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RESEARCH

Risk taking behaviour among urban and rural adolescents in two selected districts in Malaysia

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Background: Risk taking behaviour refers to the tendency to engage in behaviours that have the potential to be harmful or dangerous, which has become a major concern and is rated as one of the public health issues that need special attention. The objective of the study was to compare the prevalence of risk taking behaviour and its associated factors among urban and rural adolescents.
Methods: A comparative cross-sectional study was conducted among 306 adolescents by multistage sampling from two selected schools with involvement of their parents.
Results: The prevalence of risk taking behaviours was 81.7% in the urban and 83.7% in the rural area ($p = 0.650$). Parental background factors such as parent's education level, marital status, health status, and income were unrelated with risk taking behaviour among adolescents. The multiple logistic regression test showed that being a male (AOR = 4.55, 95% CI = 2.28–9.07), inadequate number of bedrooms (AOR = 11.54, 95% CI = 1.48–89.75), and presence of family conflict (AOR = 3.64, 95% CI = 1.49–8.89) were the predictors among adolescents for risk taking behaviour in rural areas.
Conclusion: The absence of a balanced healthy family and conducive environment would lead to a negative influence towards adolescent behaviour, which may affect both the individual and community.

Keywords: adolescent, risk taking behaviour, rural, urban

Introduction

The process of modernisation and a world with no boundaries lead to a social problem among adolescents. Statistics have shown juvenile cases are escalating year by year for all states in Malaysia.[1] It has become a great concern, and it is rated as one of the serious public health issues that needs special attention. Adolescent risk behaviours continue to trouble societies, erode families, and pose a tremendous challenge to the social services. Risk taking behaviour (RTB) refers to the tendency to engage in behaviour that has the potential to be harmful or dangerous. Beginning at age 14, adolescents are entering the developmental period of the highest risk for many social problems. The most common concerns for adolescents are being involved in dangerous activities, gangsters, smoking, drug abuse, physical fighting, and stealing.[2] There is a lot of literature available discussing about risk taking behaviour and its associated factors among adolescents from different aspects, worldwide. Risk taking behaviour is on the rise all over the world. This is surprising considering the significant allocation of government resources and efforts that have been spent to provide proper information to these adolescents, related to the consequences of the risk activities. Risk taking behaviour among adolescents has a negative impact on the psychological well-being of adult life.[3]

Parents of adolescents are often blamed for the risk taking behaviour of their children. In some courts of other countries, parents are even penalised for the antisocial conduct of their child.[4] This is because behaviour of adolescents is believed to be influenced by family environment and the characteristics of the family. Many researchers agree that the foundation of the adolescent risk behaviour is rooted in the kind of home that the adolescent has been brought up in.[5] The family, which is the smallest unit in the society, needs to be charged with positive values to ensure family members grow up in a conducive environment, so that they can face the outside world problems appropriately. The family plays an important role in the development of children's values, conception of individuality, and the way of coping with real life. By action and by example, parents shape the lives of their children from birth through adulthood.[6] In adolescents, the influence of friends and peers takes on greater importance, but research clearly demonstrates the continued significance of parents in shaping the behaviour and choices of teens as they face the challenges as they grow up. There are various factors in the family that facilitate children's values, self-construal, and resilient behaviour. These factors are elements in the family such as the closeness between the child and parents[7] or parent–child interaction, parenting styles, family environment, and the general background of parents. Family conflicts or cohesion would affect the adolescents' behaviour and development.

These facts highlight the essentiality to search and the urgency to understand the situational factors influencing the engagement of risk taking behaviour; more particularly, of family characteristic attributes such as family environment, parenting style, and parent—child interaction. There is also minimal study comparing living location and the risk taking behaviour among adolescents. In view of that, the objectives of this study were to compare the prevalence of risk taking behaviour and its associated factors among adolescents living in urban and rural areas.

Methodology

This comparative cross-sectional study was conducted in urban and rural areas of Selangor from June to September 2011. The urban and rural areas were defined by the Malaysian National statistical offices. This study was approved by the Faculty of

Medicine, Universiti Kebangsaan Malaysia ethics committee (Project code FF-183-2011) and the Department of Education, Selangor. Research on the relationship between family characteristics and adolescent risk taking behaviour generally focuses on socio demography, background of parent (either mother or father), family environment factor, and parenting styles. A multistage sampling method was used due to the large number of students in the state of Selangor. The students, aged 16, who agreed to take part and could understand both Malay and English languages were selected to participate in this study. Those who were absent and sick on that day were excluded. The data was gathered by using self-administered questionnaires. These questionnaires were distributed to the students for them to bring home to their parents. Once the adolescents and the parents had completed filling out the forms, the researchers collected these forms from the adolescents on the following day. Questionnaires to adolescents and parents had the same code number. By using a definition of RTB based on "ever been involved in at least one of the dangerous or risky activities", this study examined the family influences differentiating "have risk" and "no risk" in urban and rural adolescent. This definition has been used in previous research in Malaysia. The data were analysed by using SPSS version 18.0.

Results

The entire adolescent group (n = 306) answered and returned the questionnaires, giving a response rate of 100%. However, response rates among parents were quite low (51.9%). The majority of respondents were male, with nuclear family types, were Malay, were using parent's transport in urban while in rural using own transport, the number of bedrooms was more than 3, they had married parents, and had parents with at least secondary education (Table 1). The prevalence of RTB in view of location, whether urban (81.7%) or rural (83.7%), did not have much difference and not was statistically significant (p = 0.650). The majority RTBs in the urban area were loitering, physical fights, and absenteeism from school, while in the rural area they were loitering, absenteeism, and physical fight.

Table 1: Respondents' characteristics between urban and rural adolescents

	Urban (n = 153)		Rural (n = 153)	
	n **(%)**	**Mean (SD)**	***n*** **(%)**	**Mean (SD)**
Gender				
Male	78 (51.0)		93 (60.8)	
Female	75 (49.0)		60 (39.2)	
Family types				
Nuclear	142 (92.8)		138 (90.2)	
Extended	11 (7.2)		15 (9.8)	
Ethnicity				
Malay	90 (58.8)		148 (96.7)	
Chinese	50 (32.7)		4 (2.6)	
Indian	10 (6.5)		1 (0.7)	
Others	3 (2.0)		0 (0)	
Transport to school				
Walking	42 (27.5)		27 (17.6)	
Own transport	30 (19.6)		103 (67.3)	
Public transport	28 (18.3)		20 (1.9)	
Parents' transport	53 (34.6)		20 (13.1)	
Number of bedrooms				
Less than 3	12 (7.8)		27 (17.6)	
More than 3	141 (92.2)		126 (82.4)	
Parent Marital Status				
Married	62 (91.2)		76 (86.4)	
Divorced	2 (2.9)		6 (6.8)	
Remarried	4 (5.9)		3 (3.4)	
Widowed	0 (0.0)		3 (3.4)	
Family structure*				
Single parent	3 (4.4)		11 (12.5)	
Both parents	65 (95.6)		77 (87.5)	
Household income*				
< RM 1 000	0 (0.0)		36 (40.9)	
> RM 1 000	68 (100)		52 (59.1)	
Number of siblings		3.5 (2.82)		4.8 (1.97)
Number in household		5.5 (1.76)		6.3 (2.00)

*urban n = 68, rural n = 88.

Table 2: Risk taking behaviour comparison between urban and rural adolescents

Factors	RTB Urban		χ^2	*p*-value	POR	95% CI	RTB Rural		χ^2	*p*-value	POR	95% CI
	Yes (*n* = 125)	No (*n* = 28)					Yes (*n* = 128)	No (*n* = 25)				
	n (%)	*n* (%)					*n* (%)	*n* (%)				
Gender												
Male	70 (89.7)	8 (10.3)	7.887*	0.011	3.18	1.30–7.76	85 (91.4)	8 (8.6)	10.87*	0.001	4.20	1.67–10.51
Female	55 (73.3)	20 (26.7)					43 (71.7)	17 (28.3)				
Race												
Malay	77 (84.6)	14 (15.4)	1.277*	0.258	0.62	0.27–1.42	123 (83.1)	25 (16.9)	1.010†	0.592	0.83	0.77–0.89
Non Malay	48 (77.4)	14 (22.6)					5 (100)	0 (0.0)				
Family types												
Nuclear	116 (81.7)	26 (18.3)	0.000†	1.000	1.00	0.20–4.94	118 (85.5)	20 (14.5)	2.270†	0.132	0.33	0.10–1.09
Extended	9 (81.8)	2 (18.2)					10 (66.7)	5 (33.3)				
Transport to school												
Walking	34 (81.0)	8 (19.0)	0.016*	0.900	0.92	0.26–3.18	21 (77.8)	6 (22.2)	2.727†	0.099	0.14	0.01–1.85
Own transport	26 (86.7)	15 (18.1)	0.226*	0.634	1.41	0.33–5.90	93 (90.3)	17 (13.8)	5.305†	0.024	18.6	1.54–12.32
Public transport	42 (79.2)	5 (17.9)	0.097*	0.755	1.20	0.37–3.89	13 (65.5)	2 (66.7)	1.098†	0.295	3.71	0.28–48.51
Parents' transport	23 (82.1)	5 (17.9)					1 (33.3)	2 (66.7)				
Number of bedrooms												
Less than 3	12 (100)	0 (0.0)	1.740 †	0.187	1.24	1.14–1.35	27 (96.4)	1 (3.6)	4.087†	0.048	4.31	1.37–13.54
More than 3	113 (80.1)	28 (19.9)					101 (80.8)	24 (19.2)				
Family structure§												
Single Parent	3 (100)	0 (0.0)	0.053 †	0.818	1.30	1.13–1.48	8 (72.7)	3 (27.3)	0.040†	0.842	1.55	0.36–6.55
Both Parents	50 (76.9)	15 (23.1)					62 (80.5)	15 (19.5)				
Father's edu. level§												
Primary	3 (75.0)	1 (25.0)	0.360‡	1.000	1.18	0.35–3.89	19 (86.4)	3 (13.6)	6.925‡	0.029	5.12	1.40–18.64
Secondary	26 (78.8)	7 (21.2)					41 (85.4)	7 (14.6)				
Tertiery	22 (75.9)	7 (24.1)					8 (53.3)	7 (46.7)				
Mother's edu. level§												
Primary	7 (70.0)	3 (30.0)					18 (90.0)	2 (10.0)				
Secondary	31 (77.5)	9 (22.5)	0.798‡	0.714	1.46	0.58–3.65	44 (78.6)	12 (21.4)	2.587‡	0.260	0.48	0.19–1.18
Tertiery	15 (83.3)	3 (16.7)					8 (66.7)	4 (33.3)				
Father occupation§												
Working	49 (77.8)	14 (22.2)	0.000†	1.000	1.14	0.11–11.01	68 (80.0)	16 (20.0)	0.003†	0.960	0.62	0.11–3.52
Not working	4 (80.0)	1 (20.0)					5 (71.4)	2 (28.6)				
Mother occupation§												
Working	35 (77.8)	10 (22.2)	0.002*	0.964	1.02	0.30–3.46	27 (77.1)	8 (22.9)	0.206*	0.650	1.27	0.44–3.62
Not working	18 (78.3)	5 (21.7)					42 (81.1)	10 (18.9)				
Household income§												
< RM 1 000	0 (0.0)	0 (0.0)	-				31 (86.1)	5 (13.9)	1.614*	0.204	0.48	0.15–1.50
> RM 1 000	53(77.9)	15(22.1)					39(75.0)	13(25)				

*Pearson chi square.
†continuity correction.
‡Fisher's Exact Test.
§*n* = 68, urban; 88, rural; POR, prevalence odds ratio; CI, confidence interval; RTB, risk taking behaviour.

Gender, transport to school, number of bedrooms, and father's level of education had significant associations towards RTB, specifically to rural adolescents (Table 2). Males, regardless of location, were 3–4-times more likely to involve in risky activities compared to female adolescents. Rural adolescents who were going to school by using their own transport and had an inadequate number of bedrooms were 18-times and 4-times more likely to involve in RTB, however this did not affect urban adolescents. This result also shows no statistically significant association between family structure, parent occupations, parental income, and also mothers' education level in both areas and the involvement in adolescent RTB.

Table 3: Family characteristics comparison of risk taking behaviour among urban and rural adolescents

	RTB Urban		χ^2	*p*-value	POR	95% CI	RTB Rural		χ^2	*p*-value	POR	95% CI
	Yes (*n* = 125)	No (*n* = 28)					Yes (*n* = 128)	No (*n* = 25)				
	n (%)	*n* (%)					*n* (%)	*n* (%)				
Parent–child interaction												
Satisfied	109 (80.1)	27 (19.9)	1.149†	0.284	3.96	0.50–31.23	117 (83.0)	24 (17.0)	0.611†	0.692	1.60	0.19–13.3
Not satisfied	16 (94.1)	1 (5.9)					11 (91.7)	1 (8.3)				
Family Cohesion												
Yes	107 (82.3)	23 (17.7)	0.029†	0.865	1.29	0.43–3.83	120 (84.5)	22 (15.5)	0.354†	0.552	2.04	1.50–8.31
No	18 (78.3)	5 (21.7)					8 (72.7)	3 (27.3)				
Family Conflict												
Yes	46 (85.2)	8 (14.8)	0.678*	0.410	1.45	0.59–3.56	37 (97.4)	1 (2.6)	6.950*	0.008	9.75	1.27–74.74
No	79 (79.8)	20 (20.2)					91 (79.1)	24 (20.9)				
Parenting style§												
Authoritative	41 (78.8)	11 (21.2)	0.000†	1.000	0.80	0.21–2.99	52 (83.9)	0 (16.1)	2.413*	0.120	0.43	0.14–1.26
Non authoritative	12 (75.0)	4 (25.0)					18 (69.2)	8 (30.8)				

*Pearson chi square.
†continuity correction; POR, prevalence odds ratio; CI, confidence interval; RTB, risk taking behaviour.
§*n* = 68 urban and *n* = 88 rural.

Overall most of the respondent reported they had a satisfied relationship with their parents. Most of them reported a close relationship (cohesion) and no serious conflict among family members. However one-third of the respondent from both areas reported disagreement. More than 70% (*n* = 62, rural) and 23.9% (*n* = 21, rural) parents preferred authoritative parenting followed by authoritarian and permissive. In contrast, authoritarian type is less than double (17.6%, *n* = 12) among rural parents compared to urban parents. There was a strong association between family conflict and the adolescent RTB among rural adolescents, where those that came from conflicted families are 9-times more likely to get involved in RTB. From Table 3, it can be seen that parent–child interaction, family cohesion, and parenting styles were unrelated to RTB among urban and rural adolescents.

In rural areas, inadequate numbers of bedrooms (less than three) showed the strongest influence, which was 11-times more likely to involve risky behaviour, followed by being a male, which was 5-times more likely to involve in RTB. Those adolescents who came from conflict families were 4-times more likely to get involved in RTB (Table 4). For the urban area, only male factor became a predictor of RTB.

Discussion

In this study, among the most prevalent type of RTB for both areas were physical fights, bullying or teasing, vandalism, going out late, watching pornographic material, loitering, stealing, gangsterism, smoking, illegal racing, absenteeism, drug abuse, alcohol drinking, sexual intercourse, pre-sexual activity, gambling, clubbing, and gum sniffing. The was not much difference between the urban or rural areas.

The prevalence of RTB is high and almost equal for the adolescents in both urban and rural areas (81.7% and 83.7% respectively). This finding is congruent with previous local studies, which indicated high prevalence of RTB; 61.3% in a rural area[2]; 66.8% in an urban area[8]; and 70.5% in an urban area.[9] However, another study[10] showed that RTB was more prevalent in urban compared to rural adolescents. This finding may be due to the difference in RTB definition used, but many similar activities defining RTB were used in previous and current studies.

The assumption that can be made is the occurrence of RTB among adolescents is increasing in trend, as a statistic has shown that juvenile cases are rising.[1]The most prevalent RTB in a rural area

Table 4: Predictor factors towards risk taking behaviour among rural adolescents

Variables	Regression coefficient (B)	Adjusted odd ratio	95% CI
Gender			
Male	1.51	4.55	2.28–9.07
Number of bedrooms			
Inadequate	2.44	11.54	1.48–89.75
Family conflicts			
Yes	1.29	3.63	1.48–8.89
Constants	–1.94	0.14	

was truancy[3] followed by loitering and bullying, whereas, in the urban area, the most prevalent RTB was loitering and truancy.[8] Sexual activity involvement is more prevalent among adolescents in an urban area compared to be adolescents in a rural area. This finding is similar to previous studies that indicated 10.6% of urban adolescents[10] and 0.2%[3] of rural adolescenta had ever been involved in sexual activity.

There were more male respondents in the rural area compared to urban area in the current study. This unequal proportion is believed to influence a significant association between males and RTB in the rural area. The result is similar to a previous study where males are 4-times more likely to get involved in RTB.[9] Other studies also revealed that males had a significant association with RTB.[3,11–13]

National Housing Department Malaysia proposed in 2007 that low cost houses should have at least three bedrooms, a hall, and one toilet. The majority of the respondents from both areas reported to have an adequate number of bedrooms in their house. However, more adolescents from rural areas reported to have an inadequate number of bedrooms (less than three) compared to the adolescents from urban areas. There is a significant association between had an inadequate number of bedrooms and RTB among adolescents in the rural area, which may be explained by previous findings, which stated that fewer numbers of bedrooms in living place lead to truancy.[14] This implies that a crowded and uncomfortable environment with no privacy could lead the rural adolescent to be involved with risky behaviour.[15]

This study was primarily limited by its sampling of the study population. This is due to unequal distribution in terms of ethnicity between two groups. The study populations were homogenous, especially in rural adolescents, as the majority of respondents were Malays and Muslim. This implies the same lifestyle and culture. However, almost half of the urban adolescents are non-Malay. Furthermore, the respondents were the only school students who attended on that day. The data were not collected or recorded for those who were absent and missed school (drop out). Moreover, this study chose adolescents only from normal daily schools as respondents, which excluded private, vocational, religious institutions, and boarding school. Hence, this study result cannot be generalised to the general population of urban and rural adolescents in Malaysia. However, the result can be use as baseline data for future research.

The overall prevalence of RTB is high, regardless of the location of the adolescent, and this result indicates that adolescents nowadays are very susceptible, with the advanced technologies and a world with no boundaries. This study revealed several factors associated with RTB among adolescents, especially from rural areas. The majority of them are male, came from the environment of a broken or conflict family and also lacked family unity. An inadequate number of bedrooms and having a large number of siblings in the house may make these adolescents felt uncomfortable at home and try to search for fun and happiness outside. Hence, the roles of the family and parent, as well as schools, were very crucial. Continuous encouragement and support should work together to ensure that adolescents grow up in a healthy environment and receive appropriate developmental processes.

Parenting should be emphasised regarding a family's protective factors, such as strong bonding between children and families, parental involvement in the child's life, supportive parenting, setting of clear limits, and consistent enforcement of disciplines. Adequate parental love, warmth, care, and attention are factors of effective parenting. Creation of a suitable environment which is less conflicting and strong cohesion may prevent adolescent delinquency. As students spend more time at school, a school-based programme should be focused on teaching the adolescent positive development. This kind of programme should involve the parent as well as their sibling. School, in collaboration with other related agencies, is recommended to screen all adolescents for tobacco, alcohol, and other drug use.

The role of the healthcare providers is to give anticipatory guidance as a part of routine health maintenance, especially during health screening at the adolescent health clinic. Most of the health clinics in Malaysia provide a special clinic targeted to the adolescent as their expanded scope. This programme should provide optimal function and plan the strategies to accommodate and promote adolescent health. They should emphasise the prevention programme, especially in Mental healthcare targeted on social skills, problem-solving skills, and empowered social support.

Conclusion

As a conclusion, family characteristics, namely family conflict, had a strong influence on children's development and their outcome. However, this needs not only the parents, but also other parties to work in hand to protect the adolescents from deviant behaviour, such as a policy-maker in improving of inadequate bedrooms for adolescents per house. By identifying the associated factor, these sorts of RTB can be preventable and avoidable.

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