# Risk Factors for Spirit Possession Among School Girls in Southern Thailand†

UMAPORN TRANGKASOMBAT, M.D.*,
VEERA CHURUJIPORN, M.D.**,
VILAILUK HARUHANPONG, M.S., R.N.**,
UMPON SU-UMPAN, M.D.*,
ORAWAN NUKHEW, M.S., R.N.**,

**Abstract**

In September 1993, at a school in the south of Thailand, an outbreak of spirit possession suddenly afflicted 32 girls aged 9-14 years. A case-control study was done to investigate factors that predispose a child to spirit possession. Psychiatric evaluation was done on 32 cases and 34 matched controls. Parents were interviewed regarding the child's psychosocial history. Results of the study were as follows. Children with spirit possession were first-born and came from small families with 1-3 children. Compared with the controls their family life was characterized by more psychosocial stressors and there were significantly higher rates of psychiatric disorders, anxious and fearful character traits, histrionic character traits and history of recurrent trance states. The history of traumatic experiences and exposure to spirit possession ceremonies were more frequent in spirit-possessed children than in the control group but the difference was not significant. This study showed that being first-born from a small family, individual vulnerability especially psychiatric disorders, problematic character traits and dissociative tendency were significant risk factors in the development of possession states in children.

Spirit possession or possession state is defined in this report as a condition in which an individual acts as if he or she was under the control of another entity, usually the spirit of a deceased relative, a famous person or deity. The individuals who experienced spirit possession may report later that external spirits have entered their bodies and taken control of them. The predominant feature is

* Child Psychiatry Division, Department of Psychiatry, Faculty of Medicine, Chulalongkorn University, Bangkok 10330,
** Suansaranrom Hospital, Surat Thani 84000, Thailand.
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a dissociative symptom usually accompanied by amnesia[1]. In the Diagnostic and Statistical Manual of Mental Disorders (DSM IV) dissociation is defined as a disruption in the usually integrated functions of consciousness, memory, identity or perception of the environment. Spirit possession is classified under the diagnosis of dissociative disorder not otherwise specified (DDNOS)[2].

The phenomenon of spirit possession has been reported to occur in some countries such as Zambia, Malaysia and Thailand[3-5]. In Thailand, spirit possession is a common and accepted expression of cultural activities and religious experiences especially in the north, the northeast and the south. It is commonly found in adults[1] but sometimes can occur in school children in remote areas in the form of mass hysteria.

From September to December 1993, an outbreak of illness occurred in the remote area of Nakhon Si Thammarat province in the south of Thailand. Of 208 boys and 185 girls enrolled in the school, 32 girls (8.6%) developed the illness which took the form of possession states. It started acutely with various physical symptoms such as headache, dizziness, palpitation, followed by alteration of consciousness such as fainting and trance states and culminating in visual and auditory hallucination of a female deity, dressed in red and trying to take control of the child's body. Physical examination done after the episode was normal. After thorough investigation, the Ministry of Health concluded that the illness was epidemic hysteria and was not caused by any physical or infectious agent or environmental contamination. The Institute of Mental Health and Chulalongkorn University then sent a team to investigate the psychological aspect of the epidemic.

Since mass hysteria in the form of possession state creates distress in individuals and chaos in the community, knowledge of this phenomenon and its associated factors is very important for the community mental health. As part of the investigating team we tried to find out how this phenomenon developed. The investigation was done in 2 parts. The first was the study of the epidemiological and clinical aspects of the possession state, the results of which are reported elsewhere[6]. In this article we report the results of the second part which was the study of risk factors associated with this phenomenon.

## MATERIAL AND METHOD

This was a case-control study. The case group consisted of 32 girls who developed the symptoms of possession during the epidemic. The control group consisted of 34 girls who had no symptoms. The matching was done by selected students in the same class and the same age as the cases. The parents of the subjects were interviewed in order to obtain history of psychiatric, medical and developmental problems of the child, family and peer relationships, the presence of academic and behavioral problems, and current stressors in the family. Psychiatric assessment was done in all subjects using the semi-structured interview which assessed the psychiatric symptomatology, character traits and coping styles based on DSM III-R[7]. The interview also focused on the child's previous traumatic events, spirit possession and dissociative experiences especially trance states. Depressive symptoms of each child were examined by the Thai version of the Children's Depression Inventory (CDI), a 27-item, self-report scale which quantifies an array of depressive symptoms in children. The child was instructed to select the one sentence for each item that best described her feelings in the past 2 weeks. Response on the CDI items were made on a 3-point scale, ranging from 0 to 2 depending on the severity of the symptoms. Thus the total score can range from 0 to 54. The statistical study found the CDI, Thai version, to have good reliability and validity, and is an appropriate instrument to measure the level of depression in Thai Children[8].

The statistical analysis was done to compare variables of the case and the control groups, using chi-square, *t*-test and Fisher's exact test where appropriate.

## RESULTS

### Background data and previous experiences

Compared with the controls, cases were more likely to be first-born and came from small families with only 1-3 children. Psychiatric illness and drug abuse in parents and other family stressors such as parental conflicts and economic problems were more frequent in the case group but the difference was not significant (Table 1).

Previous experiences related to dissociation and trauma were compared. Recurrent trance states were significantly more frequent in the

**Table 1. Characteristics of subjects in both groups.**

| | Case (N=32) | | Control (N=34) | | P |
|---|---|---|---|---|---|
| | N | % | N | % | |
| Age in years : x (S.D.) | 11.0 | (1.5) | 11.4 | (1.7) | NS |
| No. of children in family ≤3 | 22 | (69) | 12 | (35) | <0.05 |
| Birth order: first born | 19 | (59) | 8 | (24) | <0.01 |
| middle | 9 | (28) | 14 | (41) | NS |
| youngest | 3 | (9) | 11 | (32) | <0.05 |
| single child | 1 | (3) | 1 | (3) | NS |
| Family breakdown | 6 | (19) | 9 | (26) | NS |
| Parent's psychiatric illness | 5 | (16) | 2 | (6) | NS |
| Parent's drug abuse | 5 | (16) | 5 | (15) | NS |
| Other family stressors | 19 | (59) | 16 | (47) | NS |
| Recurrent trance states | 11 | (34) | 3 | (9) | <0.05 |
| Past suicidal behavior | 10 | (31) | 11 | (32) | NS |
| Exposure to violence/ extreme fears | 14 | (44) | 14 | (41) | NS |
| Exposure to mediums/spirit possession | 9 | (28) | 5 | (15) | NS |

* OR = 5.4, 95% CL = 1.18-28.11

**Table 2. Results of psychiatric evaluation.**

| | Case (N=32) | | Control (N=34) | | P |
|---|---|---|---|---|---|
| | N | % | N | % | |
| Received Axis I diagnosis | 14 | (44) | 7 | (12) | <0.05*1 |
| Anxious and fearful trait | 17 | (53) | 5 | (15) | <0.01*2 |
| Histrionic trait | 6 | (19) | 0 | (0) | <0.01*3 |
| Repressive coping style | 17 | (53) | 10 | (29) | NS |
| Expressive coping style | 7 | (22) | 10 | (29) | NS |
| Somatization | 9 | (28) | 5 | (15) | NS |
| Mean CDI score (S.D) | 12.4 | | 11.2 | | NS |

*1 OR = 3.0 95% CL = 0.90-10.30
*2 OR = 3.9 95% CL = 1.16-13.23
*3 Fisher's Exact Test

case group than in the control group. Past suicidal behaviour was found in high percentages in both groups. Exposure to medium, spirit possession ceremonies and violence or extremely fearful events were higher in the case group but the difference was not statistically significant.

### Psychiatric diagnoses, character traits and coping styles

Table 2 shows that the rate of psychiatric diagnoses were significantly higher in the case group. The diagnoses were as follows: adjustment disorder(9), dysthymia(1), major depressive disorder(2), overanxious disorder(1) and dissociative disorder not otherwise specified(1). The diagnoses in the control group were adjustment disorder(5) and dysthymia(2). The CDI scores which reflected the severity of depression in both groups were not statistically significant.

The assessment of character traits and coping styles found the spirit-possessed subjects to have significantly higher rates of histrionic and anxious and fearful character traits than the control group. Repressive coping style (the tendency to keep feelings inside instead of talking to parents or other people when having problems) and somatization (the tendency to complain of physical problems such as headache, dizziness and fainting

without organic abnormality) were also more common in this group. In the control group expressive coping style was more common but the difference was not significant.

## DISCUSSION

In recent years studies on dissociative phenomena have grown tremendously especially in people with multiple personality disorder[9-12]. Studies on other specific types of dissociation such as possession state are few[1,3-5]. To the authors' knowledge there has been no case- control study on this subject in children before. The aim of this study was to understand risk factors associated with possession state. Since this phenomenon is a form of dissociative reaction, the study then focused on factors found to be associated with dissociation from previous investigations.

Most studies suggest that dissociative reaction is a common response to severe trauma, serving to provide some insulation against overwhelming stress[13,14]. In this study we found higher rates of family stressors in the spirit-possessed children than in the controls. In addition, most of the spirit-possessed children were first-born from small families while the controls were mostly the youngest child. In Asian culture, a first - born child is expected to perform better than other children and to live up to the expectation of the family in contrast to the youngest who is allowed to live a carefree life. In a small family with few children, expectations are not shared and usually are focused on the first -born. The situation will be worse if the family has conflicts because the conflicts will not be diffused as in a big family. This, combined with various family stressors, creates tremendous psychological stress and may render the child vulnerable to develop psychiatric problems including dissociative reaction.

Individual vulnerability is very important in the development of dissociation. Spiegel and Spiegel found that 8-10 per cent of the U.S. population possess the biological potential to dissociate[15]. In this study 34 per cent of the spirit-possessed children had dissociative potential as manifested by recurrent trance states. Subjects with recurrent trance states were 5 times more likely to develop spirit possession compared with those with no history of trance.

On psychiatric evaluation other vulnerabilities were found in spirit-possessed children such as psychiatric disorders and problematic character traits and coping styles. Children with anxious and fearful character traits were 4 times more likely to develop dissociation. As in previous studies[1,5,16,17], histrionic personality trait was found to be a significant risk factor in the development of mass hysteria and spirit possession. The finding of repression and somatization as frequently used modes of coping pointed to the role of ineffective conflict resolution and inability to express feelings appropriately in the development of possession state.

It is accepted that a traumatic event in the psychic life of an individual can trigger dissociation. In the United States sexual abuse has been commonly reported in the history of people with chronic dissociation[13,14]. In this study we did not find any children with a history of sexual abuse. However, exposure to violent and extremely fearful experiences were higher in spirit-possessed children. The high crime rate in this community induced fear in the children, many of whom reported encountering dead bodies on their way to school. Some had witnessed the death of their neighbors or loved ones. In vulnerable children, these traumatic experiences overwhelm the non-dissociative defenses and dissociation develops.

In western societies mass hysteria mostly takes the form of physical symptoms such as hyperventilation, abnormal movement and fainting[16,17]. Mass hysteria in the form of dissociation or possession states were reported only in some cultures where the belief in superstition is prevalent[1,3-5]. In this study higher rates of exposure to medium or spirit possession ceremonies were found in the case group than in the control group. This underlines the importance of cultural experience of individuals in the development of psychiatric symptoms.

Prompt intervention is very important in mass hysteria. In order to stop the progression of the episode, attention must be paid to children with risk factors. Treatment of underlying psychiatric disorders, helping children develop effective coping skills and reduction of stress in the family are important intervention which must be done meticulously, taking the cultural influence and group dynamics into consideration. Only then will the chaos stop and community mental health be restored.

## SUMMARY

A case-control study of spirit-possession in school girls found that being first-born from a family with a small number of children, having psychiatric disorders, problematic character traits and dissociative tendency were significant risk factors in the development of possession states in children.

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# ปัจจัยเสี่ยงของการเกิดอาการผีเข้าในเด็กนักเรียนหญิงในภาคใต้ของประเทศไทย†

*อุมาพร ตรังคสมบัติ, พ.บ.*, อัมพล สูอำพัน, พ.บ.*,*
*วีระ ชุรุจิพร, พ.บ.**, อรวรรณ หนูแก้ว**, วิไลลักษณ์ หฤหาญพงษ์***

ในเดือนกันยายน พ.ศ.2536 ที่โรงเรียนแห่งหนึ่งในจังหวัดนครศรีธรรมราช ได้มีอาการผีเข้าระบาดในเด็กนักเรียนหญิงจำนวน 32 คน อายุระหว่าง 9-14 ปี ผู้วิจัยได้ทำการวิจัยแบบ case-control เพื่อศึกษาปัจจัยเสี่ยงที่ทำให้เด็กเกิดอาการผีเข้า โดยทำการประเมินทางจิตเวช รวมทั้งทำการสัมภาษณ์บิดามารดาเกี่ยวกับประวัติทางด้านจิต-สังคมของเด็ก 32 คนที่มีอาการผีเข้า และเด็ก 34 คนที่ไม่มีอาการดังกล่าว ผลการศึกษาพบว่า เด็กที่มีอาการผีเข้าส่วนใหญ่เป็นลูกคนโตมาจากครอบครัวเล็กที่มีลูกเพียง 1-3 คน เมื่อเปรียบเทียบกับกลุ่มควบคุมพบว่า ครอบครัวของเด็กที่มีผีเข้ามีปัจจัยเครียดทางจิต-สังคมมากกว่า ส่วนตัวเด็กเองได้รับการวินิจฉัยว่ามีโรคทางจิตเวช มีบุคลิกภาพแบบวิตกกังวลและกลัวง่าย มีบุคลิกภาพแบบ histrionic และมีประวัติของการเข้าฌานในอัตราสูงกว่าอย่างมีนัยสำคัญทางสถิติ ประวัติของการประสบเหตุการณ์รุนแรงสะเทือนขวัญและการเคยเข้าร่วมในพิธีทรงเจ้าพบในกลุ่มเด็กที่มีอาการผีเข้าสูงกว่ากลุ่มควบคุม แต่ความแตกต่างนี้ไม่มีนัยสำคัญทางสถิติ การวิจัยนี้แสดงว่าการเป็นลูกคนโตจากครอบครัวเล็ก ความเปราะบางส่วนบุคคลโดยเฉพาะการเจ็บป่วยทางจิตเวชบุคลิกภาพที่ไม่เหมาะสมและแนวโน้มที่จะเกิดอาการ dissociation เป็นปัจจัยเสี่ยงที่สำคัญในการเกิดอาการผีเข้าในเด็ก

* หน่วยจิตเวชเด็ก, ภาควิชาจิตเวชศาสตร์, คณะแพทยศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย, กรุงเทพ ฯ 10330
** โรงพยาบาลสวนสราญรมย์, จ.สุราษฎร์ธานี 84000
† เสนอในการประชุมทางวิชาการประจำปีของสมาคมจิตแพทย์อเมริกัน ที่เมืองฟิลาเดลเฟีย ประเทศสหรัฐอเมริกา เดือนพฤษภาคม 2537
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