

***The Effect of Identity on Risk-taking in Middle Adolescence:
The Mediating Role of Positive Youth Development***

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Abstract

This study aimed to examine how identity development and character from positive youth development perspective can reduce risk-taking in middle adolescence by investigating the direct effect of identity and character on risk-taking and the indirect effect of identity on risk-taking through character. Self-report questionnaires were used for data collection from 405 high school students ($M_{\text{age}} = 16.58$ years; $SD_{\text{age}} = 0.95$) attending public schools in Bangkok, Thailand. The Structural Equation Modeling (SEM) was operated to analyze the tested model. The results revealed that identity and character negatively influenced risk-taking. In addition, the association between identity and risk-taking was partially mediated by character. The overall goodness-of-fit statistical analysis represented that the tested model of risk-taking is a good fit with the empirical data. The implications for decreasing risk-taking in middle adolescence along with suggestions for future research are discussed.

Keywords: identity, risk-taking, character, positive youth development, middle adolescence

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Introduction

Adolescence is recognized as a vulnerable period to participate in problems with risk-taking (Arnett, 1992). In accordance with statistics drawn from the smoking and drinking behavior survey conducted by the National Statistical Office of Thailand (NSO) in 2014, the data revealed that the starting age for both smoking and drinking in youths has significantly declined. The survey also found that the number of car and motorbike accidents caused by drunk driving occurred the most amongst adolescents (NSO, 2014). Moreover, a survey by Powwattana & Ramasoota (2008) found that 68.8% of 319 Thai female adolescents had sexual intercourse without using condoms. These reports indicated that such problems with risk-taking in Thai adolescents need an attention in order to be solved, especially for adolescents aged of 15 to 19 years (WHO, 2014; UNICEF, 2015) which can be defined as middle adolescence (Steinberg, 1996), since these problems have negative impacts not only on the health of adolescents but also their families and society as a whole (Jessor, 2014).

Risk-taking problems in adolescence is a topic that has attracted many researchers to investigate the factors that can diminish the propensity of adolescents to engage in risk-taking (e.g. Magar, Phillips, & Hosie, 2008; Dumas, Ellis, & Wolfe, 2012; Sun & Shek, 2012; Razali & Kliewer, 2015). Many studies adopted the Problem Behavior Theory (Jessor & Jessor, 1977) to comprehend risk-taking phenomena (e.g. Vazsonyi et al., 2008; Wattananonsakul & Tuicomepee, 2014). Relating to the previous research, it was found that developmental process factors in adolescence contributed to risk-taking problem reduction (Hatano, Sugimura, & Crocetti, 2016; Schwartz et al., 2015; Dumas et al., 2012; Sun & Shek, 2012; Jelicic, Bobek, Phelps, Lerner, & Lerner, 2007).

As Erikson (1968) proposed in the theory of psychosocial development, identity formation is a key developmental task that challenges every adolescent to accomplish. According to the results, identity formation can be classified into two poles; the successful one called identity achievement, and the other referred to as identity confusion. Furthermore, Marcia (1966) broadened Erikson's concept of identity by proposing two identity processes consisting of exploration and commitment. Exploration is denoted as a self-active searching and questioning about identity choices relating to one's life goals. Commitment refers to the certain decision making based on one's own identity. The presence of both exploration and commitment signifies as a pathway to achieve identity task, whereas the absence of exploration and commitment during identity development implies to identity diffusion. That is to say, the consequences of identity development are likely to affect the personality and behavioral problems along with the well-being of individuals in adolescence and adulthood (Erikson, 1968; Kroger, 2000; Schwartz, Brent Donnellan, Ravert, Luyckx, & Zamboanga, 2012). Previous relevant research revealed that adolescents with high levels of identity development tended to involve lower risk-taking problems (Hatano et al., 2016; Dumas et al., 2012).

Apart from the aspect of identity, Positive Youth Development (PYD) is also the key developmental factor for thriving adolescents (Lerner et al., 2006). PYD is a perspective which believes in the inherent strengths in every adolescent. These strengths are the potential that contributes to positive changes in the cognitive, emotional, social and behavioral domains of adolescents (Lerner et al., 2005; Phelps,

Zimmerman, Warren, Jelicic, von Eye, & Lerner, 2009), resulting in healthy adolescents and adults in the future as well as reducing an emergence of risk-taking behaviors (Lerner, Von Eye, Lerner, & Lewin-Bizan, 2009). Previous research showed that PYD was negatively associated with risk-taking behaviors in adolescents (Sun & Shek, 2012; Jelicic et al., 2007).

One aspect of positive youth development which plays a role in the formation of a healthy personality and effects risk behaviors is “Character”, which can be defined as respect for societal and cultural rules, correct behaviors, morality, and integrity (Roth & Brooks-Gunn, 2003; Lerner et al., 2005). Past research found that character was negatively associated with risk-taking in adolescents (Geldhof, Bowers, Mueller, Napolitano, Callina, & Lerner, 2014; Sun & Shek, 2012; Jelicic et al., 2007). Additionally, some studies exposed a link between identity and character which established that adolescents with achieved identity are more likely to develop positive characters compared to confused identity adolescents (Crocetti, Erentait, & Zukauskienė, 2014; Padilla-Walker, Barry, Carroll, Madsen, & Nelson, 2008). In the same vein, Erikson (1968) noted that adolescents who can achieve identity development are inclined to acknowledge their own desires and behave in accordance with social norms. The literature regarding the connection between identity, character and risk-taking as mentioned above led to the question of whether or not the relationship between identity and risk-taking can be elaborated through character.

Based on the Problem Behavior Theory (Jessor & Jessor, 1977) and Erikson’s theory of psychosocial development (1968), the present study aimed to scrutinize whether or not character can serve as the mediator between the effect of identity on risk-taking by examining the direct effect of identity and character on risk-taking and the indirect effect of identity on risk-taking through character in order to clarify how the factors related to the adolescent developmental process contributing to the reduction of the risk-taking problems in middle adolescence.

Method

Participants and procedure

The participants consisted of 405 high school students (41% boys and 59% girls) in six public schools in Bangkok, Thailand. The age of participants ranged from 15 to 18 years ($M_{\text{age}} = 16.58$ years; $SD_{\text{age}} = 0.95$). This study required and obtained permission from the school principals to administer questionnaires during class time. The survey protocol was certified by the Ethical Review Committee for Research Involving Human Research Subjects, Srinakharinwirot University.

Measures

The variables in this study were measured by self-report questionnaires. All scales were originally developed in previous research and represented in English. For this study, the scales were translated into Thai and some content was adapted in order to be in line with Thai cultural context. The psychometric properties (e.g. item total correlation analyses, content validity and internal consistency reliability) were tested and validated before the administration of the survey. All measures demonstrated a satisfactory to a good level of reliability ($\alpha = .72 - .84$) (George & Mallery, 2003).

The information and details regarding the measurement of each variable in this study are presented below.

Risk-taking

Risk-taking was depicted as the intention and willingness of adolescents to take part in risk-taking behaviors including drinking, smoking, premarital sexual and reckless driving. To index *intention* to take risks, the items adapted from the Domain-specific Risk-attitude Scale (DOSPERT; Weber, Blais, & Betz, 2002) in the health domain were employed. The participants were asked to indicate their likelihood of intention to engage in any of these high risk behaviors during over the next six months. An example of items was “Consuming four or more servings of alcohol in a single party”. The response choices ranged from 1 (very unlikely to do) to 4 (very likely to do). To assess *willingness* to take risks, the scale was derived from Gerrard, Gibbons, Stock, Vande Lune, & Cleveland (2005) and Wattananonsakul, Suttiwan, & Iamsupasit (2010). This scale firstly introduced a risk-conductive situation such as “Suppose you were with a group of friends and some of them were smoking. There are some cigarettes there that you could have if you wanted”. Then, participants were asked to answer how willing they would be to take part. The items were one cigarette and 2-3 cigarettes. The response options ranged from 1(not at all willing) to 4 (very willing).

Identity

Identity was measured by a concept of identity processes (identity exploration and identity commitment) in the domains of future occupation, field of study, personal values, religion, politics, family, friendships, dating and sex roles using the scale adapted from the Ego Identity Processing Questionnaire (EIPQ; Balistreri, Busch-Rossnagel, & Gesinger, 1995). All items were rated on a four-point Likert-type scale, ranging from 1 (not at all like me) to 4 (very much like me). Nine items measured identity exploration (e.g. “I have tried to learn about different occupational fields to find the best one for me”) and nine items measured identity commitment (e.g. “I am confident that the values I hold are right for me”).

Character

In order to measure character, the four-point Likert-type scale derived from the very short measure of the Five Cs of PYD (PYD-VSF; Geldhof et al., 2014) were used. The items on this scale represented social conscience, value diversity, personal values and conduct behavior, for example, “Respecting the values and beliefs of people who are of a different race or culture than I am”. The response format for these items ranged from 1 (not at all like me) to 4 (very much like me).

Data analysis

The data were analyzed using Structural Equation Modeling (SEM) to investigate direct and indirect effects of the tested model which consisted of latent constructs with several indicators. SEM was performed by using LISREL 8.72 software with maximum likelihood (ML) estimation (Jöreskog & Sörbom, 1996). The covariance matrix was computed as input. The related measurement errors were allowed. Assessing the overall fit of this model was determined by these criteria; the non-significant Chi-square

(Barrett, 2007), root mean square error of approximation (RMSEA) was not greater than .08 (MacCallum, Browne, & Sugawara, 1996), the comparative fit index (CFI) was greater than .95 (Hu & Bentler, 1999) including the relative Chi-square (χ^2/df ratio) of less than 2.0 (Hooper, Coughlan, & Mullen, 2008).

Results

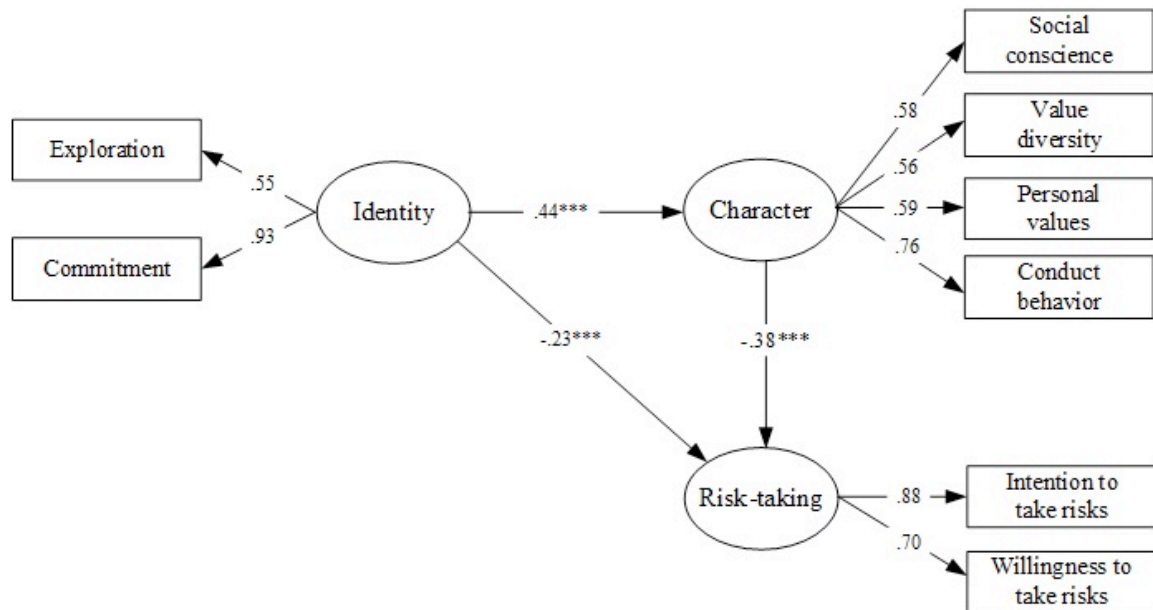
The means, standard deviations and correlation coefficients of all observed variables were analyzed and presented in Table 1. The results showed the significant relationships among all observed variables. To examine the hypothesized model of risk-taking, identity and character were defined as an exogenous variable and a mediator respectively. An initial model was estimated according to maximum likelihood method for estimating the path coefficients. Modification indices were used for modifying model to be a good fit for the data. For the final model, chi-square = 11.06, $df = 16$, $p = .81$, comparative fit index (CFI) = 1.00, root mean square error of approximation (RMSEA) = .000, goodness of fit (GFI) = .99 and adjusted goodness of fit (AGFI) = .98. Thus, all indices implied that the tested model of risk-taking was a good fit to the empirical data. The model was shown in Figure 1 with standardized coefficients. Moreover, identity and character explained 27.7 percent of the variance in risk-taking in middle adolescents.

Variables	1	2	3	4	5	6	7	8
1. Intention to take risks	1.00							
2. Willingness to take risks	.62**	1.00						
3. Social conscience	-.20**	-.15**	1.00					
4. Value diversity	-.26**	-.15**	.36**	1.00				
5. Personal values	-.28**	-.24**	.34**	.30**	1.00			
6. Conduct behavior	-.33**	-.26**	.44**	.55**	.45**	1.00		
7. Identity exploration	-.17**	-.18**	.16**	.13*	.20**	.17**	1.00	
8. Identity commitment	-.33**	-.26**	.24**	.23**	.31**	.25**	.52**	1.00
<i>M</i>	13.22	17.17	3.47	3.34	3.39	3.45	22.05	25.67
<i>SD</i>	3.74	5.19	0.77	0.75	0.74	0.68	3.80	3.49

* $p < .05$, ** $p < .01$

Table 1 Mean, standard deviation and correlation of observed variables

The model showed that identity had a significantly positive effect on character. However, both identity and character had significantly negative effects on risk-taking directly. Identity also influenced risk-taking indirectly through character. Therefore, character is *partially* mediated the relationship between identity and risk-taking (Little, Card, Bovaird, Preacher, & Crandall, 2007).



Note: Values are standardized coefficients. Chi-square = 11.06, $df = 16$, $p = .81$; root mean square error of approximation (RMSEA) = .000; comparative fit index (CFI) = 1.00; goodness of fit (GFI) = .99; adjusted goodness of fit (AGFI) = .98 (***) $p < .001$

Figure 1: Structural equation model of risk-taking in middle adolescence.

Conclusions and recommendations

The purposes of this study were to examine the effect of identity on risk-taking in middle adolescence directly and indirectly through character from positive youth development perspective. The results revealed that identity significantly influenced risk-taking directly and indirectly through character which can also be described as the partial mediator between identity and risk-taking. In addition, the overall goodness-of-fit statistical analysis indicated that the hypothesized model of risk-taking was a good fit with the empirical data.

According to the results, the whole picture of the interrelation between identity, character and risk-taking was supported by the psychosocial development theory (Erikson, 1968) together with the Problem Behavior Theory (Jessor & Jessor, 1977). Specifically, the psychosocial development theory describes that adolescents who can accomplish their identity tasks are more likely to behave in a positive way in line with social norms, which is consistent with a definition of character and, simultaneously, less likely to participate in risk-taking behaviors, compared to adolescents with confused identity. Moreover, identity and character are considered to be protective factors in a personality system that can mitigate risk-taking engagement in adolescents based on the Problem Behavior Theory.

Focusing on each pathway in the model of this study, the negative effect between identity and risk-taking is consistent with prior research (Hatano et al., 2016; Schwartz et al., 2015; Dumas et al., 2012), additionally, a negative association of character to risk-taking is also in line with preceding studies (Geldhof et al., 2014; Sun & Shek, 2012; Jelicic et al., 2007) which implied that both identity and character

can reduce the likelihood of engaging in risk-taking. Besides, the positive relationship between identity and character is also parallel with previous studies (Crocetti et al., 2014; Padilla-Walker et al., 2008) which indicated that adolescents with more likelihood to achieve identity task possess a more positive character. Consequently, the results of this study suggested that when adolescents synthesized their identity more positively, the possibility of taking part in high risk behaviors tends to reduce, concurrently, a positive development in character is inclined to escalate. As a result, the positive character can also potentially decrease the chances of engaging in high risk behaviors.

This study may contribute to and have practical applications as it provides information that can be used to develop prevention programs for schools as well as communities in order to prevent risk-taking problems amongst middle adolescents. These findings suggested that schools and communities should promote identity in middle adolescents and help them achieve their successful identity tasks by creating contexts that encourage adolescents to explore their own competence by considering the influences that can affect the direction of their lives and then generating plans of action to address identified choices and challenges. As a consequence, they can define who they are and what they believe in prior to making a commitment regarding their identity. (Ferrer-Wreder, Lorente, Kurtines, Briones, Bussell, Berman, & Arrufat, 2002). The success of identity development will lead to the reduction of the likelihood of risk-taking problems, including increasing the positive development of their character indirectly.

It is worth noting that the significance of identity development and risk-taking problems was not solely limited only in middle adolescence but also in early adolescence, late adolescence and early adulthood (Erikson, 1968; Jessor, 2014). In order to understand the thorough concept, it is suggested that future studies should clarify the pattern of relationships between identity, character and risk-taking through the various stages of adolescence as well as early adulthood.

In conclusion, the current study provided a further information for adolescent literature by showing the mechanism of relationships between identity, character and risk-taking in middle adolescence which established that character based on a concept of positive youth development is the partial mediator between identity and risk-taking. Furthermore, the present study added supportive evidence on the developmental process factors that can potentially reduce risk-taking problems, as well as underlying the importance of identity development in middle adolescence.

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