

# Community Group Program

## Evaluation of Strengths and Difficulties Questionnaire (SDQ) data from 1999-2005

### Summary of findings:

- Between 1999 and 2005, CGP have collected SDQ data for 2069 participants. Missing data due to attrition and incomplete records reduced the number for various analyses between 562 and 1973 depending on the analysis.
  - More male (60%) than female (40%) records were analysed
  - More participants were referred from DE&T (84%) than MHS (16%)
  - The average age of participants was 10.11 (SD=2.4)
- 80% of participants were involved in 30% of CGP programs, with FIST, Stop Look Listen and Bike Challenge being the three highest attended programs.
- From parent, teacher and self report, up to 49% of participants were found in the abnormal range for emotional symptoms, up to 50% were in this range for conduct problems, up to 35% for hyperactivity, up to 59% for peer problems, up to 35% had abnormally high problems with prosocial behaviour, and up to 58% ranked in the abnormal range for total difficulties on SDQ.
  - Significant differences between age groups were found for conduct problems, hyperactivity, prosocial behaviour and total difficulties. Younger children had more problems than older children on these scales.
  - Males were found to be significantly higher on conduct, hyperactivity, peer problems and total difficulties, and significantly lower on prosocial behaviour than females.
  - MHS referrals were found to have significantly higher emotional symptoms, conduct problems, hyperactivity, peer problems and total difficulties than those referred from DE&T referrals.
- Parents, teachers and participants recorded a significant reduction in emotional symptoms, conduct problems, and overall difficulties following CGP programs. Teachers reported significant improvements across all subscales, parents reported a significant improvement across all but the prosocial scale, and self report data found slight improvement on all scales except conduct problems and prosocial behaviour (which were higher for self report).
  - Subsequent analysis of change following CGP programs by age, gender and referral type found no significant effects of these factors. The above mentioned improvements were sustained regardless of age, gender, or referral type.

## Introduction

Since 1999, 2069 children between the ages of 1 and 19 have been involved in CGP programs with an average age of 10.11 (SD=2.4). The majority of participants (60%, n=1228) were male, whilst 40% were female (n=786). More participants were referred from schools (84%, n=960) than from the mental health service (16%, n=183) (see Figure 1).

CGP program participants were assessed via the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). The SDQ is a brief behavioural and emotional screening measure that is completed by parents, teachers and students (if aged between 11-16) prior to and following their CGP program. The SDQ contains 25 questions that provide scores on 5 scales of emotional problems, conduct problems, hyperactivity, peer problems and prosocial behaviours. Prior research of the SDQ questionnaire in large samples has allowed the authors to subscribe clinical ranges, and allow interpretation of each report in context with the general population.

Due to the nature of clinical work, the analysis presented in this report has been influenced by a significant degree of missing data. An attrition rate of up to 40% between pre and post program evaluation has been recorded. For those questionnaires collected at both points of evaluation, missing data at item level was also encountered. A case wise removal of items was conducted for missing data. In all analysis presented, the number of records being compared is presented (see n(number of participants)). Notwithstanding, most statistical analyses had sufficient statistical power from which meaningful interpretations could be made.

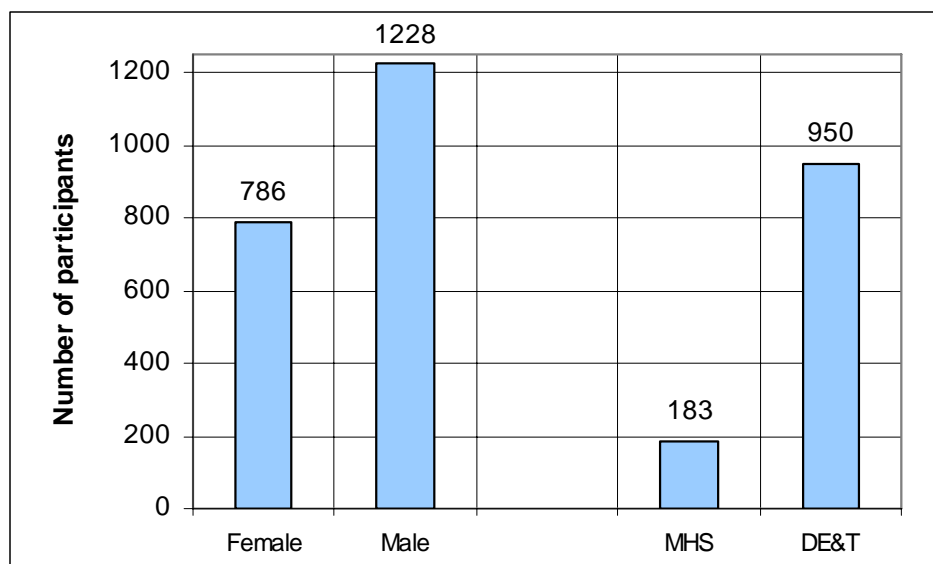


Figure 1. Number of participants in CGP programs between 1999 and 2005 by gender and referral.

As illustrated in figure 2, over 80% of participants have been involved in 8 of 26 CGP Programs. FIST has been the most strongly attended (19%), followed by Stop Look and Listen (12%), Bike Challenge (12%), Girls in Art (11%), Healthy Parents (8%), Boyz'n'Art (7.5%), Buddies (6%) and Bright Lives (5%)

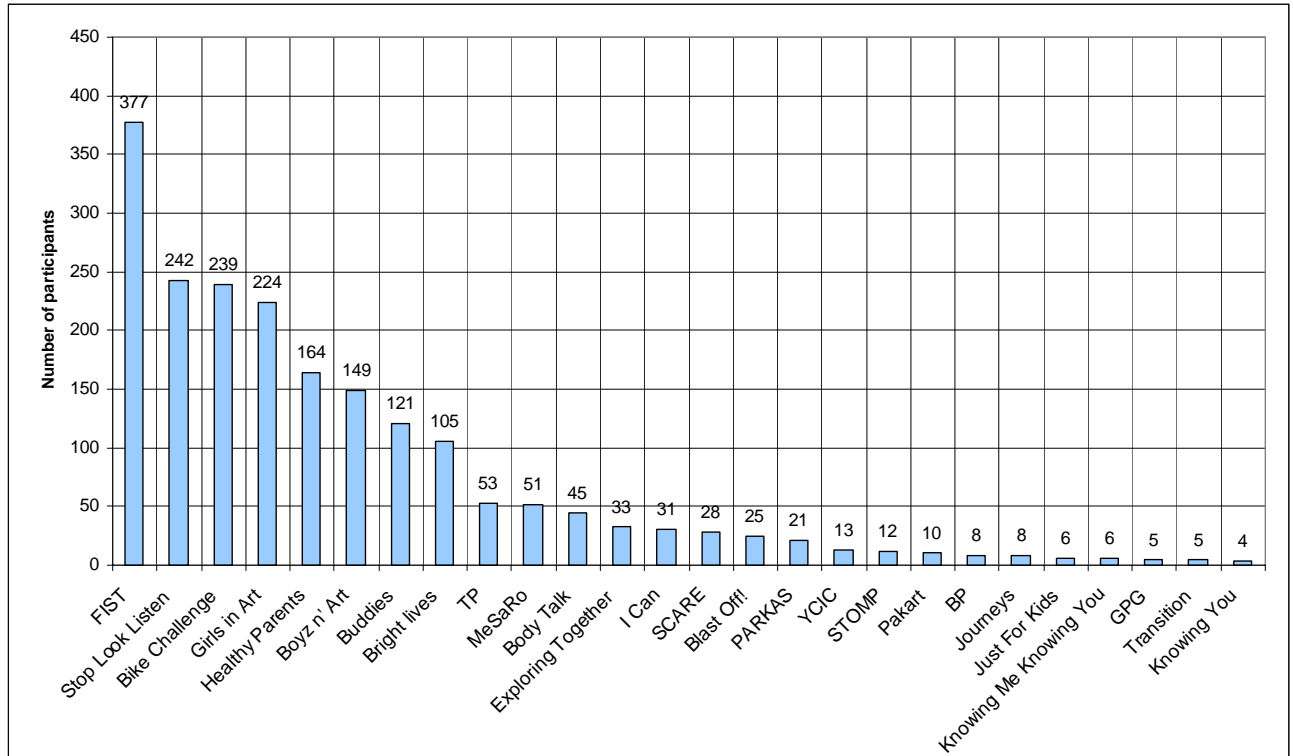


Figure 2. The number of participants in each program from 1999-2005.

## Clinical Profile

Data collected from parents, teachers and some participants (aged 11+) at the beginning of CGP programs were compared with normative data to identify individuals who scored in the 'abnormal range' for the SDO subscales. The percentage of participants in the abnormal range are presented in figure 3.

Between 15 and 49% of participants are reported in the abnormal range for emotional symptoms such as anxieties and depressive symptoms. Between 19 and 50% of participants recorded conduct problems in the abnormal range, whilst between 17 and 35% were reported to have difficulties relating to hyperactivity. 15 to 59% of participants are reported with significant peer problems and between 5 and 35% are recorded to have deficiencies in prosocial behaviour. Overall, between 20 and 58% of participants were recorded with psychological difficulties in the abnormal range.

As illustrated in figure 3, there are some clear discrepancies between parent, teacher and self reporting on the SDO. Parents report the highest levels of all difficulties overall, whilst self reported difficulties are the lowest. This is particularly evident on the emotional problems and peer problems subscales. There is no evidence to support claims that parents are particularly sensitive or overestimate their children's emotional and behavioural difficulties, or that children have poor insight or underestimate their difficulties. This observation is noted to alert readers to the complexity of analysing this multi-informant assessment measure, and to consider this dynamic when reading subsequent findings in this report.

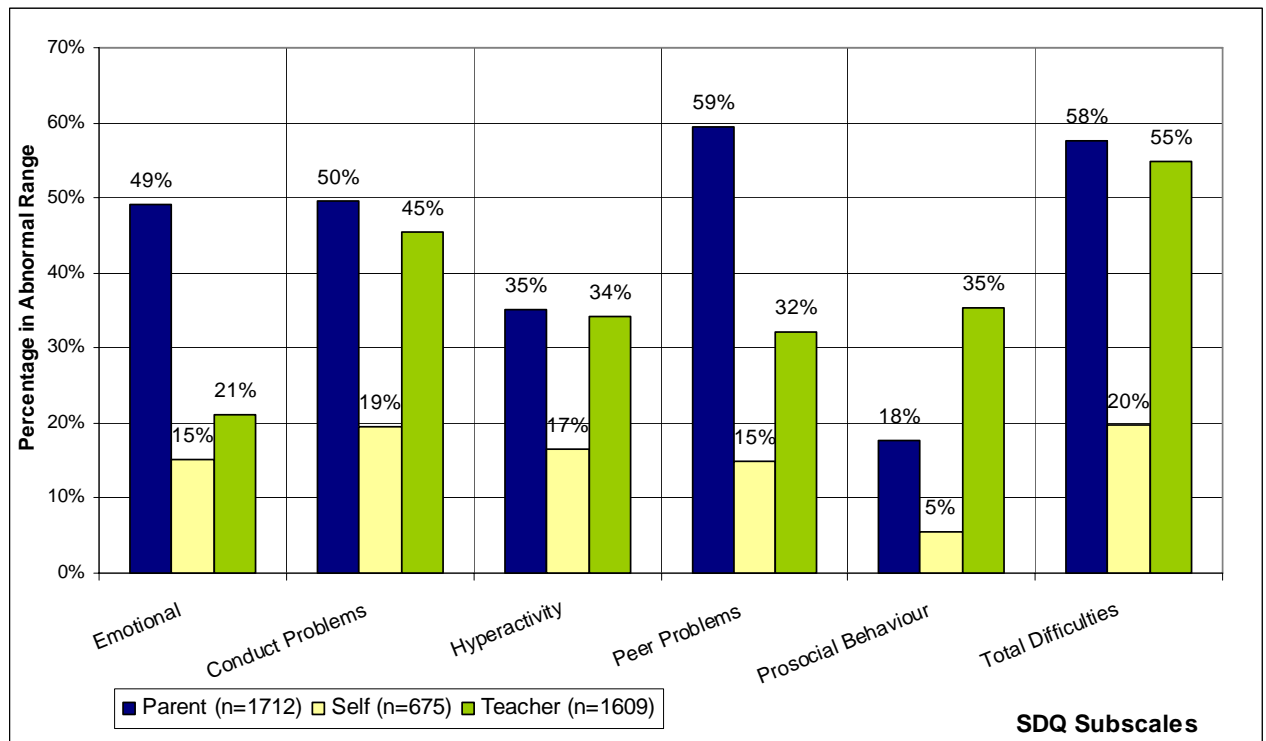


Figure 3. The percentage of participants in the 'abnormal range' for SDO scores as reported by parents, teachers and participants.

## Age Differences

An analysis of mean SDO scores by teacher report across age groups found significant differences between ages for conduct problems ( $F(1,60) = 2.74, p = .01$ ), Hyperactivity ( $F(1,60) = 9.36, p < .01$ ), prosocial behaviour ( $F(1,60) = 4.94, p < .01$ ), and total difficulties ( $F(1,60) = 4.26, p = .03$ ), but not emotional problems ( $F(1,60) = 1.65, p = .11$ ) or peer problems ( $F(1,60) = 1.85, p = .06$ ).

As illustrated in Figure 4, for most subscales, the mean scores for most problem behaviours were highest with participants in the  $\leq 6$  years to 7 years decreasing in severity to 11 years, before increasing slightly from 12 to 14 years.

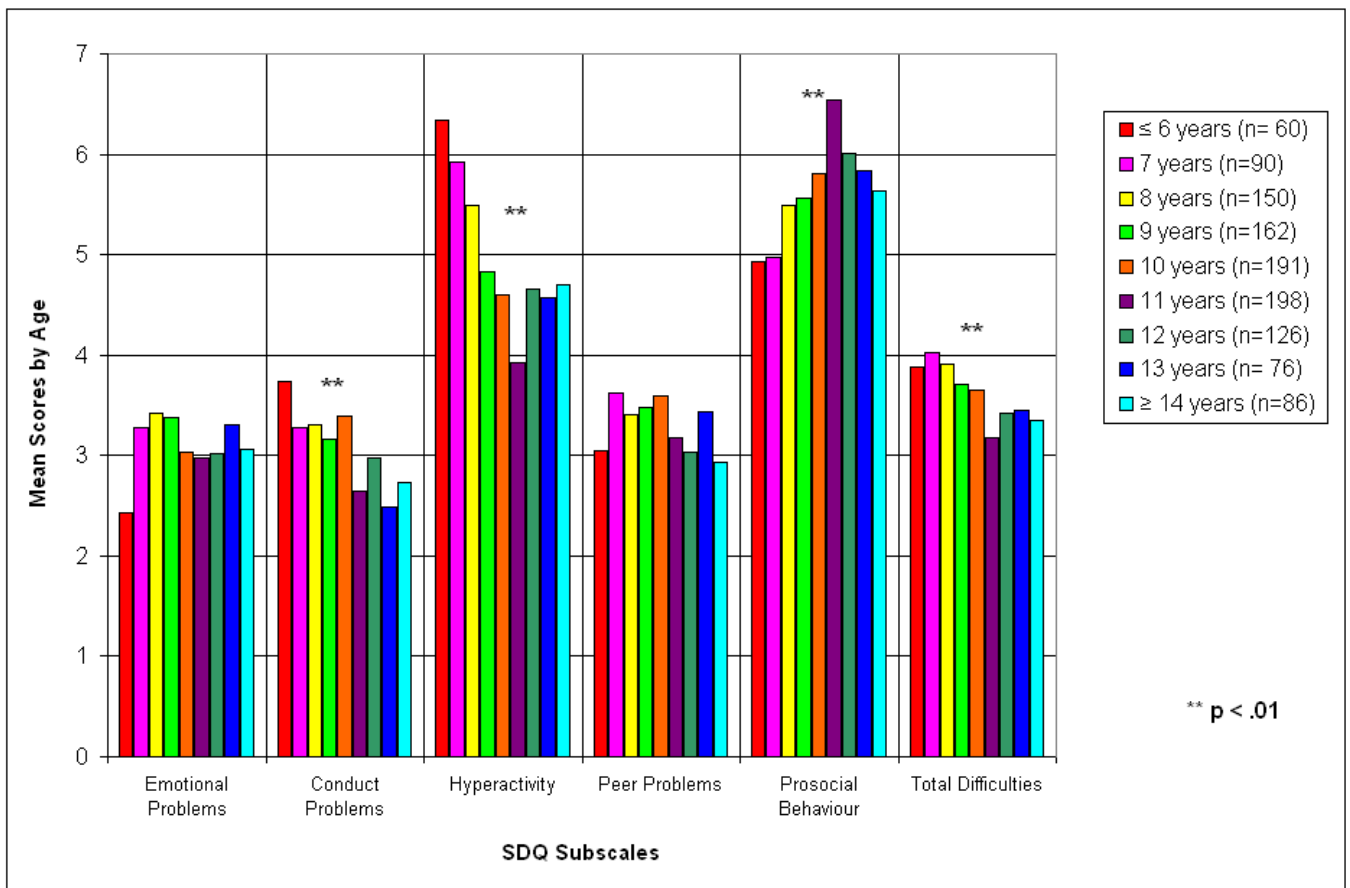


Figure 4. Mean SDO scores for CGP program participants by age as reported by teachers.

## Gender Differences

Figure 5 presents mean scores by gender across the SDO subscales as informed by teachers. Mean scores and normative indicators (abnormal and borderline) are an average of parent and teacher data.

The statistical analysis found no significant difference between male and female participants for emotion symptoms ( $t(1973) = 1.00, p = .30$ ). On other scales however, males were found to have significantly greater conduct problems ( $t(1973) = 10.12, p < .01$ ), hyperactivity ( $t(1973) = 13.55, p < .01$ ), peer problems ( $t(1973) = 3.17, p < .01$ ) and total difficulties ( $t(1973) = 9.43, p < .01$ ) than female participants. Female participants also scored significantly higher on the prosocial scale than males ( $t(1973) = 10.92, p < .01$ ).

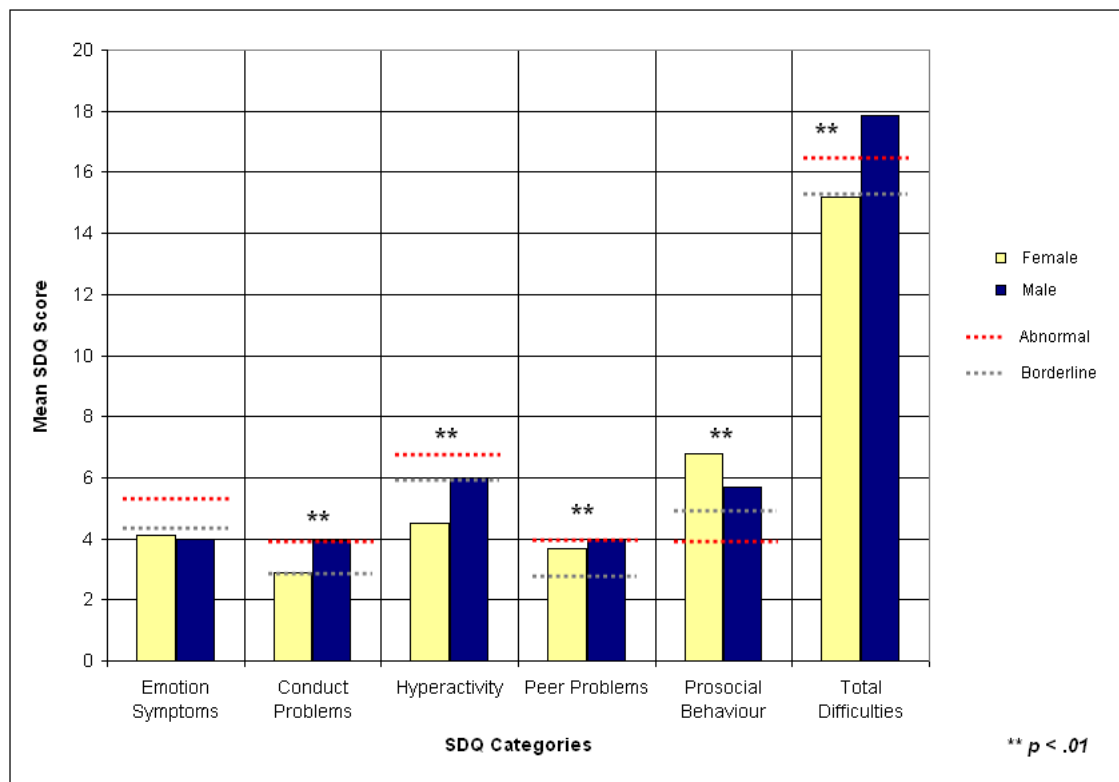


Figure 5. Mean SDO scores by gender at pre-program assessment by teacher report.

## Difference by referral (MHS Vs DE&T)

Figure 6 presents mean scores by referral type across the SDO subscales as reported by teachers. Mean scores and normative indicators (abnormal and borderline) are an average of parent and teacher data.

The statistical analysis found that MHS referrals had significantly higher levels emotional symptoms ( $t(1098) = 3.41, p < .01$ ), conduct problems ( $t(1098) = 5.11, p < .01$ ), hyperactivity ( $t(1098) = 4.52, p < .01$ ), peer problems ( $t(1098) = 2.33, p = .02$ ), and total difficulties ( $t(1098) = 5.53, p < .01$ ) than DE&T referrals. MHS referrals did not differ significantly from DE&T referrals on the prosocial scale ( $t(1098) = 1.22, p = .22$ ).

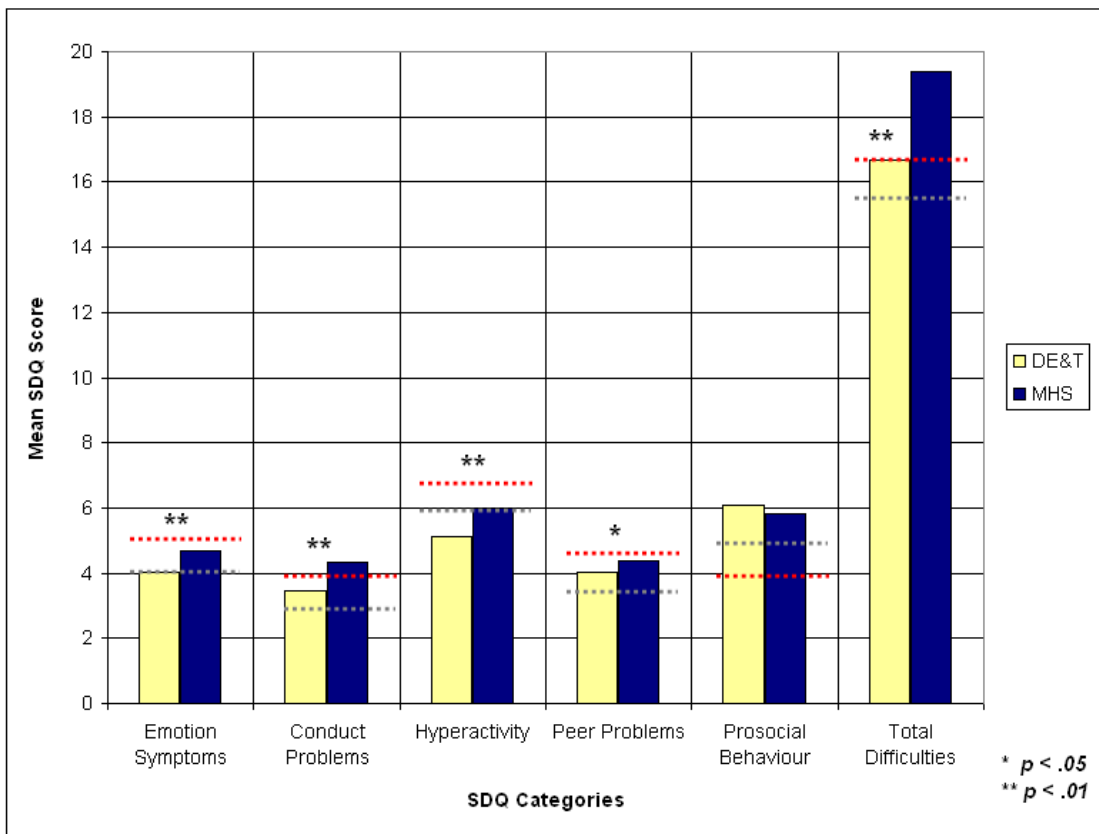


Figure 6. Mean pre program SDQ scores by referral type at pre-program assessment by teacher report.

## Reported change at post program assessment

Figure 7 presents the change in parent, teacher and self report on the SDO questionnaire in comparison to abnormal and borderline normative data (NOTE: normative levels have been set as the average of parent and teacher scores).

Parents report a significant reduction in emotional symptoms ( $t(1056) = 6.88, p < .0001, d' = .18$ ), conduct problems ( $t(1056) = 5.55, p < .0001, d' = .18$ ), hyperactivity ( $t(1056) = 5.53, p < .0001, d' = .14$ ), peer problems ( $t(1056) = 2.33, p = .02, d' = .06$ ), and total difficulties ( $t(1056) = 8.46, p < .0001, d' = .20$ ), and improvement in prosocial behaviours ( $t(1056) = 1.71, p = .09, d' = .04$ ). Mean scores fell below abnormal levels for total difficulties, below borderline levels for emotional symptoms, hyperactivity and prosocial behaviour, and towards borderline levels for conduct and peer problems.

Individuals reported a significant reduction in emotional symptoms ( $t(561) = 2.45, p < .01, d' = .10$ ) and hyperactivity ( $t(561) = 1.98, p = .05, d' = .08$ ), a slight reduction in peer problems ( $t(561) = 1.10, p = .27, d' = .04$ ) and total difficulties ( $t(561) = 1.87, p = .06, d' = .06$ ). A slight increase in conduct problems ( $t(561) = -1.52, p = .13, d' = .06$ ), and decrease in prosocial behaviours was also recorded ( $t(561) = .78, p = .44, d' = .03$ ).

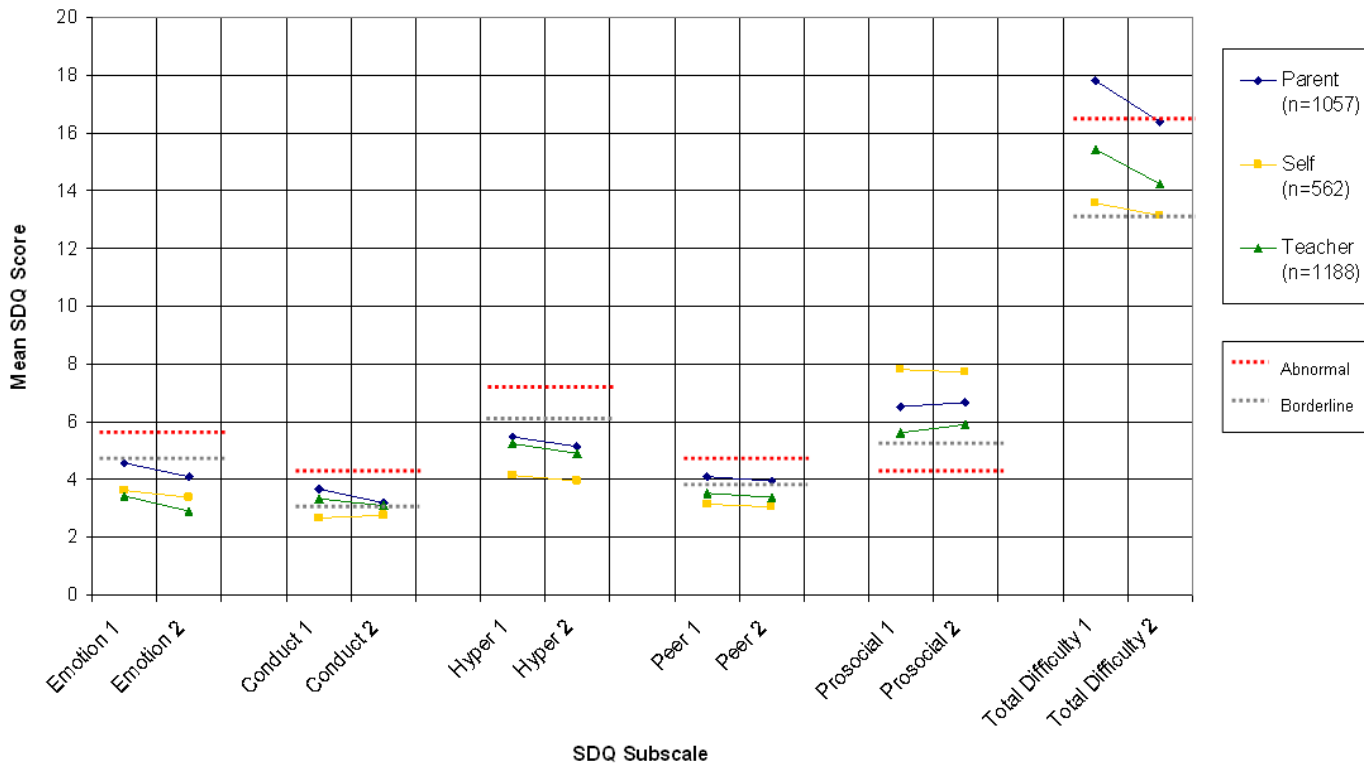


Figure 7. Mean pre and post SDQ scores for all subscales as reported by parents, teachers and participants.

Teachers reported significant improvement across all subscales. The most significant improvement was a reduction in emotional symptoms, ( $t(1199) = 8.01, p < .01, d' = .21$ ). A significant reduction in conduct problems ( $t(1187) = 3.26, p < .01, d' = .07$ ), hyperactivity ( $t(1200) = 4.99, p = .01, d' = .11$ ), peer problems ( $t(1199) = 3.21, p = .01, d' = .07$ ), and total difficulties was recorded ( $t(1198) = 7.64, p < .01, d' = .17$ ). A significant improvement in prosocial behaviour was also reported by teachers ( $t(1201) = 4.71, p < .01, d' = .10$ ).

In summary, parents, teachers and participants recorded a significant reduction in emotional symptoms, conduct problems and overall difficulties following CGP programs. Teachers report significant improvement across all subscales following CGP programs, parents report significant improvement on all but the prosocial scale, whilst self report data found slight improvement in all but conduct problems and prosocial behaviour.

Subsequent analysis of change over program by age, gender and referral found no significant differences across scales. All changes noted above were found to exist regardless of the age, gender or method of referral for each participant.