# TEMPERAMENTAL AND ANTI-SOCIAL FACTORS AFFECTING HOW PRIMARY SCHOOL CHILDREN MAKE AND KEEP FRIENDS

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#### ABSTRACT

In this study, 398 primary school children were investigated to ascertain how aggressive behaviours and selfreported temperamental traits affect children's social support from their friends. The results indicate that changes in aggressiveness and the child's mood and flexibility predicted social support from classmates. More specifically, anti-social behaviours such as jealousy and showing off, and poor interpersonal behaviours such as not smiling and being inflexible resulted in lower levels of classmate support.

Key words: Children, anti-social, temperament, social support.

### **INTRODUCTION**

The world of the child consists of many individuals, some who make a significant contribution and others who offer casual acquaintance. In times of crisis, the child's network of significant people offers support through comfort, companionship and rebuilding the child's sense of self. This network is commonly regarded as a social support network. Considering that children's social support networks are important predictors of mental health problems (Kupersmidt et al., 1990; Lustig et al., 1992), understanding the processes by which friendships are fostered is important for the prevention of future mental health problems.

Social support is described in two ways, first, as the continuing social aggregates that provide individuals with opportunities for feedback about themselves and for validation of their expectations of others (Caplan, 1974). A second is the information that leads a person to believe that she or he is cared for and loved, esteemed and valued, or belongs to a network of communication and mutual obligations (Cobb, 1976).

Measures of social support are either qualitative or quantitative. Qualitatively, some researchers focus on how satisfied children are with the support that they are receiving (Harter, 1985; Wolchik et al., 1984). Quantitatively, researchers focus on the size of social support networks, such as number of people children can turn to for support (Lustig et al., 1992).

Among the significant people that children turn to are their friends. This is not surprising, considering that 7–11 year olds have been observed spending 40% of their

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waking time with their peers (Barker and Wright, 1955). Support from friends and peers is an important predictor of children's adjustment. A lack of social support from peers, or social rejection by a peer group, is one of the best predictors of academic failure and school drop-out (Kupersmidt et al., 1990; Parker and Asher, 1987). Furthermore, it is better to have at least one good friend, compared with none at all (Bukowski and Newcomb, 1987).

In general, lower levels of social support lead to more emotional and behavioural problems in children. Lower levels of children's perceived social support from their classmates were associated with higher levels of depression, anxiety, attention problems, thought problems, social problems, somatic complaints and lower self-esteem (Parker and Asher, 1987; Teoh, 1997; Wolchik et al., 1989). Furthermore, when social support was specifically provided by non-family members, such as peers and other adults, the children reported more internalising rather than externalising behaviour problems. Difficulties in concentration/attention and somatic complaints are related to general internalising disorders as they mask underlying anxiety and depression (Kashani et al., 1981; Kovacs and Beck, 1977).

Friendships have a functional role in moulding the behaviour of the child. They offer consensual validation of interests, hopes, and fears, bolster feelings of self-worth, provide affection and opportunities for intimate disclosure, promote the growth of interpersonal sensitivity, and offer prototypes for later romantic, marital and parental relationships (Sullivan, 1953). Within the peer group children test out ideas and receive feedback from peers, during which respect, equality and reciprocity are developed (Bukowski and Hoza, 1989; Furman and Burhmester, 1985; Furman and Robbins, 1985; Fine, 1981; Hartup and Sancilio, 1986; Lewis and Feiring, 1989; Piaget, 1932).

Considering that social support is such an important predictor of children's mental health, many questions are then asked about the mechanisms by which the child acquires or loses friends. Several researchers have attempted to show how friendships are made, and also lost.

It is uncertain if social support's causal relationship to mental health problems is due to a lack of social skills or distorted cognition. Children who lack social skills may either make friends easily and lose them by failing to sustain the relationship, or they may not have the skills to initiate friendships to begin with. In the former scenario the child is eventually rejected by peers (Hymel et al., 1993).

On the other hand, he/she may attribute social isolation to external cues out of his/her control and withdraw from everyone (Crick and Ladd, 1993). Children who have distorted cognitions about themselves inevitably depreciate themselves and either fail to recognise, or unwittingly decline their peers' efforts to engage them (Brumback et al., 1977). Considering that distorted self-cognitions may affect children's ability to make friends, the question arises as to whether this is in effect part of the child's temperamental make-up. If it is the case, then temperament may be a predisposing risk factor predicting children's abilities to make friends. Morever, Thomas and Chess (1977) described how children's temperaments affected their reactions from significant others in their environment, such as the peers. These eventually helped shape the child's development. Furthermore, Windle (1992) decribed how adolescents with difficult temperaments had less support from their friends. Despite all these findings, the literature fails to specify in greater detail the mechanisms by which these friendships are made.

To summarise, research indicates that social support is important in protecting children against the risk of mental health problems. However, the mechanisms by which friendships are made and lost are poorly understood. Two views have been offered for why children are neglected, either that they are anti-social and lose their companions, or that they lack the skills to initiate friendships. Considering the above issues, the research questions posed by this study are as follows:

- 1. How do anti-social behaviours and temperament predict children's social support from friends?
- 2. What are the most important properties within each factor determining why children do not have friends?

#### METHODOLOGY

#### **Research Design**

A single survey was used to gather data for this study. The dependent variables comprised measures of children's social support and the independent variables were measures of children's anti-social behaviours and also their temperaments.

#### **Subjects**

Participants in this study were 398 children. As this study was part of a larger study on the effects of family structure on children's well-being, 194 children were from separated and 204 children were from non-separated families. The children were aged between 8–12 years old (Mean = 10 years 8 months; 187 females, 211 males). No-significant differences were noted between groups on gender and child's age.

Children aged between 8 and 12 years old were chosen for the following reasons. Eight years of age is viewed as the lower age limit for accurate self-reports (Wolchik et al., 1989). Twelve years of age, or in Year 6, was chosen so as to avoid the effects of further complications of children entering secondary school, which in itself may be a significant life event. The total number of schools involved in the study was 5 private and 48 government schools.

#### Procedure

Children in this study were asked to complete the questionnaires in groups of between five to ten students in their respective schools. Prior to participation, informed consent was obtained from their parents and the children. The questionnaires were administered as part of a larger battery of questionnaires. The administrator was a Clinical Psychologist with a Masters qualification. All questions were verbally administered to the children.

Questionnaires that the parents completed were sent to them by post and they were returned by post to the researcher.

## **Measurement Devices**

1. Anti-Social Behaviours: Aggression Sub-scale of the Child Behaviour Checklist [CBCL] (Achenbach and Edelbrock, 1983).

To measure anti-social behaviours, the aggression sub-scale of the CBCL was used. This is one out of the nine CBCL sub-scales. The original CBCL comprises 118 statements of problem behaviours, which can be broken up into a total behaviour problem score; three general scores; nine sub-scales scores (Achenbach, 1991). At the broadest level, the CBCL measures social competence, internal (emotional) and external (behavioural) mental health problems. The internalising scale comprises three sub-scales: withdrawn behaviours, somatic complaints and anxiety/depression. The externalising scale comprises two subscales: aggression and delinquency. An additional four scales measure social, sexual, thought and attention problems. Higher scores indicate more behavioural problems. Coefficient alphas for the individual sub-scales are reported to range from .68 to .92. Average test-retest reliability has been reported as .95. For this study, only the aggression scale was utilised. There is an extensive literature attesting to the reliability and validity of the CBCL in cross-cultural research of children (Bird, 1996).

2. The Dimensions of Temperament Survey-Revised [DOTS-R] (Windle and Lerner, 1986)

This is a 54-items self-report survey designed to measure temperament. It yields nine subscores of temperament which are approach/withdrawal, mood, activity level-general, rhythmicity-daily habits, rhythmicity-sleep, flexibility/rigidity, and distractibility. For the purposes of this study, all sub-scales were utilised with the exception of activity level-sleep, rhythmicity-sleep and rhythmicity-eating. A four choice response format, "usually false", "more false than true", "more true than false", and "usually true", was used with each item. Higher scores are generally indicative of a better temperament. Overall reliability for the DOTS-R dimensions with elementary school children ranges from .54 to .81 (Windle and Lerner, 1986).

3. The Social Support Scale for Children [SSS-C] (Harter, 1985)

This measures perceived support and regard across four domains: parental support, classmate support, teacher support and close friend support. The scale consists of 23 items which children respond to on a four-point scale. The internal consistency for each of the four sub-domains ranges from .72 to .82 (Harter, 1985). The scale yields four separate sub-domain mean scores. The higher a score obtained, the greater the indication of perceived support. For the purposes of this study, only the social support from classmates scale was

chosen considering that children spend a large proportion of time with their peers, who are usually their classmates at school (Barker and Wright, 1955).

#### **Statistical Procedures**

The purpose of the analysis was to observe what variables predict social support from classmates. The dependent variable was a measure of social support from classmates and the independent measures were measures of aggressiveness and measures of temperament. All the measures were on a continuous scale whose descriptive data are described in Table 1.

Table 1. Descriptive Statistics of Clinician Support and Hypothesised Frederiors					
Variables	Mean	SD	Median	Range	
Social support from classmates (SSS-C)	3.05	0.72	3.17	1–4	
Aggressiveness (CBCL)	55.12	7.51	51.0	50-90	
Temperament (DOTS-R)					
Approach withdrawal	18.86	3.68	19.0	7–28	
Mood	22.38	4.70	23.0	7–28	
Activity level—General	18.38	5.09	18.0	7–28	
Rhythmicity—Daily habits	11.89	2.78	12.0	5-20	
Flexibility/rigidity	13.33	3.41	13.0	5-20	
Distractibility	20.84	4.39	21.0	8-31	

Table 1. Descriptive Statistics of Children's Social Support and Hypothesised Predictors

#### RESULTS

In order to obtain a description of what children generally report as their most frequent modes of social support, a frequency analysis was conducted. Having classmates who would be their friends and being able to spend recess time with those classmates, who liked the child the way the child is, and being asked to play in games were amongst the most frequently reported modes of social support (see Table 2).

To obtain a general idea as to the strength of the relationships between social support from classmates and measures of temperament and aggressiveness, a Spearman's correlation matrix was first generated. No significant relationship was observed between social support from classmates and general activity level and rhythmicity of daily habits. Significant relationships were observed between social-support from classmates and temperamental subscales approach-withdrawal (r = .19, p < .01), flexibility-rigidity (r = .28,

Item	Content	Percentile
SSSC10	Having classmates who don't make fun of you.	23.4
SSSC14	Having classmates who pay attention to you	39.9
SSSC18	Getting asked to play in games	39.2
SSSC2	Having class mates who like you the way you are.	55.3
SSSC22	Spend recess time with classmates	58.8
SSSC6	Having classmates who would be their friend	60.1

Table 2. Percentile Rankings of Most Frequently Reported Modes	of
Social Support by Children	

p < .01, mood (r = .36, p < .01) and task distractibility (r = .15, p < .01), and parental reports of child aggressive behaviours (r = -.15, p < .01). Table 3 shows these significant relationships, and indicates that the relationships between social support from classmates and aggressiveness are not as strong as that of temperament.

R) Sub-seales, Anti-Social (Regressive) Denaviours and Social Support from Classifiates					
	Aggressiveness (Anti-Social)	Approach- Withdrawal	Flexibility -Rigidity	Mood	Distractibility
Approach- Withdrawal	01				
Flexibility- Rigidity	12	.18**			
Mood	20**	.29**	.29**		
Distractibility	02	.25**	.00	.15**	
SocSupp Classmates	15**	.19**	.28**	.36**	.15**

Table 3. Correlation Matrix Depicting the Relationship Between the Temperament (DOTS-R) Sub-scales, Anti-Social (Aggressive) Behaviours and Social Support from Classmates

Note: \*\*Significant at p < .01 level.

In an effort to further delineate which aspects of temperament predicted social support from classmates, a multiple linear regression was conducted where the dependent variable was social support from classmates and the independent variables were approach-withdrawal, flexibility-rigidity, mood and task distraction. The independent variables significantly accounted for 14 per cent of the variance in predicting social support from classmates [F(4, 393) = 15.90, p < .01] (see Table 4). Specifically, the more flexible the child is in behaviour, the more positive their moods were and the more social support they derived from their classmates.

Temperament Predicting Social Support from Classifiates ( $N = 598$ )				
	В	SE B	β	
Social Support from Classmates				
Approach-withdrawal	.01389	.00994	.07116	
Flexibility-rigidity	.02928	.01038	.13906**	
Mood	.03794	.00776	.24861**	
Distraction	.01541	.00794	.09437	

Table 4. Summary of Ordinary Least Squares Multiple Regression Analysis for Temperament Predicting Social Support from Classmates (N = 398)

Note:  $R^2 = 0.14$  [F(4, 393) = 15.90, p < .01]. \*\*Significant at p < .01 level.

In order to find out which aspects of temperament (i.e., specific behaviours) predicted whether social support was obtained from classmates, an additional set of multiple linear regressions was conducted. This time, social support from classmates was the dependent variable and questionnaire items that measured flexibility-rigidity (see Table 5) and mood (see Table 6) were the independent variables.

	В	SE B	β
Social Support from Classmates			
DOTS – R Question 1	.07199	.03134	.11810*
DOTS – R Question 13	.09459	.03375	.14939**
DOTS – R Question 18	.06210	.03355	.09608
DOTS – R Question 44	00187	.03290	00307
DOTS – R Question 49	.00452	.03420	.00670

 Table 5. Summary of Ordinary Least Squares Multiple Regression Analysis for Flexibility-Rigidity Predicting Social Support from Classmates (N = 398)

Note:  $R^2 = 0.06 [F(5, 392) = 15.33, p < .01]$ . \*\*Significant at p < .01 level. \*Significant at p < .05 level.

The flexibility-rigidity questions contributed six per cent of the variance in predicting social-support from classmates [F(5, 392) = 15.33, p < .01] (see Table 5). Only questions DOT1 (*"It takes me a long time to get used to a new thing in the home"*) and DOT13 (*"It takes me a long time to adjust to new schedules"*) were found to significantly predict social support from classmates. Thus, the quicker it takes the child to get used to new things in the home, the quicker the child can adjust to new schedules, and the more social support they have from classmates.

Predicting Social Support from Classmates ( $N = 398$ )				
	В	SE B	β	
Social Support from Classmates				
DOTS – R Question 3	006737	.038072	009754	
DOTS – R Question 14	015132	.040459	020938	
DOTS – R Question 28	.115359	.044860	.161351*	
DOTS – R Question 34	.048606	.034860	.073938	
DOTS – R Question 48	.076879	.045064	.100464	
DOTS – R Question 50	.039535	.037827	.060329	
DOTS – R Question 52	.083644	.052012	.100434	

Table 6. Summary of Ordinary Least Squares Multiple Regression Analysis for Mood Predicting Social Support from Classmates (N = 398)

Note:  $R^2 = 0.12$  [F(7, 390) = 7.97, p < .01]. \*Significant at p < .05 level.

The mood questions contributed 12 per cent of the variance in predicting social support from classmates [F(7, 390) = 7.97, p < .01] (see Table 6). Only question DOT28

("*I smile often*") was found to significantly predict social support from classmates. Therefore, the more often the child smiles, the more social support they get from their classmates.

To ascertain the strength of the relationship between aggressive behaviours and having more social support from classmates, aggressive behaviours were regressed onto social support from classmates. Aggressiveness accounted for one per cent of the variance in predicting social support from classmates [F(1, 396) = 6.38, p < .05] (see Table 7).

Behaviours Predicting Social Support from Classmates ( $N = 398$ )				
	В	SE B	β	
Social Support from Classmates				
Aggressiveness	01203	.00477	12588*	

Table 7. Summary of Ordinary Least Squares Multiple Regression Analysis for AggressiveBehaviours Predicting Social Support from Classmates (N = 398)

Note:  $R^2 = 0.01$  [F(1, 396) = 6.38, p < .05]. \*Significant at p < .05 level.

In order to find out which aspects of aggressive behaviours predicted whether social support was obtained from classmates, an additional multiple linear regression was conducted. Social support from classmates was used as the dependent variable and questionnaire items that measure aggressive behaviours were the independent variables.

The aggressiveness questions contributed towards seven per cent of the variance in predicting social support from classmates [F(20, 338) = 1.23, p >.01] (see Table 8). Only questions CBC27 ("*easily jealous*") and CBC74 ("*shows-off or clowns a lot*") were found

to significantly predict social support from classmates. Children who are easily jealous and show-off or clown are less likely to have more social support from their classmates.

In order to find out which specific aspects of aggressive behaviours and temperament predicted whether social support was obtained from classmates, mood, flexibility-rigidity and aggressiveness questions that were found to significantly measure social support from classmates were regressed on the social support from classmates sub-scale. The independent variables accounted for 14 percent of the variance in predicting social support from classmates [F(5, 364) = 12.39, p >.01] (see Table 9). The most significant predictors of social support from classmates were questions CBC27, DOT13 and DOT28. In general, the more a child is able to adjust to new schedules, smile and be less jealous, the more friends they have amongst their classmates.

6 66	В	SE B	β
Social Support from			
Classmates			
CBCL Question 104	01222	.08616	00902
CBCL Question 16	17220	.10082	12006
CBCL Question 19	04360	.07257	04092
CBCL Question 20	.01081	.12107	.00682
CBCL Question 21	22162	.13424	12553
CBCL Question 22	.03431	.09136	.02738
CBCL Question 23	.09121	.09032	.06374
CBCL Question 27	15393	.07596	12652*
CBCL Question 3	07989	.07189	07547
CBCL Question 37	10839	.10685	07006
CBCL Question 57	.04230	.12157	.02536
CBCL Question 68	.11578	.10217	.07350
CBCL Question 7	.04229	.07493	.03517
CBCL Question 74	15492	.07514	13513*
CBCL Question 86	.04859	.08281	.04301
CBCL Question 87	.03158	.08160	.02547
CBCL Question 93	.04181	.06775	.03771
CBCL Question 94	.07798	.08387	.06365
CBCL Question 95	03719	.08286	03419
CBCL Question 97	.19311	.15490	.09560

Table 8. Summary of Ordinary Least Squares Multiple Regression Analysis for Items measuring Aggressive Behaviours Predicting Social Support from Classmates (N = 398)

Note: R<sup>2</sup> = 0.07 [F(20, 338) = 1.23, p >.01]. \*Significant at p < .05 level.

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Social Support from Classmates	D		þ		
DOTS - R Question 1	.05890	.03018	.09770		
DOTS – R Question 13	.09315	.03102	.14783*		
DOTS – R Question 28	.18676	.03513	.26267**		
CBCL Question 27	13088	.06006	10779*		
CBCL Question 74	06232	.05688	05476		

 Table 9. Summary of Ordinary Least Squares Multiple Regression Analysis for Items

 Measuring Aggressive and Temperamental Behaviours Predicting

 Social Support from Classifier (N = 208)

Note:  $R^2 = 0.14$  [F(5, 364) = 12.39, p >.01]. \*\*Significant at p < .01 level. \*Significant at p < .05 level.

#### DISCUSSION

In summary, this study observed that changes in aggressiveness and the child's mood and flexibility predicted social support from classmates. More specifically, the aggressive behaviours of concern that resulted in less classmate support were manifested in such antisocial acts as jealousy and showing off, and poor interpersonal behaviours such as not smiling and being inflexible.

The results obtained in this study have generally supported and added to current research in this field. The results, when compared alongside those of earlier reviewers, do provide some understanding of how the mechanisms for friendship acquisition and loss may be related to the various anti-social behaviours observed in this study. Earlier observations that dispositions, in particular being uncooperative and seemingly unfriendly, lead to peers perceiving that the child is not interested in them, leading to the child being neglected (Coie et al., 1982; Coie and Kupersmidt, 1983). From the perspective of anti-social behaviours, the present results compliment Puttalaz and Wasserman (1990) findings that children who are more popular are less likely to try and draw attention to themselves, whereas those who are less popular would try to attract attention through other means such as showing off. Perhaps, a further attention seeking behaviour may result when jealous children say spiteful things about their peers, thereby drawing negative attention to themselves.

The results suggest several areas of application. When assessing why a child has been neglected by their friends, questions on their responses to their peers, such as whether they are jealous and constantly wanting to get attention should be posed. Furthermore, if they are lonely, then questions on their interpersonal skills, such as whether they have a friendly disposition and how easily they adapt to changes in their environment should be addressed.

There are several limitations to this study. While it may be tempting to draw conclusions on causation, the first weakness of this study is that it consists of cross-sectional data which represents the experiences of these children at a single point in time. Secondly, the applicability of the results to other age groups needs to be considered. Finally, it is recognised that half of this sample is made up of children of separated parents. Thus the impact that other factors, such as inter-parental conflict and separation from one's parent, have in affecting the child's friendship acquisition skills needs to be considered.

Where application of the results of this study is concerned, some form of intervention could be proposed to reduce the anti-social behaviours. Suggestions for intervention to curb anti-social behaviours would include training the child to use less anti-social ways to get attention and resolve problems. Programmes might include communication skills training, problem solving, and identification of feelings in others (Peterson and Gannoni, 1982). To deal with lack of skills such as shyness, communication skills which focus on altering unfriendly dispositions such as learning to accept and give compliments and counteracting negative thoughts are used (Jaycox et al., 1994; Stark, 1990).

Future work that could potentially continue from this study may be conceptualised into two areas: exploration of causes of lack of friendship acquisition skills, and testing interventions to try and increase and maintain the child's network of friends. With regards the former area, research needs to be carried out on how children develop either anti-social or withdrawn behaviours. The role of the media and parenting behaviours on the child, as postulated by social learning theorists, may be explored (Bandura and Walters, 1963). These behaviours may be part of the child's innate make-up, when considering what proportion of these behaviours are inherited from parents, as suggested by trait theorists (Thomas et al., 1970). In the latter case, interventions could focus on the extent that reducing aggressive behaviours and increasing social skills have on helping children make and maintain friendships. Several studies have focussed attention on some of these behaviours with some success (Allen et al., 1972; Schneider, 1992). However, most intervention programmes consist of pre-determined packages, resulting in less emphasis being placed on evaluating specific components of the intervention programmes.

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