Influence of perceived parenting styles on goal orientations and career aspirations of high school science students in Thailand

Thanita Lerdpornkulrat ¹, Ravinder Koul ², Chuchai Sujivorakul ³

1. Doctoral Candidate, Learning Innovation and Technology Program, Faculty of Industrial Education and Technology, King Mongkut’s University of Technology Thonburi, Bangkok, Thailand, thanita_le@yahoo.com
2. Education Division, Penn State University, Great Valley School of Graduate Professional Studies, Malvern, PA, USA
3. Department of Civil Technology Education, Faculty of Industrial Education and Technology, King Mongkut’s University of Technology Thonburi, Bangkok, Thailand

Abstract

There has been considerable research interest on the relationship between the parenting styles of Asians and student motivation and achievement. The investigation presented in this paper contributes to the literature in this area by examining the influence of perceived parenting style on goal orientations and career aspirations of a sample of high school science students in Thailand (N = 2438). Results of multiple regression analysis showed several significant findings: Students who perceived their parents as empathic were more likely to have adopted mastery goals and empathic parenting had a particularly positive influence on females’ career aspirations. Students who perceived that their parents have “domineering views” were more likely to have adopted performance avoidance goals. Students who perceived that their parents are “the regulators of family rules” were more likely to have adopted both mastery and performance goals. These findings are discussed in light of social dimensions of achievement goals and gender roles.

Keyword: Parenting style, achievement goal theory, career aspirations, Thailand
Introduction

Widely accepted theories of attachment (e.g., Bartholomew, 1990) and symbolic interactionism (e.g., Mead, 1934) posit that people develop a sense of self on the basis of how other people treat them. Eccles (1994) introduced a cognitive model which includes a component on socialization and academic choice that focuses on the role of parents and teachers in shaping the achievement-related beliefs and career choices of young adults. More recently, there has been research in social psychology using cognitive theories of motivation to explain the influence of parenting behavior on student judgments of self-competency, value beliefs and goals (Chao & Tseng, 2002).

Much of the research on the influence of parenting styles on children’s outcomes has been based on Baumrind’s (1971) conceptualizations of authoritative, authoritarian, and permissive styles of parenting, and their impact on the physical, cognitive, and social development of children (see also Eccles, 1994). For example, studies carried out in USA have found that support of child autonomy with authoritative parenting is related to intrinsic motivation while repression of child autonomy with authoritarian parenting is related to extrinsic motivation (e.g., Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987). There has also been research in east Asia using Baumrind’s typology (e.g., see Murayama & Elliot, 2009) but some researchers have questioned the direct application of Baumrind’s typology within the Asian context (e.g., Chao & Tseng, 2002). Chao and Tseng (2002) suggest that because societies differ in terms of family environment and socialization process, the social understandings and meanings of such terms as “parental control” and “warmth” may not be universal (also Steinberg, Lamborn, Dornbusch, & Darling, 1992). It would therefore make sense for research to take culturally specific perceptions and descriptions of parenting style into account.

Survey studies on the relationship between parenting style and student motivation have used either a two-dimensional motivational model of mastery and performance achievement goal orientations or a three-dimensional motivational model of mastery, performance approach and performance avoidance achievement goal orientations (Church, Elliot, & Gable, 2001; Gonzalez, Doan Holbein, & Quilter, 2002). Generally speaking, mastery goals focus inwardly on mastering a task and personal improvement while performance goals focus outwardly on normative outcomes, grades and other external evaluations and comparisons (Hyde & Durik, 2005). A student who endorses a performance
approach goal wants to demonstrate ability that is superior to others, and a student who endorses a performance avoidance goal wants to not appear stupid compared to others (Church et al., 2001). As Gonzalez et al. (2002) have noted, the three-dimensional motivational model may lead to a more precise depiction and understanding of the nature of relationship between parenting style and student motivation.

The study presented in this paper was carried out in Thailand. A child’s perception of parental behavior is considered to be as important an influence on child’s development as actual parental behavior (Steinberg et al., 1992), so we assessed Thai students’ perceptions of parental behavior to form the basis of our typology of parenting style. Using a three-dimensional model of motivational achievement goal orientation, we then investigated the influence of the two most commonly perceived parenting styles on students’ motivational goals and aspirations for high earning science, math, engineering or related professions.

**Method**

**Participants**

We collected survey data in July 2010 from every student enrolled in the upper secondary level academic science-math stream in five different schools located in central and north-eastern Thailand. More than 94% of responses to our survey were complete (N =2438, Males = 46%; Females = 54%). The proportion of females in our sample and the socio-economic status of all our participants was representative of the population nationwide. A majority of 87.5% of respondents had parents in a marital relationship. More than two thirds of the students (72.9%) were brought up by mother and father, 12.5% by mother only, 2.7% by father only, and 11.9% by family relative(s).

**Instruments**

The first section of the survey asked for general information (e.g., parent’s education and career aspiration). The second section of the survey assessed motivational goal orientation toward science (17 items, e.g., “I like to perform tasks in my science class because this makes me learn new things”) (see Koul, Roy, Kaewkuekool, & Ploisawaschai, 2009). The third section of the survey assessed the two most common parenting styles as described by participants in the study: Pa-dej-garn or jao-ra-biab parenting, and aou-jai-sai or aou-jai-sai-doo-lae parenting. Pa-dej-garn parents are perceived to make all decisions on behalf of their children, put too many demands and restrictions on children, force children to accept
what they think is right, and never entertain questions from children. Aou-jai-sai parents are perceived to show empathy for their children, encourage verbal give-and-take, and allow children to form their own point of view. Based on informal interviews with a group of students and previous literature, we created a survey to assess participants’ perceptions of these parenting styles in relation to their own upbringing. Because past research has found that children may perceive their parents to have different styles of parenting (e.g., Chao & Tseng, 2002), we assessed the parental roles separately. We used a 5-point Likert scale from strongly disagree (1) to strongly agree (5).

Analysis

Data collected in this investigation was analyzed with exploratory factor analysis with principal components on the correlation matrix of associations and the factor extraction rule based on eigenvalues greater than 1. Principal component method was chosen because it obtained a larger proportion of variance compared to principal axis factoring. Both orthogonal (Varimax) and oblique rotations were conducted. Both rotation approaches grouped the survey items into the same number of factors. Although the oblique rotation sum of squares loadings was a little better than those for the orthogonal, we are reporting only the orthogonal solution because it is adequate and more summary information is provided for it by the SPSS statistical software that we used (see also Henson & Roberts, 2006). We used the Anderson-Rubin method to calculate scores on each factor for each survey participant. Each factor score was used for the subsequent statistical analysis.

Prior researchers have concluded that aspirations for high earning science, math, and engineering professions provide focus for the influence of home environment on the career decisions of students (see Correll, 2001). We used mean monthly salary to code each of the professions aspired to in our survey data as HESME (high earning science, math, engineering or related professions) or Non-HESME (Non-high earning science, math, engineering or related professions) (see www.worldsalaries.org/thailand.shtml). For example, general physician ($1218), dentist ($925), engineer ($962), and pharmacist ($700) were coded as HESME; low-earning science-related professions, such as nursing ($200), and all other professions were coded as non-HESME. In order to find the influence of family variables that discriminate the student choice between a HESME and Non-HESME profession, we conducted discriminant function analysis.
Results

The Goal Orientation Scale (58% variance) had three factors: mastery goal orientation (6 items, e.g., “I feel satisfied when I learn new things in my science class”), performance goal approach orientation (5 items, e.g., “I feel good when I perform better than other students in science”), and performance avoidance goal orientation (6 items, e.g., “My main goal in science class is to avoid looking stupid in science”). The Parenting Style Scale (59.4% variance) had four factors: “empathic father” (6 items, e.g., “My father was always willing to listen to children’s concerns), “empathic mother” (6 items, e.g., “My mother was always willing to listen to children’s concerns), “parents are the regulators of family rules” (4 items, e.g., “my father always felt that parents should force their children to behave appropriately”) and “parents have domineering views” (4 items, e.g., “My mother always felt that children must accept what she thought was right”). The “empathic mother” and “empathic father” sub-scales measured the perceived degree of parental respect for child’s thoughts, feelings and expression. The empathic father and empathic mother sub-scales were found to be conceptually equivalent (Behling & Law, 2000) because the same number of conceptually equivalent factors extracted from the two scales and the same items loaded on each factor, and approximately the same proportion of total variance was accounted by each factor. “The regulators of family rules” sub-scale assessed parental insistence upon complete obedience to parentally established family rules and regulations. The “domineering views” sub-scale measured the degree to which parents were perceived to force their ideas on the child.

Both males and females in our study perceived their mother to be more empathic than their father. Compared to males, females perceived both their father and mother to be significantly more empathic, F = 7.86, partial eta squared = .003, and F = 29.32, partial eta squared = .012, respectively, p < .01. Compared to females, males perceived their parents to be significantly more “regulators of family rules” and to have “domineering views”, F = 13.02, partial eta squared = .005 and F = 9.04, partial eta squared = .004, respectively, p < .01. Split-file analysis of variance of each parenting style survey item with gender found that both males and females perceived their mother to be significantly more “the regulator of family rules” and to have significantly more “domineering views” than their father.
Table 1
Multiple regressions: Influence of perceived parenting style, education, and gender on achievement goal orientations (N = 2438)

<table>
<thead>
<tr>
<th>Achievement goal orientation</th>
<th>Influence variable</th>
<th>beta</th>
<th>Parameter estimates</th>
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<tr>
<td>Mastery</td>
<td>Empathic father</td>
<td>.235</td>
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<td></td>
<td>Empathic mother</td>
<td>.199</td>
<td>9.196</td>
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<td>Regulators of family rules</td>
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<td>Domineering views</td>
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<td>Father’s education</td>
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<td>-.246</td>
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<tr>
<td></td>
<td>Mother’s education</td>
<td>.003</td>
<td>.095</td>
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<tr>
<td></td>
<td>Gender</td>
<td>-.004</td>
<td>-.170</td>
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<tr>
<td>Performance approach</td>
<td>Empathic father</td>
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<td>-.350</td>
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<td></td>
<td>Gender</td>
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<td>Performance avoidance</td>
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<tr>
<td></td>
<td>Gender</td>
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<td>-2.673</td>
</tr>
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</table>

*p < .01, **p < .05  Mastery goal orientation adjusted $R^2 = .111$, Performance approach goal orientation adjusted $R^2 = .034$, Performance avoidance goal orientation adjusted $R^2 = .082$

Results of regression analysis show the influence of parenting styles on motivational goal orientations. Table 1 presents b-values and their level of significance. The largest predictor of performance avoidance orientation was the perception of domineering views (b = .273). The perception that father and mother are empathic made the greatest contribution to mastery orientation (b = .235 and .199). The perception that the parents are the regulators of family rules contributed positively to both mastery goals (b = .121) and performance avoidance goals (b = .110). Generally speaking, we found that the males in our study were more oriented towards performance approach and performance avoidance goals than the females and the difference was statistically significant, $F = 3.87$, $p < .05$, partial eta squared = .002, and $F = 18.62$, partial eta squared = .007, $p < .01$.  

Proceedings- Behavioral Science and Social Problems-010
4th International Conference on Humanities and Social Sciences
April 21st, 2012 Faculty of Liberal Arts, Prince of Songkla University
Students who aspired for high earning science, math and engineering professions perceived their father to be significantly more empathic than the students who aspired for Non-HESME, $F = 6.16$, partial eta squared $= .002$, $p < .05$. This difference was true both for males and females, $F = 3.0$, partial eta squared $= .003$ and $F = 3.6$, partial eta squared $= .003$, $p < .05$.

Discriminant function analyses found that Boxes’ test was insignificant and all log determinants were very similar, which means that the homogeneity of variance assumption was met (Stevens, 1992). The statistical model of family influences was not significant for males, Chi-square $= 11.67$, $p = .07$, which means that the family variables did not significantly discriminate the HESME group from non-HESME group. However, the model was significant for females, Wilks’ Lambda $= .952$, Chi-square $= 55.776$, $p < .01$. Discriminant analysis yielded a canonical correlation of .22, explaining about 5.1% of variance in the female aspiration for a HESME profession or non-HESME profession. A high level of education for both parents and the perception of both parents as “empathic” contributed positively to females’ aspirations for high earning science, math, engineering and related professions. These four variables showed statistically significant differences in mean values for females’ career aspirations, and the classification results showed that 60% of the cases were correctly classified.

Discussions

The American philosopher John Dewey (1916) has said that the “individual” and the “social” are nested. Dewey’s insight describes the nature of what our investigation found in Thailand, and our findings offer cross-cultural validity for his perception. We found that students’ beliefs about their parents are associated with their achievement goals for themselves (see also Poortvliet & Darnon, 2010). According to Lau and Yeung (1996) and Chao and Tseng (2002) Asian children may perceive parental regulation of family rules as “domination” or as an “organizational type of control” to promote family harmony. Our investigation found that the endorsement of either mastery or performance goals was associated with the interpretation of parental regulation of the child’s behavior (see also Chao & Tseng, 2002; Gonzalez et al., 2002). We found that the perception of parental control as “domineering” associated with performance avoidance goals which are negatively related with students’ self-esteem (Herz & Gullone, 1999) and life satisfaction (Stewart et al., 1998)
while the perception of parental control as “caring” associated with mastery goals which are positively associated with self-control, persistence (Zhengyuan et al., 1991) and life satisfaction (Stewart et al., 1998). These findings corroborate widespread evidence from research conducted in USA on the association between students’ perception of others and their beliefs about themselves and academic tasks—namely, that positive evaluation of others is linked to mastery goals (Kaplan, 2004) and positive representation of self, including high levels of self-efficacy and self-esteem (Arbona & Power, 2003).

The significant positive association that we found between females’ perceptions of both their father and mother as empathic and their aspirations for HESME professions was notable since family factors (parental education and parenting style) had no significance in relation to the career aspirations of males in our study. In another investigation with a similar population of high school students in Thailand, we found gender differences in career aspirations that may result from stereotype effect and social preferences (Koul, Lerdpornkulrat, & Chantara, 2011; see also Correll, 2001). Koul et al. (2011) found that males aspired for HESME professions at a higher rate than females not because they valued science more than females or because they had higher grade-point-averages than females. They did so partly because they perceived they were simply more suited for HESME professions. Koul et al. (2011) also found that higher levels of biology and physics classroom anxiety negatively impacted the aspirations of females, but not males, for HESME professions. Findings from these investigations suggest that females use their emotional states and emotional support as a source of information about their competency to aspire for HESME professions. Therefore, family role models and persuaders are especially critical sources of self-efficacy beliefs for females. The results draw attention to the nested nature of motivation and social environment and, particularly for females, the influence of affective elements on student motivation and career aspirations.

References


