goals. About half the programmes had psychological goals, interpersonal goals, behavioural goals, vocational goals, and a few programmes had cultural goals (20%).

Effectiveness of Youth Mentoring Programmes

The effectiveness of youth mentoring programmes was first examined overall, regardless of goal domain (e.g., academic, psychological), followed by effectiveness by domain. Next, based on the information available on each programme, features of programmes were examined to see if associations with effectiveness could be identified; these features included general programme characteristics, programme delivery characteristics, youth characteristics, and mentor-mentee relationship characteristics. Again, these findings are first presented as aggregated across goal domains and then within goal domains of educational, psychological, behavioural, and interpersonal. Vocational and cultural

domains were not included as these were frequently not evaluated, even when they were programme goals.

For the within-goal analyses, only findings that were different from the overall pattern are presented in order to minimise confusions by repeating findings. Only characteristics that had adequate variability or had enough valid information are included. For instance, as 96% of programmes had identified goals, this variable was not examined as there was not enough variability to draw meaningful conclusions. Similarly, duration of the relationship was not included as only 23% included this information in the research. It is important to note that for the following results, patterns in the data are presented. This does not mean that if a particular type of programme was associated with less favourable outcomes that all programmes of that type were not effective, just that this was a trend.

Overall programme effectiveness.

Overall, the majority of programmes included in this review showed some level of effectiveness (88%), with only 12% being classified as not effective. The remaining programmes were quite varied in their level of effectiveness: 35% were moderately effective (e.g., a modest effect size) or showed mixed effectiveness (e.g., effective in some goal domains but not others; effective for qualitative but not quantitative methodology); 27% were effective (e.g., strong effects found for many of the goals); and 27% were very effective (strong effects found for most or all of the goals). It should, however, be noted that for 26% of all programmes included in this review, at least one adverse outcome was found.

When examined by goal domain, programmes tended to be more effective in psychological and interpersonal areas (86% and 73%, respectively, of programmes were effective or very effective within these goals) and less so in academic, behavioural, vocational, and cultural areas (45%, 36%, 40%, and 33%, respectively, of programmes were effective or very effective). This is, in part, because the effectiveness of programmes with academic and behavioural goals was very variable within programmes, meaning they

were successful in some aspects of the goal but not others (e.g., attendance but not academic performance). In addition, programmes with academic goals were less consistent with their effectiveness than other types of goals, meaning there were programmes that were ineffective and programmes that were very effective. Another pattern that emerged in regards to programme goals was that programmes covering fewer areas, i.e., had fewer goal domains, tended to be more effective.

Programme characteristics. Concerning the mentoring programmes, general programme characteristics that were examined included: the dissemination of the programme (independent, multi-site regional, or national); programme age (new/relatively new versus more established); had a history of evaluation (yes or no); programme was based on principles of good practice (no, somewhat or yes); and programme was mentoring-only versus mentoring as one component of a wraparound programme. Overall, when looking at the dissemination of the programme, independent programmes tended to be less effective than regional multi-site programmes; there was not a trend for national programmes, meaning some were effective while others were not. One exception to this result was for behavioural goals where independent programmes showed a higher proportion of effectiveness (43%) as compared to regional multi-site or national programmes (both with 0% effective; 100% mixed/moderately effective).

For the age of the programme, those which were more established were more likely to be effective as compared to new or relatively new programmes. This association was particularly true for programmes with interpersonal goals. Two-thirds of new programmes were ineffective, whereas 80% of established programmes were effective.

Regarding a history of programme evaluation, more effective programmes tended to have a history of evaluation. Only unsuccessful programmes had not previously been evaluated. That said, many successful programmes had also not been previously evaluated.

There was also a positive association between best-practice and

effectiveness. When programmes were based on international principles of good practice, they were more likely to be effective. This was particularly true for psychological goals and for interpersonal goals. For psychological goals, for programmes that utilised good practices, all were successful, whereas for programmes that somewhat utilised good practice, 50% were ineffective or had mixed/moderate effects.

Interestingly, when mentoring was a component of a programme versus being a stand-alone programme, the mentoring programme was more effective. That said, it was not possible to tease apart the impact that mentoring had independent of the other programme components; therefore, this result should be interpreted with caution.

The only factor that did not have an association was the location of the programme. Variation in effectiveness was not found for school-based programmes or community-based programmes and there were too few mixed programmes to draw meaningful conclusions.

Programme delivery. The next set of factors examined related to programme delivery. These included: type of relationship (one-to-one, group, or mixed); type of mentor (peer, university student, or other adult); compensation for mentors (paid versus volunteer); level of programme structure (in terms of time, location and activities); inclusion of families (no contact or at least minimal contact); expected duration of relationship (less than 6 months, 6 to 9 months, one year, or more than one year); and matching of mentors and mentees on gender (not enough programmes matched on ethnicity to look at it in a meaningful manner).

Regarding the type of mentoring relationship, programmes with one-to-one mentoring or mixed (one-to-one and group) mentoring tended to be more effective than programmes that delivered mentoring in groups only. This was particularly evident for programmes with academic goals. Programmes that utilised peers as mentors were less effective than those with university students, but there was no clear pattern as to how the use of adults as mentors impacted on programme effectiveness.

There was also an association

between level of structure and programme effectiveness. Programmes that were more highly structured, in terms of time, location and activities of mentoring, were more effective, as compared to programmes that had less structure. This pattern was found across programme goals. For matching on gender, programmes that did match on gender tended to be more effective as compared to those that did not.

However, programmes that had a longer expectation for the length of the mentee-mentor relationship tended to be more effective, once a minimal threshold of more than one year was met. There was no consistency in effectiveness for programmes that expected the relationship to be one year or less. There was no difference in effectiveness between programmes that paid mentors and those where mentors were volunteers. Likewise, programme effectiveness was not moderated by the inclusion of family in the programme.

Youth characteristics. In terms of youth characteristics, we examined variation in gender (male only, female only, or mixed); age, as indicated by level of school they attend on average (primary, primary or intermediate, intermediate, intermediate or secondary, or secondary); socioeconomic background of the youth (low, mid, high or mixed); and risk status of the youth (low/no risk, at-risk, high-risk, or mixed). For gender, age and risk status there was no variation in effectiveness. However, when examining the socioeconomic background of the youth, there was a trend for programmes that were aimed at mid-level economic background youth being less effective as compared to programmes with low or mixed socioeconomic background youth. This variable, in particular, had high levels of missing information, so caution must be taken when interpreting this result.

Researcher-practitioner relationship. In terms of the researcher-practitioner relationship, there was a moderate association between external assessment of programmes and greater programme effectiveness. This pattern was found consistently across programme goals, and particularly for educational goals. In cases where the research evaluator also delivered the programme, there were slightly lower

effectiveness rates found.

Discussion

The State of Youth Mentoring in New Zealand

Youth mentoring has grown significantly in the past 20 years. At the time of this study there were 23 active programmes within the Youth Mentoring Network umbrella. Of the programmes included in this review, most were independent, possibly reflecting that mentoring in New Zealand is still relatively young. Programmes have not had as much time, compared to other countries with large national programmes (e.g., Big Brothers/Big Sisters in the U.S. and Perach in Israel), to widely-disseminate their programmes. With time, it is anticipated that effective programmes will continue to grow in New Zealand and become more prevalent.

Interestingly, schools were the most popular location for programmes. This is likely due, in part, to the finding that programmes with educational goals were the most prevalent with 94% having at least one. This reflects the very functional nature of mentoring programmes and the strong connection between the education and mentoring sectors. It also reflects the understanding of mentoring programmes that many at-risk youth leave school with little or no qualifications (MYD, 2003).

Somewhat surprisingly, few programmes incorporated cultural goals (20%), despite the fact that 62% ($n = 16$) had a significant proportion of Māori and/or Pasifika youth. This gap is particularly poignant given that cultural identity is an important component of well-being for Māori and Pasifika youth (Anae, 2001; Borell, 2005). Further, cultural identity has been noted in the Youth Development Strategy (MYD, 2002) as important for the development of Māori and Pasifika youth.

Most of the programmes included in this review utilised a traditional one-to-one mentoring relationship. No programmes utilised a team mentoring or e-mentoring approach. This prevalent use of the traditional model occurs despite the argument (e.g. Evans & Ave, 2000) that this model may not be fully appropriate in the New Zealand context.

Further, most programmes expected the mentors and mentees to have contact on a weekly basis. However, due to a lack of reporting, it is unclear what proportion of mentors and mentees actually met that expectation.

On a very positive note, almost all programmes screened their mentors and provided them with initial, and to a lesser degree, ongoing, training or support and supervision. This is important as previous research has identified ongoing support as a characteristic of effective programmes (e.g., Allen & Eby, 2008; Bullen, Farruggia, Rozas Gómez, Hebaishi Hasan Kamal, & Mahood, 2010). Clearly, the presence of training is not equal to the quality of training. Therefore, the degree of variation in the quality of training and mentor support is unclear.

Characteristics of effective programmes

It is noteworthy that almost all programmes demonstrated some level of effectiveness. Since the 1970's, international research has demonstrated that not all programmes are effective, and that in some instances, they can be harmful to young people (e.g., O'Donnell, Lydgate, & Fo, 1979). New Zealand, being relatively young in its mentoring history, is well positioned to learn from the mistakes of other countries.

Programmes with psychological and interpersonal goals were typically more effective than programmes with other types of goals. This is similar to Tolan and colleagues' (2008) meta-analysis on mentoring and juvenile delinquency in which they found more success for effecting behaviour such as aggression than for effecting educational achievement. There are two non-competing explanations for this finding which will focus on education, as the vast majority of programmes had at least one educational goal. First, it may be harder to make changes in the educational domain. This is likely to require more structure, intense focus and having the young person work on something that may not always be fun. By contrast, working on interpersonal and psychological goals may be more informal and more enjoyable and engaging for the young person and consequently more rewarding for the

mentor. A second explanation is that a key premise of youth mentoring is that the mentor and mentee establish a high-quality relationship (Evans & Ave, 2000) which is based on trust, mutuality and empathy (Rhodes, 2005). Working on interpersonal and psychological goals may serve to facilitate this relationship, whereas, educational goals may not. One further consideration is that programmes that direct their attention to fewer goals are more effective. It may be the case that programmes with educational goals either need to put high levels of structure and focus in place to specifically address these goals or provide other wraparound services (e.g., tutoring) to address educational goals. In light of the evidence that many youth underachieve at school (MYD, 2003), interventions such as mentoring can be a powerful vehicle for improving educational achievement. This discussion is not intended to minimise the importance of addressing psychological and interpersonal issues. As many New Zealand youth have experienced stress within the home (MYD, 2003), having a mentor may help them to cope better.

While component studies (i.e. those that were part of wraparound services) were shown to be more effective, it is difficult to tease out the direct effects of mentoring as mentoring represented a component of most (64%) studies included in this review. Interestingly, previous international research (i.e., DuBois et al., 2002) did not find component studies to be more effective as compared to mentoring alone. One possible explanation for this is the difference in goals, in that New Zealand programmes, as previously mentioned, are highly focused on educational goals, whereas American programmes, the focus of the DuBois et al. (2002) meta-analysis, are less focused on educational goals. Regardless, it is likely that mentoring can provide an additional component to programmes that work with vulnerable youth.

It is interesting to note that so few studies (29%) included some level of family involvement, as this appears to be particularly salient within the Māori and Pasifika cultural context (Anae, 2001; Pryor, 2006). While there did not appear to be an association

with programme effectiveness, there was relatively little variation on this construct as most programmes did not include the involvement of families. International research (e.g., DuBois et al., 2002; Rhodes, Grossman, & Resch, 2000) has indicated that parental involvement is associated with more effective programmes. In fact, mentoring has been found to be associated with increase connectedness to parents (Karcher, Davis, & Powell, 2002). As such, it seems worthwhile that future research examine this issue in greater detail.

One-off programmes, for the purpose of research (e.g., Master's thesis) or for single-school use, are largely ineffective. Great caution should be taken by individuals who are considering this avenue of study or intervention as these programmes, generally-speaking, may not have the appropriate knowledge of good practice and the support and resources required to be effective. For those earning a postgraduate degree, it would be better to support an established programme by providing an external evaluation. Schools that are interested in starting a mentoring programme should collaborate with existing programmes that have been shown to be effective.

In addition, programmes aimed at low or mixed economic background youth were more effective than programmes aimed at youth from mid-level economic backgrounds. This possibly reflects a greater level of need among lower income youth. Therefore, it is important for programmes to focus their limited resources on youth with greater levels of need.

Inconsistent with some international findings (e.g., DuBois et al., 2002), this review found a positive association between the expected duration of the mentor-mentee relationship, once a minimum threshold of one year was reached, and the effectiveness of the programme. As there was large variation in expectations of the length of mentor-mentee relationships (i.e., 2-48 months), programmes should consider extending their programme as a means of increasing effectiveness, particularly in light of evidence demonstrating harm when matches end early (Grossman & Rhodes, 2002).

Also inconsistent with the DuBois

et al. (2002) meta-analysis is the lack of variation in effectiveness as a function of risk status. DuBois and colleagues found that programmes that targeted at-risk youth were more effective than programmes that targeted youth who were not at-risk. One possible explanation for this difference relates to programme goals. In the New Zealand context, it is possible that programmes targeting typical youth may have goals that are appropriate for those youth (i.e., are not trying to effect substantial change where substantial change is not required); likewise, the outcomes may align well to the goals. It is also important to note that there was also no difference on the other end of the risk spectrum- high-risk youth. While there were fewer programmes focusing on high-risk youth, it is noteworthy that there was not variation in effectiveness. One possible explanation is that programmes targeting high-risk youth may be more likely to be a component of a larger suite of services provided to the youth and, thus, those programmes are providing the additional support that is required. This combination of services, that cannot be teased apart, brings the effectiveness of programmes for high-risk youth to the same level as programmes targeting at-risk youth.

The final point under characteristics of effective programmes to be discussed is the importance of ensuring that principles of good practice are incorporated within mentoring programmes. While a number of programmes evaluated demonstrated these principles, a significant proportion did not, which was associated with less effectiveness. The importance of using good practice cannot be highlighted enough. Previous research has demonstrated the harm to young people when good practice is not followed, such as the premature termination of mentoring relationships (Grossman & Rhodes, 2002). Good practice principles can provide a blueprint for programmes to follow and work towards meeting.

Limitations and Future Research

An important limitation of this review is that studies were included if they met inclusion criteria, regardless of the quality of the research. As a

result, the findings presented here related to effectiveness should be interpreted as somewhat tentative. This review should be reconducted in the future once studies using better quality research procedures are conducted. Another possible limitation is that there could be evaluations that were missed in the search process. While the process followed recommendations as outlined by Littell and colleagues (2008), it is possible that there were active programmes with evaluations that were not found during the search process and were not members of the Youth Mentoring Network. It is also important to note that studies examining natural mentoring were excluded despite the importance of these types of relationships, particularly for Māori youth (Evans, et al., 2005). Future research should examine the effectiveness of natural mentoring relationships. The final limitation is that studies were all treated equally regardless of the size of the programme or evaluation; however, this was felt to be necessary as qualitative studies would have had a reduced contribution to the review due to methodological differences as the study samples would have been smaller compared to the quantitative studies. Again, once there is a greater breadth of quality studies, a meta-analysis could be conducted in the future that can account for differing sample sizes. In addition, a meta-synthesis could also be conducted to look at qualitative data.

Conclusions and Recommendations

Youth mentoring has clearly grown in scope over the past 20 years. There are now 23 active programmes under the umbrella of the Youth Mentoring Network, from all over the country, reflecting the broad uptake of this effective social intervention for young people (DuBois et al., 2002). While still relatively young, the youth mentoring movement within New Zealand has the opportunity to create very effective programmes by incorporating principles of good practice identified in this review and placed in the context of international research (e.g., Allen & Eby, 2008; DuBois et al., 2002; Sipe, 2002). It is essential that mentoring continue to

improve upon its practice as the concept of mentoring fits into the Positive Youth Development framework (e.g., Farruggia & Bullen, 2010; Larson, 2006) which emphasises that every young person has potential and highlights the importance of nurturing environments.

Recommendations for programmes and policy makers include:

- Programmes need to be evaluated for effectiveness. Only a small proportion (35%) of known, active programmes (n = 23) have had any evaluations on the effectiveness of their programmes for mentees, regardless of the quality. Not only does funding, and in particular government funding, need to be made available to programmes so that they can engage in this type of work, but funding should also be contingent upon programmes engaging in evaluation. It is essential evaluations utilise the most rigorous procedures to increase the validity of the findings;
- Programmes that are ineffective or have mixed results should ensure that they incorporate principles of good practice within programme delivery;
- Programmes that are ineffective or have mixed results with large numbers of programme goals should consider becoming more specialised, focusing on fewer programme goals; and
- Less effective programmes should participate in external training for both staff and mentors in order to improve upon practice.

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Corresponding Author:

Dr Susan P. Farruggia
School of Teaching, Learning and
Development,
Faculty of Education,
University of Auckland
Private Bag 92601
Symonds Street
Auckland
New Zealand.
s.farruggia@auckland.ac.nz

Table 1. Mentee and mentor characteristics for included studies.

Reference	Mentee characteristics	Mentor characteristics
Adams, R. J. (2004)	Programme aimed at youth at risk for truancy. Four mentees, 3 male and 1 female, with a mean age of 11.5 years. Ethnicity of mentees and the duration of the programme were unknown.	Mentors were university student volunteers who were screened and trained and received ongoing monthly support but no supervision of the match.
Afeaki-Mafie'o, E. (2007)	Programme aimed at high risk Pasifika youth. Mentee was one Pasifika female, age unknown. The duration of the programme was 20 months, on average.	Mentors were adult and peer volunteers. It was unknown whether they were screened, trained, or received ongoing match support and supervision.
Ave, K. et al., (1999)*	The mentoring for children/youth at-risk demonstration project. Ethnicity: Māori-27%, NZ European-73%.	
	Man Alive: Aimed at young males between the ages of 5 and 18 years who do not live with their natural father. The expectation for length of relationship was 12 months.	Mentors were adult volunteers who were screened and trained. Ongoing support or supervision were unknown.
	Just-Us-Youth: Aimed at children whose parents were incarcerated. An estimated 80-90% of children targeted are of Māori descent. The expected length of relationship was 12 months.	Mentors were adult volunteers who were screened and trained. Ongoing support or supervision were unknown.
	Te Whare Putea: The expected relationship length was 12 months.	Mentors were adult volunteers who were screened and trained. Ongoing support or supervision were unknown.
	Presbyterian Support Services: Aimed at at-risk children and youth. The expected length of relationship was 12 months.	Mentors were adult volunteers who were screened and trained. Ongoing support or supervision were unknown.
	Tuakana/Teina Mentoring Programme INC Project: The targeted age group was 8-15 years of age (male and female) who were at risk of offending. The expected length of relationship was 12 months.	Mentors were adult volunteers who were screened and trained. There was initial match supervision, but ongoing support was unknown.
	Te Runanga O Ngati Porou: Aimed at at-risk youth of the Ngati Porou community. The expected relationship length was 12 months.	Mentors were adult volunteers who were screened and trained. Ongoing support or supervision were unknown.
Ballinger, S. et al., (2009)	Programme for low and at-risk young women who showed leadership potential. All participants (n = 47) were from low-decile schools in the Auckland region, with 15% NZ European and 85% of unknown ethnicity. The expected length of relationship was 48 months.	The mentors were adult volunteers. Mentors were screened and trained and received monthly ongoing support and supervision of match.
Deane, K., & Harre, N. (2008)	Project K programme for youth with low self-efficacy. Report analyzed 41 Project K programmes across 8 regions. Mixed gender and ethnicity (proportions unknown) with 398 participating. The expected length of relationship was 12 months.	Mentors were adult volunteers. Mentors were screened and trained and received monthly ongoing support and supervision of match.
Enkey, R. F. (2001)	Project K programme. Mentees were 137 (68 female) students from 4 schools, with 80% NZ European, 9% Māori, 6% Pasifika, and 5% other. The expected relationship length was 12 months.	Mentors were adult volunteers. Mentors were screened and trained and received monthly ongoing support and supervision of match.
Hammond, J. (2007)	Programme aimed to increase school engagement of students. Eighteen mentees participated, all female, with 28% Māori and 72% NZ European. The expected length of relationship was unknown.	Mentors were paid adults. Mentors were screened and trained. It was unknown whether they received ongoing support and supervision of the match.

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Reference	Mentee characteristics	Mentor characteristics
Heke, J. (2005)	Programme aimed at at-risk Māori youth. Mentees were 25 Māori youth (60% female) between the ages of 11 and 12 years. The expectation for length of relationship was 2.5 months.	Mentors were volunteer peers. Mentors were screened and trained and received weekly ongoing support and supervision of match.
Hill, J. (2008)	"I Have a Dream" programme aimed at at-risk low-decile youth. Mentees were 53 males and females 12-to-14 year olds. Mentees' ethnicity was predominantly Māori and Pasifika, proportions unknown. The expected relationship length was 12 months.	Mentors were adult volunteers. Mentors were screened and trained and received monthly ongoing support and supervision of match.
Inving, E. et al., (2003)	Programme aimed at high ability Year 13 students. Mentees were 62 students whose gender and ethnicity was unknown. The expectation for length of relationship was 9 months.	Mentors were teachers at the school and were not screened or trained. It was unknown whether they received ongoing support and supervision of the match.
Kostuk-Warren, J. (2005)	Project K programme. Twenty-seven mentees (52% female) and a control group (n = 15), with 74% NZ European, 15% Māori, and 11% other. The expected relationship length was 12 months.	Mentors were adult volunteers. Mentors were screened and trained and received monthly ongoing support and supervision of the match.
Lennan, M. (2006)	Programme aimed at boys of single mothers. Mentees were 11 at-risk males aged between 8 and 18 years and were predominantly Māori and Pasifika, proportions unknown. The expected relationship length was for 12 months.	Mentors were adult volunteers. Mentors were screened and trained and received monthly ongoing support and supervision of the match.
Litchfield, J. E. (2006)	Programme aimed at at-risk youth of a mid-decile all boys' school. Mentees were 15 year 9 boys (age 9-14 years) of whom 33% were Māori; 47% were NZ European; and 20% were of other ethnicity. The expectation for the length of relationship was 8 months.	Mentors were peer volunteers. Mentors were screened and trained and received ongoing support and supervision on the match every 2-4 months.
Lyon, D. R. (1992)	Programme aimed at Cambodian students (n = 13). Age of mentees ranged from 14-20 years of age, with 8 males, 5 females. The expectation for the length of relationship was 2 months.	Mentors were peer volunteers and all were screened. Mentors were trained and received weekly support but there was no ongoing supervision.
Mclean, D. (2007)	Programme aimed at Māori youth pursuing a career in the health profession. Of the 4 mentees, 3 were Māori and 1 identified as Māori/Pasifika. Mentees were 50% male and aged between 17 and 19 years. The expected relationship length was 6 months.	Mentors were paid adults. Mentors were screened and trained. It was unknown whether they received ongoing support and supervision of the match.
McInerney, J. (2005)	Programme aimed at-risk children between the ages of 4-12 years. The 16 mentees (56% female) were either NZ European (81%) or Māori (19%). The expected length of relationship was 12 months.	Mentors were adult volunteers. Mentors were screened and trained and received monthly ongoing support and supervision of the match.
Milne, B. et al., (2002)	Programme for high-risk youth with a history of truancy. The 66 mentees (53% male) had a mean age of 14.8 and were NZ European (65%), Māori (27%), and other ethnicities (8%). The duration of the programme was unclear.	Mentors were adult volunteers. It was unknown whether they were screened or trained or whether they received ongoing support and supervision of the match.
Ministry of Education (2009)	Programme aimed at low achieving Māori youth. The 1074 mentees were male (43%) and female, and typically Māori (98%), age unknown. The expected length of relationship was 12 months.	Mentors were adult volunteers. They were trained and screened and received monthly ongoing support or supervision of match.
Qiao, C., & McNaught, H. (2007)	Project K programme. The 94 mentees were 51% female, aged 14 to 16 years. Ethnicity was NZ European (53%), Māori (28%), and other (19%). The expected relationship length was 12 months.	Mentors were adult volunteers. Mentors were screened, trained and received monthly ongoing support and supervision of the match.

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Reference	Mentee characteristics	Mentor characteristics
Selwood, J. (2005)	Deaf mentoring programme, the 8 mentees' age ranged from 6 to 16 years, were of mixed gender (proportions unknown). Mentees' ethnicity and expectation for the length of relationship were unknown.	Mentors were adult volunteers. It was unknown if mentors were screened, trained, or received ongoing support or supervision of the match.
Starpath (2006)	MATES Programme aimed at at-risk youth with academic potential. The 96 mentees were 51% male, aged between 16 and 18 and were Pasifika (40%), NZ European (27%), Māori (22%), and other (11%). The expected relationship length was 8 months.	Mentors were paid university students. Mentors were screened and trained and received weekly ongoing support and supervision of the match.
Starpath (2007)	MATES Programme. The 77 mentees were male and female and aged between 16 and 18. Mentees' ethnicity was predominantly Māori and Pasifika, proportions unknown. The expected relationship length was 8 months.	Mentors were paid university students. Mentors were screened and trained and received weekly ongoing support and supervision of the match.
Stevenson, L. (2008)	Online programme for physical education students. Mentees (n = 12) were 92% male from a Year 13 class. Mentees' ethnicity was 8% Māori and 92% of unknown ethnicity. The expectation for the length of relationship was 2 months.	Mentors were adult volunteers who were experts in their sporting field. They were not screened or trained for the programme and received support and supervision of the match infrequently.
Tasi, B. S. (2009)	Programme aimed to assist at-risk Pasifika youth with the school to work transition. Mentees were 8 Pasifika males with a mean age of 19.6 years. The expected length of relationship was unknown.	Mentors were adult volunteers. It is unknown whether they were screened or trained or whether they received ongoing support or supervision of the match.
Wilson, S. (2006).	Programme aimed to improve retention and graduation rates at New Zealand polytechnic. Mentees were 83 mixed-gender students enrolled at the polytechnic, age and ethnicity were unknown. The expected length of relationship was 4-9 months.	Mentors were staff at the polytechnic. Mentor screening, training and ongoing support and supervision of the match were unknown.
Youth at Risk of Offending Team (2001)	Programme aimed at young offenders and youth at-risk of offending. Mentees were 14 male (57%) and female youth, with a mean age of 12.5 years. Mentees were NZ European (71%) and Māori (29%). The expectation for the length of relationship was unknown.	Mentors were adults, but it is unknown whether they were paid or volunteers. Mentors were trained. It is unknown whether they were screened. Ongoing support was given monthly while ongoing supervision was given every 2 -4 months.

*Note. This report incorporated evaluations from multiple studies. Details are provided where information could be extracted on individual programmes.

Table 2. Programme characteristics for included studies.

Citations	Programme characteristics	Mentoring only vs. component	Site of programme	Programme goals	Programme type	Expected frequency of contact	Duration of mentoring relationship
Adams, R. J. (2004)	Independent	Mentoring	Community	Academic, Behavioural Vocational	One-to-one	Unknown	Unknown
Afeaki-Mafle'o, E. (2007)	Regional multi-site	Component	Schools	Academic, Vocational	Mixed	Weekly	20 months
Ave, K. et al. (1999)	Man Alive	Unknown	Mixed	Psychological, Behavioural Interpersonal	One-to-one	Unknown	12 months
	Just-Us-Youth	Unknown	Mixed	Psychological, Interpersonal	One-to-one	Unknown	12 months
	Te Whare Putea	Unknown	Mixed	Interpersonal, Vocational	One-to-one	Unknown	12 months
	Presbyterian Support Services	Unknown	Mixed	Academic, Psychological, Behavioural, Interpersonal	One-to-one	Unknown	12 months
	Tuakana/Teina Mentoring Programme INC	Unknown	Mixed	Behavioural, Vocational	One-to-one	Unknown	12 months
	Te Runanga O Ngati Porou	Unknown	Mixed	Academic, Behavioural Interpersonal	One-to-one	Unknown	12 months
Ballinger, S. et al. (2009)	Regional multi-site	Component	Mixed	Academic, Psychological Interpersonal	One-to-one	Fortnightly	48 months
Deane, K., & Harre, N. (2008)	National	Component	Schools	Academic, Psychological, Behavioural, Interpersonal, Vocational	One-to-one	Weekly	12 months
Enkey, R. F. (2001)	National	Component	Schools	Academic, Psychological, Behavioural, Interpersonal, Vocational	One-to-one	Weekly	12 months

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Citations		Programme characteristics					
	Programme dissemination	Mentoring only vs. component	Site of programme	Programme goals	Programme type	Expected frequency of contact	Duration of mentoring relationship
Hammond, J. (2007)	Independent	Component	School	Academic, Behavioural	Group	Weekly	Unknown
Heke, J. (2005)	Independent	Mentoring	School	Academic, Behavioural, Vocational, Cultural	Group	Weekly	2.5 months
Hill, J. (2008)	Regional multi-site	Component	Community	Academic	One-to-one	Monthly	12 months
Inving, E. et al. (2003)	Independent	Mentoring	School	Academic	One-to-one	Unknown	9 months
Kostuk-Warren, J. (2005)	National	Component	School	Academic, Psychological, Interpersonal	One-to-one	Monthly	12 months
Lennan, M. (2006)	Regional multi-site	Mentoring	Community	Academic, Psychological, Behavioural, Interpersonal	One-to-one	Monthly	12 months
Litchfield, J.E. (2006)	Independent	Mentoring	School	Academic, Interpersonal	One-to-one	Every 2-4 months	8 months
Lyon, D. R. (1992)	Independent	Mentoring	Schools	Academic, Psychological, Interpersonal, Cultural	One-to-one	Weekly	2 months
McLean, D. (2007)	Independent	Component	Unknown	Academic, Psychological, Interpersonal, Vocational	Group	Unknown	6 months
McInerney, J. (2005)	Regional multi-site	Component	Community	Psychological, Interpersonal	One-to-one	Weekly	12 months
Milne, B. et al. (2002)	Independent	Component	Community	Academic, Psychological, Behavioural, Interpersonal	One-to-one	Unknown	Unknown
MoE (2009)	National	Mentoring	Community	Academic	One-to-one	Fortnightly	12 months
Qiao, C., & McNaught, H. (2007)	National	Component	School	Academic, Psychological, Behavioural, Interpersonal, Vocational	One-to-one	Monthly	12 months
Selwood, J. (2005)	Regional multi-site	Mentoring	School	Academic, Psychological, Interpersonal, Cultural	One-to-one	Unknown	Unknown
Starpath (2006)	Regional multi-site	Mentoring	School	Academic, Psychological	Mixed	Weekly	8 months
Starpath (2007)	Regional multi-site	Mentoring	School	Academic, Psychological	Mixed	Weekly	8 months
Stevenson, L. (2008)	Independent	Component	School	Academic, Behavioural	Mixed	Less frequent/never	2 months

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Citations	Programme characteristics						
	Programme dissemination	Mentoring only vs. component	Site of programme	Programme goals	Programme type	Expected frequency of contact	Duration of mentoring relationship
Tasi, B. S. (2009)	Independent	Component	Unknown	Vocational	One-to-one	Unknown	Unknown
Wilson, S. (2006)	Independent	Component	School	Academic	One-to-one	Less frequent/ never	4-9 months
YROT (2001)	Independent	Component	Unknown	Academic, Psychological, Behavioural, Interpersonal, Cultural	One-to-one	Monthly	Unknown

Table 3. Overall programme, mentor and mentee characteristics.

Program dissemination		Mentor support	
Independent	48%	Weekly	22%
National	20%	Monthly	61%
Regional	32%	2-4 months or less	17%
Location		Mentor supervision	
Urban	80%	Weekly	22%
Rural	8%	Monthly	44%
Mixed Urban and Rural	12%	2-4 months or less	33%
Site of program		Contact with mentees	
School	65%	Weekly	77%
Community	26%	Bi-Weekly	18%
Mixed	9%	Monthly or less	4%
Level of mentoring in program		Mentee gender	
Stand alone	36%	Male only	15%
Component	64%	Female only	15%
Majority of program	39%	Mixed Male and female	70%
Less than half	38%	Mentee ethnicity	
Less than a quarter	23%	Mostly Māori	54%
Program type		Mostly Pasifika	19%
One-to-one	73%	Both Māori and Pasifika	62%
Group	12%	Mentee Socio-Economic Status (SES)	
Mixed	15%	Low SES	44%
Program goals		Mid SES	17%
Educational	96%	Mixed SES	39%
Psychological	52%	Mentee risk level	
Interpersonal	52%	Low risk	18%
Behavioural	44%	At risk	56%
Vocational	40%	High risk	20%
Cultural	20%	Mixed risk level	8%
Type of mentor			
Adult	72%		
University student	12%		
Peer	12%		
Other	4%		

Figure 1. Flow chart reflecting search process, screening and inclusion decisions.

