A Systematic Assessment of the Specific Fears, Anxiety Level, and Temperament of Children with Imaginary Companions

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This study investigated the specific fears, anxiety level, and temperament characteristics of children with and without imaginary companions. Mothers of children with and without imaginary companions (37 mothers in each condition) whose children were aged between 3.2 and 8.7 years were asked to complete the Fear Survey Schedule for Children — II Parent (FSSC-II-P), the Revised Children's Manifest Anxiety Scale — Parent (RCMAS-P), and the Short Temperament Scale for Children (STSC). Examination of mothers' ratings indicated no differences between groups on the fear and temperament subscales. The scores for anxiety were significantly higher for imaginary companion children as a result of differences on the concentration and worry-over sensitivity subscales. However, the mean scores were still within the normal range. Consequently, it is concluded that whereas the presence of imaginary companions may be associated with some difference in levels of anxiety, overall there is no indication that children with imaginary companions experience emotional difficulties.

A fascinating aspect of children's development involves the occurrence of the imaginary companion. Despite claims that these companions are experienced by as many as 65% of children (Mauro, 1990; D.G. Singer & J.L. Singer, 1990) there is still very little empirical data on this phenomenon. The lack of systematic investigations in early research (e.g., Vostrovsky, 1895) and the differing data collection procedures utilised in later studies (e.g., Ames & Learned, 1946; Hurlock & Burstein, 1932; Jersild, Markey, & Jersild, 1933; Svendsen, 1934) have led to inconsistencies in the interpretation of results in the imaginary companion literature. More recent research (Harter & Chao, 1992; Manosevitz, Fling, & Prentice, 1977; Manosevitz, Prentice, & Wilson, 1973; Mauro, 1990; J.L. Singer & D.G. Singer, 1981; Taylor, Cartwright, & Carlson, 1993) has addressed these issues and included constraints such as enlisting participants within a similar age range and adopting a more standard definition of the imaginary companion. The most frequently cited definition is that offered by Svendsen (1934) who refers to the imaginary companion as:

An invisible character named and referred to in conversation with other persons or played with directly for a period of time, at least several months, having an air of reality for the child, but no apparent objective basis. This excludes that type of imaginative play in which an object is personified, or in which the child himself assumes the role of some person in his environment. (p. 988)

The theoretical orientation of imaginary companion research has also changed. Earlier research (e.g., Ames & Learned, 1946; Svendsen, 1934; Vostrovsky, 1895) focused exclusively on the individual and environmental factors associated with imaginary companions. More recent investigations (Harter & Chao, 1992; Manosevitz et al., 1977; Manosevitz et al., 1973; Mauro, 1990; J.L. Singer & D.G. Singer, 1981; Taylor & Carlson, 1997; Taylor, Cartwright, & Carlson, 1993) have investigated the relationship between these factors and the role of imaginary companions in childhood development. Collectively these studies suggest that the presence of the imaginary companion has a positive effect on childhood development with children using the companion to extend social and language skills, reduce anxiety, and come to terms with their fears.

Despite changes in opinion regarding the role of imaginary companions in children's development, exploration of the reasons why some children create imaginary companions and others do not raises more questions than it provides answers. For example, do children who experience higher levels of anxiety and more fears create imaginary companions to help them deal with these emotional responses, or are they temperamentally different to other children? Very few studies have specifically investigated the association between the presence of these companions and the factors of anxiety, specific fears, and temperament. The few studies that have will now be considered with respect to each of these factors.

Anxiety

Anxiety has been investigated only indirectly in children with imaginary companions. For example, J.L. Singer and D.G. Singer (1981) observed the affective behaviour of preschool children with and without imaginary companions during several sessions of spontaneous play. Affective behaviours were defined according to their valence. Positive affective behaviours included expressions of liveliness and elation such as smiling, enjoyment during play activities, and laughter. Negative affective behaviours included expressions of anger, fear or anxiety, fatigue, and sadness. The results indicated that children with imaginary companions showed more positive affect in their play and were less likely to be anxious during later play sessions than children without imaginary companions. The authors concluded that the presence of an imaginary companion increases the likelihood that a child will demonstrate positive emotionality during play and will play happily in preschool.

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Mauro (1990) and Meyer and Tuber (1989) evaluated the anxiety of children with imaginary companions using the combined anxiety and depression scale of the Child Behaviour Checklist (CBQ; Achenbach & Edelbrock, 1983). The results from both of these studies indicated the absence of any pathological anxiety in children with imaginary companions.

However, in each of the studies mentioned above the specific anxieties and levels of anxiety that were experienced by these children were not assessed. J. L. Singer and D. G. Singer (1981) did not specifically examine anxiety, but included it as a component of fear. Mauro (1990) and Meyer and Tuber (1989) evaluated children's experience of anxiety using the combined anxiety and depression scale of the CBQ, a scale that not only makes the differential evaluation of anxiety difficult, but also is designed to assess severe emotional-behavioural problems in children (Kline, 1994; Merrill, 1995). Consequently, children who experience non-clinical levels of anxiety may be incorrectly assessed as not being anxious.

Thus, while the findings from these studies could be interpreted to indicate that children with imaginary companions do not experience increased anxiety compared to children without these companions, the lack of instruments used specifically to measure anxiety casts doubt on this interpretation.

The only conclusion that can be drawn from the data is that children with imaginary companions may experience anxiety but not at pathological levels (Mauro, 1990; Meyer & Tuber, 1989; J.L. Singer & D.G. Singer, 1981).

**Specific Fears**

Similar to anxiety, the relationship between children's specific fears and the presence of imaginary companions has not been investigated separately in imaginary companion research. Researchers have tended to include fear as either a component of overall behaviour or as part of personality trait without quantifying it as a separate construct. For example, earlier researchers (e.g., Manosevitz et al., 1973; J.L. Singer & D.G. Singer, 1981) incorporated specific fears within a constellation of observable behaviours. These studies reported that children with imaginary companions did not display more fearful behaviour than children without companions.

Inuzuka, Satoh, and Wada (1991) incorporated fear related items within a personality trait inventory that examined anxiety levels. Respondents in this study reported that they would describe themselves as "timid" and "inclined to worry". However, the respondents in this study were old enough to understand terms such as "timid" and "inclined to worry" and hence, able to report these emotional states with some accuracy. It is questionable whether younger preschool children would be able to understand and report these types of emotional states as accurately. Thus, conclusions regarding older children's self-reported emotional experiences cannot be generalised to a younger population as younger preschool children's ability to understand and report these emotional states cannot be assumed.

Again, the lack of specificity in the measures and the use of different methodologies such as observation, and questionnaire (e.g., Manosevitz et al., 1973; Inuzuka et al., 1991) has resulted in inconsistent claims that children with imaginary companions are both more, and less likely to experience specific fears than children without these companions.

**Temperament**

The view that imaginary companions are compensatory for children with personality difficulties pervaded early research work (e.g., Vostrovsky, 1895; Svenden, 1934). However, more recent research evidence (Manosevitz et al., 1973; Mauro, 1990; J.L. Singer & D.G. Singer, 1981) suggests that children with imaginary companions display positive characteristics such as persistence, general happiness during play, and sharing behaviour.

Despite these assertions, only one study has specifically examined the relationship between temperament and the development of imaginary companions. Mauro (1990) used maternal ratings on the Children's Behaviour Questionnaire (CBQ; Rothbart, Ahadi, Hershey, & Fisher cited in Ahadi, Rothbart, & Ye, 1993) to compare the temperamental characteristics of children with and without imaginary companions. Using a 7-point scale (1 = extremely untrue of your child to 7 = extremely true of your child) mothers were required to rate their children's behaviour on a number of dimensions that encompassed three major temperament factors, namely Sociability, Activity, and Emotionality. Mauro (1990) found that mothers of preschool children with imaginary companions rated their children as less shy and more able to focus their attention for longer periods of time than mothers of preschool children without companions. These findings were considered as indicating that children with imaginary companions create them because they enjoy social interaction and have an increased ability to focus because of their sustained concentration during fantasy play. However, additional research that specifically investigates the temperament profiles of children with and without imaginary companions is needed before any conclusions regarding the relationship between the presence of imaginary companions and temperament can be made.

Thus, the aim of the present study was to investigate the association of specific fears, anxiety level, and temperament with the presence or absence of imaginary companions using standard data collection methods and instruments designed specifically to measure each of these constructs through parent report. In addition to investigating whether there are differences between children with and without imaginary companions in for example specific fears, the individual subscales for each construct were considered to determine the specific location of any differences that were identified.

While data suggests that there is a moderate relationship between self-reported fears and anxiety (e.g., Ollendick, 1983; Scherer & Nakamura, 1968), more recent research findings indicate that the relationship between these two constructs is not always interchangeable. For example, King, Gullone, and Ollendick (1992) administered the Fear Survey Schedule for Children — Revised and the Revised Children's Manifest Anxiety Scale to children with high and low levels of anxiety. Although a moderate relationship was observed between some items on the fear and anxiety subscales for high anxiety children, correlations between the majority of items on each scale were low. These researchers concluded that while fear and anxiety may be related, fear and anxiety are conceptually distinct. Thus, it was decided for the purpose of this study to measure anxiety and specific fears as separate constructs.

Whereas the lack of detailed research in these areas prevents clear predictions being made regarding the association of these factors with the presence of imaginary companions, as an exploratory study, it was expected that the use of standard data collection procedures, as well as instruments specifically designed to evaluate fear, anxiety, and temperament would clarify the relationship between these factors and the presence of imaginary companions.

**METHOD**

**Participants**

The participants were 37 mothers of children who have or who have had imaginary companions (IC children; M age = 6 years and 0 months; range = 3 years and 2 months to 8 years and 6 months) and 37 mothers of children without imaginary
companions (NIC children; M age = 6 years and 1 month; range = 3 years and 2 months to 8 years and 7 months). Using Taylor’s (1999) methodology as a guideline for identifying ICs, children were only included if both child and parent were consistent in reporting, “companion” or reporting “no companion”. There were 19 girls and 18 boys in each of the IC and NIC groups.

**Behavioural Measures**

The present study used three instruments to measure parents’ perceptions of childhood behaviour. These measures were: (a) the Fear Survey Schedule for Children — II Parent (FSSC-II-P; Boudlin & Pratt, 1998); (b) the Revised Children’s Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1985); and (c) the Short Temperament Scale (STSC; Prior, Sanson, & Oberklaid, 1989; Sanson, Prior, Garino, Oberklaid, & Sewell, 1987).

**Fear Survey Schedule for Children — II Parent (FSSC-II-P; Boudlin & Pratt, 1998).** This scale was adapted from the Fear Survey Schedule for Children—II (FSSC-II; Gullone & King, 1992) as a parent report instrument for use with the parents of children in the 3 year to 9 year age range. The FSSC-II comprises 78 items for which respondents are instructed to rate their level of fear according to a 3-point scale

$1 = \text{not scared}, ~ 2 = \text{scared}, ~ 3 = \text{very scared}$. Previous research (e.g., Gullone & King, 1992; Ollendick, 1983; Ollendick, King, & Frary, 1989) has identified five subtypes of fear: “Fear of Death and Danger”, “Fear of the Unknown”, “Fear of Failure and Criticism”, “Animal Fears”, and “Psychic Stress-Medical Fears”.

The FSSC-IIP comprises 94 items for which parents are instructed to rate their child’s level of fear according to a 4-point scale

$0 = \text{not applicable}, ~ 1 = \text{not scared}, ~ 2 = \text{scared}, ~ 3 = \text{very scared}$. Boudlin and Pratt (1998) identified eight subtypes of fear. As four of these subtypes were similar to those identified by Gullone and King’s (1992), the names were retained. The four additional subtypes were named: “Mythical Creatures Fears”, “Vulnerability Fears”, “School Fears”, and “Altered Environment Fears”. Psychometric evaluation of the FSSC-IIP using alpha coefficients revealed an internal consistency .73. This evaluation combined with previous research findings indicating that mothers provide accurate reports of their children’s fears (see Bondy, Sheslow, & Garcia, 1985) resulted in utilisation of the FSSC-IIP in the present study.

**The Revised Children’s Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1985).** This is a 37-item parent-report inventory that measures trait anxiety in children and adolescents aged 4 years to 19 years. Each of these items describes either an action or a feeling (e.g., “I wiggle in my seat a lot”, “I feel that others do not like the way I do things”) and children are asked to indicate whether the item is descriptive of their actions or feelings by circling either “Yes” or “No”.

Children’s anxiety level is then measured according to a global measure of anxiety (represented by the Total Anxiety score), and three subscales of anxiety: Physiological Anxiety, Worry-over-sensitivity Anxiety, and Concentration Anxiety; that have been consistently identified in previous factor analytic studies of the scale (Finch, Kendall, & Montgomery, 1974; Reynolds & Paget, 1981; Reynolds & Richmond, 1978, 1979). Normative scores segregated by age, ethnicity, and gender have been calculated and a cut-off of 1 SD above or below the mean scores of the normative sample is considered to warrant further attention. The scale has high internal consistency ($>.80$) and test-retest reliability for the Total Anxiety Scale ($>.90$) across a broad age range, gender, and ethnicity (Reynolds & Richmond, 1985).

Although it was recognised that the adaptation of an assessment instrument can alter its psychometric properties, the reliability and validity of the original RCMAS indicated its potential usefulness as a parent report instrument for use in the present study. The parent report version of the RCMAS (RCMAS-P) comprises 37 items for which parents are asked to rate how they perceive their child usually thinks and feels by circling either “Yes” or “No”. Psychometric evaluation of the RCMAS-P using alpha coefficients revealed an internal consistency of .89. Permission to modify the RCMAS was obtained from Western Psychological Services (personal communication September 5, 1995).

**The Short Temperament Scale for Children (STSC; Prior et al., 1989).** This is a 30-item parent-report inventory that enables the assessment of temperament style in Australian children and provides norms for three developmental age periods: 3 years 5 months to 4 years 5 months, 4 years 10 months to 6 years 6 months, and 6 years 8 months to 8 years 3 months. Parents are asked to rate their child’s behaviour on each item according to a 6-point scale, where 1 corresponds to almost never and 6 corresponds to almost always.

Following completion of the inventory, each child’s temperament style is classified on four dimensions: Approach (approach vs. withdrawal from new people and situations), persistence (tendency to persevere with tasks or activities), rhythmicity (regularity of biological and behavioural functions), and inflexibility (a combination of cooperation-manageability and irritability factors). The scores on three of these dimensions (approach, persistence, and inflexibility) are then combined to form a continuous easy–difficult scale that permits the classification of each child’s overall temperament style without losing any information. A cut-off of 1 SD above and below the mean score on this scale is used as a classification cut-off. The scale has test-retest reliability ranging from .77 for inflexibility to .90 for approach (Prior et al., 1989; Sanson, et al., 1987). Moreover, it has been noted by researchers (see Pedlow, Sanson, Prior, & Oberklaid, 1993) that maternal ratings of temperament using the Australian version of the Child Temperament Questionnaire (on which the STSC is based) correspond to observable behaviour. Hence, the STSC was considered a reliable method of reporting childhood temperament.

**Procedure**

**Recruitment.** Analysis of 478 questionnaires from a previous study identified 81 children who were reported as having, or having had an imaginary companion and 397 children who were reported as not having or never having had an imaginary companion (see Boudin & Pratt, 1999). On the last page of this questionnaire, mothers were asked to indicate if they would be willing to participate in further research. In the IC group, 37 mothers indicated that they would be willing to participate in further research and in the NIC group, 156 mothers indicated their willingness to participate in further research. Each NIC volunteer was categorised according to age and gender and matched to each IC volunteer. The final 37 NIC participants in this study were then randomly selected from each age and gender grouping and matched with the 37 IC participants.

**Process.** Following institutional ethics approval, all 74 mothers were initially contacted by phone. During this initial contact, mothers were given a brief explanation of the study and offered the opportunity to participate in the research.
If mothers agreed to participate, a one-hour home visit was arranged.

During the visit and prior to commencement of the data collection, a brief explanation regarding the purpose of each of the scales was given. General instructions regarding the completion of the FSSC-IIP, RCMAS-P, and STSC were also given. Subsequent to these explanations, all mothers were invited to ask any questions they had regarding the study, as well as confirm their understanding regarding the purpose and completion of the scales. Following this sequence, mothers who agreed to participate signed a written consent form then completed the rating scales.

**RESULTS**

*Analyses*

Although it was recognised that there might be some overlap between these variables, statistical tests were selected conceptually on the assumption that the scales would largely “tap” distinct areas. Hence three separate multivariate analyses of covariance (MANCOVA) were planned rather than one MANCOVA across all three scales. However in order to test this assumption, Pearson product-moment correlation coefficients were calculated on the total fear score, the total anxiety score, and each dimension of temperament. The correlations are presented in Table 1. Small but significant correlations were found between fear and anxiety, and between the temperament dimension inflexibility and anxiety. The correlations between fear and the temperament dimensions were not significant.

Although these findings indicate some overlap between variables, it was decided for the purpose of clarity to continue with the planned analyses of the data using three separate MANCOVAs. In addition, because only the effects of IC status on each of the variables was of interest, age was used as a covariate in all analyses. An alpha level of .05 was set for all tests.

**Fearfulness.** A summary of the means and standard deviations for all fear scores is presented in Table 2. A between subjects (IC/NIC) repeated measures MANCOVA was performed on the eight individual fear scores that comprise the overall measure of fearfulness.

The MANCOVA revealed that the combined DVs were not significantly affected by IC status, $F(7, 66) = 1.55, p = .17$.

**Anxiety.** A summary of the means and standard deviations for all anxiety scores is presented in Table 3. A between subjects (IC/NIC) repeated measures MANCOVA was performed on the four components of anxiety (concentration anxiety, physiological anxiety, over sensitivity and worry, and the lie scale) that comprise the overall measure of anxiety. Examination of the MANCOVA revealed a significant effect for IC status, $F(3, 70) = 3.19, p = .03$. ICs were reported to experience higher levels of anxiety than NICs.

Because of the correlations among the anxiety components (Worry-over sensitivity $r = .31$, Concentration $r = .37$, Physiological $r = .43$) a stepdown analysis was performed to determine which of these components made a contribution to predicting differences between ICs and NICs.

Worry-over sensitivity was entered into the analysis first, followed by physiological anxiety, and finally concentration anxiety. This analysis revealed that worry-over sensitivity anxiety made a significant contribution to detecting differences between ICs’ and NICs’ levels of anxiety, stepdown $F(1, 71) = 4.32, p = .02$, with ICs reported to experience more worry-over sensitivity anxiety (adjusted mean = 4.41) than NICs.

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**Table 1**

Intercorrelations Among Fear, Anxiety, and the Dimensions of Temperament ($N = 74$)

<table>
<thead>
<tr>
<th>Fear</th>
<th>Anxiety</th>
<th>Approach</th>
<th>Persistence</th>
<th>Rhythm</th>
<th>Inflexibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>.39*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 2**

Mean Scores on Each of the Eight Fear Factors for IC and NIC Children ($N = 74$)

<table>
<thead>
<tr>
<th>Factor</th>
<th>IC ($n = 37$)</th>
<th>NIC ($n = 37$)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>37.30 (4.22)</td>
<td>36.89 (5.25)</td>
<td>37.09 (4.73)</td>
</tr>
<tr>
<td>Factor 2</td>
<td>17.73 (2.67)</td>
<td>16.30 (2.68)</td>
<td>17.01 (2.75)</td>
</tr>
<tr>
<td>Factor 3</td>
<td>24.78 (4.65)</td>
<td>24.11 (4.33)</td>
<td>24.45 (4.47)</td>
</tr>
<tr>
<td>Factor 4</td>
<td>11.38 (3.34)</td>
<td>11.30 (2.85)</td>
<td>11.34 (3.08)</td>
</tr>
<tr>
<td>Factor 5</td>
<td>7.87 (2.42)</td>
<td>7.41 (2.33)</td>
<td>7.64 (2.37)</td>
</tr>
<tr>
<td>Factor 6</td>
<td>8.84 (2.48)</td>
<td>8.27 (2.16)</td>
<td>8.55 (2.32)</td>
</tr>
<tr>
<td>Factor 7</td>
<td>7.24 (1.30)</td>
<td>7.05 (1.49)</td>
<td>7.15 (1.39)</td>
</tr>
<tr>
<td>Factor 8</td>
<td>5.62 (0.92)</td>
<td>5.43 (0.65)</td>
<td>5.53 (0.80)</td>
</tr>
<tr>
<td>Total</td>
<td>120.76 (14.49)</td>
<td>116.76 (13.76)</td>
<td>18.76 (14.13)</td>
</tr>
</tbody>
</table>

**Table 3**

Mean Scores for Each Anxiety Component for IC and NIC Children ($N = 74$)

<table>
<thead>
<tr>
<th>Anxiety Components</th>
<th>IC ($n = 37$)</th>
<th>NIC ($n = 37$)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration</td>
<td>0.70 (1.10)</td>
<td>0.43 (0.96)</td>
<td>0.57 (1.03)</td>
</tr>
<tr>
<td>Physiological anxiety</td>
<td>2.76 (1.95)</td>
<td>2.68 (1.92)</td>
<td>2.72 (1.92)</td>
</tr>
<tr>
<td>Worry-over sensitivity</td>
<td>3.27 (2.21)</td>
<td>2.21 (1.60)</td>
<td>2.74 (1.99)</td>
</tr>
<tr>
<td>Lie</td>
<td>3.00 (2.19)</td>
<td>2.32 (2.03)</td>
<td>2.66 (2.12)</td>
</tr>
<tr>
<td>Total</td>
<td>9.73 (4.36)</td>
<td>7.64 (4.18)</td>
<td>8.68 (4.27)</td>
</tr>
</tbody>
</table>

*Note: Standard deviations are in parentheses.*
(adjusted mean = 3.53). After the pattern of differences measured by worry-over sensitivity and physiological anxiety were accounted for, concentration anxiety was also found to make a significant contribution to detecting differences between ICs’ and NICs’ levels of anxiety, stepdown \( F(1, 71) = 6.95, p = .04 \), with ICs reported to experience more concentration anxiety after adjustment for age (adjusted mean = 1.87) than NICs (adjusted mean = 1.01).

Temperament. A summary of the means and standard deviations for the four temperament scores is presented in Table 4. A between subjects (IC/NIC) MANCOVA was performed on the four dimensions of temperament (approach, inflexibility, persistence, and rhythmicity) that comprise an overall temperament score. However, as the easy–difficult dimension is an average of the three DVs (approach + inflexibility + temperament score) that precede it in the analysis, it would have been inappropriate to include this dimension in the MANCOVA. Thus, in order to determine whether differences exist between ICs and NICs on the easy–difficult dimension, a \( t \) test was performed.

The MANCOVA revealed that the combined DVs were not significantly affected by IC status, \( F(3, 70) = .41, p = .75 \).

Scores on the easy–difficult dimension were computed from the sum of approach, inflexibility and persistence for each IC and NIC group. The mean scores on the easy–difficult dimension were then calculated for each IC and NIC group. A \( t \) test revealed that there was no significant difference between these means IC easy–difficult, \( M = 2.46, SD = 0.51 \); NIC easy–difficult, \( M = 2.57, SD = 0.50 \); \( t(72) = .92, p = .36 \); Levene test, \( p = .66 \).

### DISCUSSION

The aim of the study was to use standard data collection methods and instruments designed specifically to measure fearfulness, anxiety, and temperament to clarify the relationship between the presence of imaginary companions and these constructs. Utilising the FSSC-IIP, RCMAS-P, and the STSC to investigate these factors, the study found reported differences in IC and NIC children’s level of anxiety but not in their fearfulness and temperament.

#### Anxiety

This study found differences in the anxiety levels of children with imaginary companions that have not been reported previously (e.g., Mauro, 1990; Meyer & Tuber, 1989; J.L. Singer & D.G. Singer, 1981). Children with imaginary companions were reported to experience higher levels of anxiety than children without these companions. Additional analyses using the stepdown procedure revealed that concentration anxiety and worry-over sensitivity anxiety were the sub-components that contributed to the difference in the anxiety score.

According to Reynolds and Richmond (1985) high worry-over sensitivity anxiety scores suggest that a child is afraid or oversensitive to the environment and tends to internalise this anxiety until they become overburdened with it. High concentration anxiety scores suggest that a child is concerned that they are not as capable as other children and cannot meet the expectations of significant others. Elevated scores on each of these scales may manifest in children as problems concentrating to the extent that it interferes with their intellectual ability, increased dependence on adults, and difficulties dealing with their emotional responses.

However, the anxiety scores of children with imaginary companions, although higher than the scores of children without companions, were within 1 SD above the normative scores. According to Reynolds and Richmond (1985) scores that do not exceed 1 SD above the mean do not require further attention. Thus, while the MANCOVA findings suggest that children with imaginary companions might have a greater tendency to experience anxiety, this is restricted to concentration and worry-over sensitivity. Moreover, the mean scores for these children are still within the normal range. Thus, one interpretation of these findings may be that the greater tendency of children with imaginary companions to experience specific types of anxiety, albeit within normal limits, may cause enough distress to warrant the creation of an imaginary companion to help them with difficult situations.

For example, Taylor (1999) describes the development of an imaginary companion by a 3-year-old boy named Sam who required several visits to a doctor’s surgery following a traumatic amputation and surgical reattachment of one of his fingers. During these visits, the doctor had decided not to let the mother into the treatment room while attending to the wound. This separation from the mother resulted in Sam screaming for his mother. However, a week following the commencement of these visits, Sam appeared to cope much better. When asked about the change in his behaviour, Sam reported the appearance of an elf named Woody who turned up in the treatment room and helped him cope with the ongoing medical treatment in the absence of his mother.

#### Specific Fears

The present study found that parents did not report any differences in the specific fears of children with and without imaginary companions. Children with imaginary companions were not found to experience more specific fears compared to children without these companions. However, while these findings are similar to those obtained in previous imaginary companion research (e.g., Manosevitz et al., 1973; J.L. Singer & D.G. Singer, 1981) the extent to which they can be directly compared to previous findings is limited for two reasons. The first reason concerns the number of participants in the study. However, the power of this study was estimated to fall somewhere between .5 and .7 for the analyses conducted and although not ideal, it is unlikely that major differences in specific fears would be identified even if a much larger sample was involved.

The second reason is the differing data collection methods and the inadequate assessment and definition of fearfulness (e.g., Manosevitz et al., 1973). Reports of the increased fears of children with imaginary companions in previous research (e.g., Inuzuka et al., 1991) suggest that fears may have been reported where anxiety was indicated. The inseparable treatment of these two factors in previous imaginary companion research (e.g., J.L. Singer & D.G. Singer, 1981), as well as similarities in the physiological, and hence behavioural responses in fear and anxiety states (Graham, 1990; Reynolds & Richmond, 1985) may have produced reports that were
based on a combination of these two factors. Thus, previous reports of the increased fearfulness of children with imaginary companions may have reported the combined behavioural responses of fear and anxiety, rather than fear behavioural responses alone.

**Temperament**

This study also found that parent reports regarding the temperament of children with and without imaginary companions were not significantly different. This finding supports previous research by Mauro (1990) who found that overall, children with imaginary companions were reported as neither temperamentally difficult nor as having a different temperament style to children without imaginary companions. However, while these findings refute the conclusions made by early researchers (e.g., Svendsen, 1934) that children with imaginary companions are temperamentally difficult it is again possible, although unlikely, that with larger numbers of participants major differences would be detected.

In summary, based on parental report, with the exception of anxiety scores which were slightly elevated, but still within normal range, there was no evidence to suggest that children with and without imaginary companions differed on the emotional dimensions of fear, anxiety, and temperament. The slightly elevated anxiety scores associated with the presence of imaginary companions were interpreted to indicate that children with imaginary companions might have a predisposition to experience anxiety. However, claims regarding findings from parent report should be treated with caution until they are directly compared to children's self-reports.

In addition, as the present study did not take into account differences in children's age or gender, it is possible that some variations between children with and without imaginary companions were not identified. Thus, future research should compare directly the self-reported fears and anxieties of children with and without imaginary companions with parents' reports of their children's fears and anxieties, taking into account sample size and childhood differences in age and gender.

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**References**


