

Mediating Roles of Coping Strategies in Relationship between Gender Roles and Academic Adjustment

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Abstract

Background. Some undergraduates face problems in academic adjustment thus are unable to continue their studies. By using the theory of gender schema and the transactional model of stress and coping, this study aims to explore the relationships among gender roles, coping strategies and academic adjustment, and to examine whether coping strategy is a mediator for the effects of gender roles on academic adjustment.

Method. The descriptive predictive survey method was used in this study. Altogether 196 undergraduate participants were selected through the purposive sampling method. They were asked to fill in a questionnaire consisting of three measurements: Academic Adjustment Scale, Bem Sex Role Inventory, and Brief COPE.

Results. The findings of the study showed that different gender roles are associated with different coping strategies and academic adjustment, and that different coping strategies are associated with academic adjustment differently. In addition, positive thinking is a statistical mediator for the effects of femininity on academic adjustment while avoidance is a statistical mediator for the effects of masculinity on academic adjustment.

Conclusion. The findings indicate the importance of considering gender roles in the transactional model of stress and coping, besides creating awareness among undergraduates about the importance of using different coping strategies corresponding to their gender roles while facing problems in academic adjustment.

Keywords. Gender roles, academic adjustment, coping strategies, undergraduates.



Introduction

Entering university is a challenging yet rewarding experience for many undergraduates as various new tasks are laid ahead of them with these new experiences either helping them to grow or bringing them down (Parker et al., 2004). Since these challenging and yet rewarding experiences can be overwhelming for undergraduates, many of them face problems in adjusting themselves to the newer environment (Dyson & Renk, 2006).

As observed, the challenges faced by undergraduates can come from different sources. For instance, most undergraduates whom are away from their homes for the first time would experience the feeling of homesickness thus wish to always stay together with their parents and friends (Thurber & Walton, 2012). In addition, as they need to learn the skills to build up new relationships with peers, they need to adjust and accommodate themselves to the unfamiliar community (Parker et al., 2004). In a study that recruited 117 freshmen in Jordan, Al-Qaisy (2010) concluded that there are multiple changes that can be expected in the first year of college experience, among them, an increase in responsibilities dealing with daily schedules, socializing with group mates or acquaintances, managing expenditures, allocating time for other necessary routines such as homework and exercising, managing time correctly to meet deadlines and studying so that students are not left behind in preparation for their tests and examinations. Therefore, most undergraduates need to adjust themselves by developing self-care skills, making personal choices, taking individual responsibilities and being independent (Parker et al., 2004). Those who cannot adjust to the better may have to drop out from their studies.

In Malaysia, about 21% of undergraduates are estimated not being able to graduate from their studies (Ministry of Education, 2018). Sabtu et al. (2016) conducted an in-depth interview with 15 students from a private technical vocational education institution in Malaysia, and their results indicated institutional factors such as staff and lecturers' attitudes, and the student characteristics like family problems, poor academic performance,

and lost interest to study as the students' main reasons of attrition. Yadav, Yusoff and Tan (2012) earlier adopted a retrospective approach to analyse student records of a medical university and they found the attrition rate of males higher than that of females.

Meanwhile, Araque, Roldán and Salguero (2009) used the student data provided by the information technology department from a university in Spain and found that starting age, parents' studies and academic performance are significant predictors for undergraduates' drop out, and those similar outcomes emerged across software engineering, humanities and economic science undergraduates. Bernardo et al. (2016) who recruited 1301 Spain undergraduates found three factors relevant to undergraduates' persistent dropout from studies, which are coexistence (relationships with teachers), adaptation (social and academic adaptation) and performance (compliance with program, studying time, use of study techniques and class attendance). Willcoxson, Cotter and Joy (2011) recruiting 4361 Australia undergraduates from six public universities found varying reasons of attrition among them. Year one undergraduates mentioned their expectations of the institution which may be related to their expectations on academic and educational experiences. Year two and year three undergraduates quoted their commitments to the course, availability of learning-related support and quality feedback. Overall, these studies suggested that problems in academic adjustment are the main factor that relevant to the attrition among tertiary students (Baker, 2004).

Gerdes and Mallinckrodt (1994) defined academic adjustment as a student's psychological capacity to adjust, adapt and overcome problems, difficulties and different requests encountered in his or her everyday lives. In order for an individual to be successful academically, they must have the capacity to both engage favourably with other people in their academic environment and to successfully navigate the various expectations and pressures that come with that environment (Van Rooij et al., 2018). Academic adjustment is not only relevant to students' scholarly potential but also motivation to learn and

extent of satisfaction with the learning environment (Gerdes & Mallinckrodt, 1994). Anderson, Guan and Koc (2016) suggested a construct of academic adjustment that includes three aspects, namely, academic lifestyle (the disparity between the role of a student and that of a person), academic motivation (the degree to which one is motivated to continue and complete academic work), and academic accomplishment (the amount of success achieved in academic work).

Academic Adjustment and Coping Strategies

As poor academic adjustment is relevant to the attrition from universities, information would be helpful for undergraduates to help them cope with different challenges in their academic lives, and to make them become more independent and responsible in managing their own lives (Sevinç & Gizir, 2014). Undergraduates who are not able to positively adjust themselves to university lives would be bound to face difficulties not only in their studies but also in psychological developments (A. Wang et al., 2006).

Lazarus and Folkman (1984) proposed the transactional model of stress and coping to explain the process that different coping strategies adopted by an individual would affect the outcomes of given stressful situations, and that outcomes can vary from person to person. Context is the primary determinant of coping effectiveness, since coping in one situation may be ineffective in another (Folkman, 2013). Lazarus and Folkman (1984) defined coping as “constantly changing cognitive and behavioral efforts in order to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (p. 141). In other words, coping refers to any attempt or effort that people make to manage stressful events or situations in their lives.

Usually, coping methods are categorized into problem-based coping and emotion-based coping. Problem-based coping is different methods or actions adopted by individuals to tackle the problems so that their stress can be reduced. The emotional-based coping is different methods or actions adopted by individuals

to manage their distress feelings that are related to the problems. However, Skinner et al. (2003) argued that the strategies adopted by people to deal with difficult situations are more complicated.

For example, the use of social support coping strategy is difficult to categorize under the problem-focused or the emotion-focused coping strategies. Furthermore, the problem-focused and emotion-focused coping categories do not reflect many coping strategies' instrumental and affective functions. A problem-solving strategy may help to reduce negative emotions related to the stressor (Folkman & Moskowitz, 2004; Skinner et al., 2003). Therefore, different approaches to categorizing coping strategies have been proposed, such as Suls & Fletcher (1985) proposed the approach versus avoidance coping categories; Baumstarck et al., (2017) proposed four coping categories that include social support, problem solving, avoidance, and positive thinking, and Benson (2010) proposed another four coping categories that include engagement, distraction, disengagement, and cognitive framing.

Gan, Hu and Zhang (2010) examined the relationships between coping and adjustment among 403 freshmen at a Chinese university and found that proactive, but not preventive, coping mediates the effect of stress on maladjustment. Besides, most of the 25 Turkey first-year undergraduates interviewed by Sevinc and Gizir (2014) mentioned that they employ the avoidance coping strategy in their academic adjustment. Tao, Dong, Pratt and Hunsberger (2000) who studied on 390 first-year China undergraduates found positive coping being positively associated with academic adjustment, and negative coping negatively associated with academic adjustment.

Gender Roles and Academic Adjustment

Besides, some studies have compared gender differences in academic adjustment, but the results are inconsistent. For example, Cliniciu et al. (2021) surveyed 194 students from Transylvania University of Brasov and reported that female students adjusted better

than male students. Brass et al. (2019) also reported female students adjusted better than male students. Their sample includes 1003 grade 5 and 6 students. Nonetheless, Aloka (2022) surveyed 213 fresh undergraduates from a university in Kenya and reported no gender difference in academic adjustment. Similarly, Jain et al. (2017) survey 522 undergraduate and postgraduate students in India reported no gender difference in academic adjustment. In our knowledge, we did not find studies that compare gender roles difference in academic adjustment.

Gender Roles and Coping

Elsewhere, some studies suggested that the types of coping strategies adopted by individuals are relevant to their gender roles (Cecen, 2008; Tamres et al., 2002). Basically, masculine gender roles consist of traits and roles traditionally believed to be masculine such as in leadership, ambition and aggressiveness (Eagly & Steffen, 1984). Meanwhile, feminine gender roles encompass traits and roles traditionally believed to be feminine such as in community, care and nurture (Eagly & Steffen, 1984; Sikdar & Mitra, 2009).

There are different theories to explain the socialization of gender roles, which include traditional learning theory, social learning theory, social cognitive theory, developmental constructivist approaches and gender schema theory (Miller, 2016; Stockard, 2006). According to a literature review conducted by Starr and Zurbriggen (2017), the gender schema theory that is proposed by Bem is significant in its impacts; as of June 2015, more than 1300 citations in PsycINFO have been found to be relevant to this theory.

The Gender schema theory is a social-cognitive theory that explains how people become gendered from an early age through the socialization that affects the formation and development of gender schema throughout their lifetime (Starr & Zurbriggen, 2017). The theory claims that it is important to differentiate sex, gender, and gender roles, as children learn to identify themselves with gender and play the roles of gender through the socialization. This socialization is also

known as a sex typing procedure. A boy and a girl learn to form the gender schema of masculinity and femininity through their parents, as their parents have also been socialized about the distinctions between genders. The internalized of gender roles would be formed and developed into a gender schema, and the children will use the gender schema to assimilate cultural expectations of gender roles and become self-fulfilling prophecies. Through such societal influences, a child would then form and develop gender role schema alongside the extensive and intensive dichotomy between genders (Bem, 1981; Keener et al., 2017).

Furthermore, the above-mentioned socialization process also affects the stressors and coping strategies experienced by genders. Through the socialization by same-sex peers, boys learn to use masculinity strategies to interact with their same sex friends, and girls learn to use the femininity strategies to interact with their same sex friends (Keener et al., 2017). For instance, among 2816 Spanish people of ages between 18 to 65 years old surveyed by Matud (2004), males prefer to use rational and detachment strategies whereas females favour emotional and avoidance strategies to cope with their stressful problems. In addition, compared to males, females report more stressful events like chronic stress, minor daily stressors, and psychological stress. Similarly, Madhyastha, Latha and Kamath (2014) who surveyed 94 third-year medical students from India found that females are more likely to use emotional and instrumental support. Males would use avoidance and negative coping strategies such as self-blame, denial, and substance use. Meanwhile, among 86 Korean students in the United States participating in an online survey, females are found more likely to use collectivistic coping such as talking with others about the problem while facing acculturative stress (Lee, 2014). Besides, Cecen (2008) reported male Turkish undergraduates using self-confident, optimistic, and hopeless coping styles and female Turkish undergraduates adopting social support seeking and submissive coping styles. According to a meta-analysis on 50 studies from English-speaking countries conducted by

Tamres and colleagues (2002), women, in comparison to men, are more likely to employ coping mechanisms that involve verbal expressions to either others or to themselves. These include trying to obtain emotional support, ruminating about difficulties, and engaging in positive self-talk. Overall, these studies reported considerable gender differences in coping strategies.

However, it is noteworthy that sex and gender need not be linked, as sex is fixed and will not change with time while gender roles may change and reflect the beliefs of the current society (Bresnahan et al., 2001; Holt & Ellis, 1998). Therefore, femininity and masculinity can be regarded to be in variable states rather than stable traits. In other words, gender roles can be changed across time and context (Keener et al., 2017). Hence, most of the above-mentioned studies that are using sex instead of gender roles for comparisons may not capture the reality. Due to the social change whereby the society is more likely to accept males taking the feminine rather than masculine gender roles, and females taking the masculine rather than feminine gender roles, it is only appropriate to examine the relationships of gender roles with coping strategies and academic adjustment than to examine

gender differences in coping strategies and academic adjustment.

Aims of the study

By combining the theory of gender schema and the transactional model of stress and coping (Holt & Ellis, 1998; Lazarus & Folkman, 1984), this study examined the relationships among gender roles, coping strategies and academic adjustment in undergraduates. Since the transactional model of stress and coping proposed that different coping strategies adopted by an individual would affect the outcomes of given stressful situations (Lazarus & Folkman, 1984), which is academic adjustment in this study, and the gender schema theory suggested that the types of coping strategies adopted by individuals are relevant to their gender roles (Cecen, 2008; Tamres et al., 2002), we expected that the relationship between coping strategies and academic adjustment is relevant to gender roles, therefore gender roles would affect the adopted coping strategies, and that the adopted coping strategies would affect the academic adjustment. In other words, the influences of gender roles on academic adjustment are mediated by coping strategies.

Research Questions

The research questions and the conceptual framework (see Fig. 1) of the study are as follows:

1. What is the relationship between gender roles and coping strategies?
2. What is the relationship between gender roles and academic adjustment?

3. What is the relationship between coping strategies and academic adjustment?
4. Are coping strategies statistical mediators for the effects of gender roles on academic adjustment?

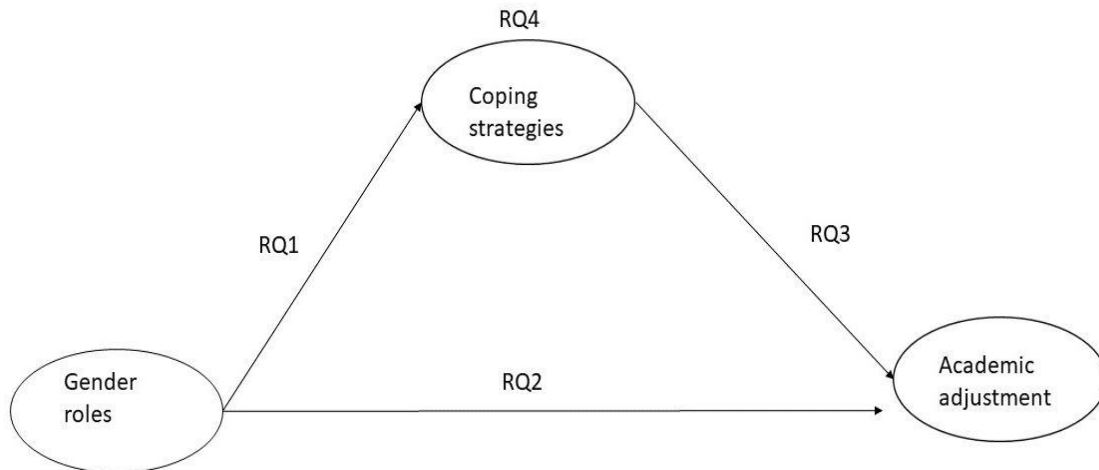


Fig 1. The Conceptual Framework

Method

Sample

A total of 196 undergraduate students (49.5%, $n = 95$ males; 50.5%, $n = 97$ females) participated in this study. Hair Jr et al. (2016) suggested that the minimum sample size should be equal or the larger than the ten times of the largest number of formative indicators in one construct. Based on this suggestion, the minimum sample size of this study is 80. The age of the participants ranged from 19 to 26 years old ($M = 21.99$, $SD = 1.43$).

Assessment Measures

The questionnaire executed in this study included four parts: Participant's demographic information, femininity and masculinity in gender role, adaptation to university lifestyle as well as coping strategies. The demographic information consists of the student's general characteristics such as race, ethnicity, gender, age, course of study and year of study.

Academic Adjustment Scale (AAS).

AAS is a 9-item questionnaire consisting of three factors: Academic lifestyle, academic achievement, and academic motivation. Academic lifestyle represents the fit between the individuals and their temporary roles as students. Academic achievement depicts the students' satisfaction with academic progress and performance. Academic motivation conceptualizes the students' efforts to continue and complete their academic studies. The student participants answered on the 5-point Likert scales ranging from 1 (Rarely applies to me) to 5 (Always applies to me). Both Cronbach's alpha and test-retest reliability were reported as above .70 (Anderson et al., 2016).

12-Item Bem Sex Role Inventory (BSRI-12). This inventory includes 12-items on two factors. The first factor is 'Masculine' that consists of six items, such as "Has leadership abilities" and "Acts as leader". The second factor, 'Feminine' that also consists of six items, such as "Warm" and "Sensitive to other's needs". Participants were required to

answer how well the items described them on a 7-point Likert scale (1 = “not applicable” to 7 = “totally applicable”). The Cronbach’s alpha of the measurement was .78 for Masculinity and .88 for Femininity respectively (Carver et al., 2013).

Brief COPE Inventory. Brief COPE Inventory is the shortened version of Coping Orientation to Problems Experienced (COPE) that contains 28-items on four factors: Social support (8 items), problem solving (4 items), avoidance (10 items) and positive thinking (6 items). The 4-point Likert scale ranges from 1 = I haven’t been doing this at all to 4 = I’ve been doing this a lot. The internal consistency of the four scales were from 0.64 to 0.82 (Baumstarck et al., 2017).

Procedure

We applied for the approval from the Scientific and Ethical Committee of the university first. After getting the approval, we then use the purposive sampling to recruit undergraduate participants. The inclusive criteria are the participant should be a Malaysian and an undergraduate in a Malaysia university. Those international undergraduates who study in a Malaysia university or a Malaysian who study oversea were excluded. The descriptive predictive survey method was used. Questionnaires were distributed at different locations of the university. A consent form was presented to the participants who were willing to take part in this study, and they were briefed on ethical issues such as the confidentiality of their data as well as the purpose of this study. Each of them was required to complete the 10 to 15-minute questionnaire and hand it back to the researchers for data collection. The researchers thanked the participants for their cooperation upon their questionnaire completion. Altogether, 192 responses were collected from the distributed 200 questionnaires thus the response rate was 96%.

Results

Demographic Factors

Gender, age, and academic adjustment. The results of independent t-test found no significant difference between male ($M = 3.57$, $SD = .65$) and female participants ($M = 3.54$, $SD = .57$) in academic adjustment, $t(190) = -.28$, $p = .782$. Also, no significant relation was found between ages and academic adjustment by using Pearson correlation analysis, $r(190) = .08$, $p = .287$. Accordingly, both gender and age are not included as control variables in further analyses.

Gender and gender roles. No significant difference was found between male ($M = 4.78$, $SD = .88$) and female participants ($M = 4.71$, $SD = .92$) in femininity, $t(189.88) = -.56$, $p = .576$. However, male participants ($M = 4.61$, $SD = 1.08$) achieved a higher score in masculinity than female participants did ($M = 4.14$, $SD = 1.11$), $t(190) = -2.97$, $p = .003$.

Measurement Model

Construct reliability. The composite reliability of all measurements ranged from .77 to .87. In terms of the four coping strategies, the composite reliabilities of avoidance, positive thinking, problem solving, and social support were 0.80, 0.77, 0.81 and 0.82 respectively. The composite reliability of the two gender roles were 0.87 for femininity and 0.86 for masculinity. Lastly, the composite reliability of academic adjustment was 0.80. The findings suggested that the latent constructs of all measurements are acceptable, as suggested by Hair et al. (2016) that the results should exceed the value of .7 for the composite reliability.

Discriminant validity. Using the Fornell-Larcker criterion, the discriminant validity of the measurements was evaluated. As all other measurement indexes were less than the measurement's square root, the discriminant validity of the measurements is deemed satisfactory (see Table 1). (Hair Jr et al., 2016).

Table 1*Discriminant Validity of All Measurements (N=196)*

	1	2	3	4	5	6	7
1. Avoidance	.56						
2. Femininity	.04	.72					
3. Masculinity	-.27	.37	.73				
4. Positive thinking	.15	.44	.25	.64			
5. Problem solving	.09	.46	.32	.64	.72		
6. Social support	.38	.36	.14	.44	.45	.63	
7. Academic adjustment	-.31	.25	.39	.38	.29	.18	.59

Coefficient of determination, effect size and collinearity statistics of measurements. As shown in Table 2, all the predictors explained 34% of the total variance of academic adjustment, hence a large effect size. The below 5 variance inflation factor of all scales indicated no collinearity

Table 2*Coefficient of Determination, Effect Size and Collinearity Statistics of Measurements (N=196)*

DV	Predictors	R ²	f ²	VIF
Academic adjustment		.34		
	Femininity		.01	1.35
	Masculinity		.04	1.46
	Avoidance		.15	1.34
	Positive thinking		.09	1.85
	Problem solving		.01	1.94
	Social support		.03	1.58
Avoidance		.09		
	Femininity		.03	1.16
Positive thinking		.21		
	Masculinity		.10	1.16
Problem solving		.23		
	Femininity		.17	1.16
Social support		.13		
	Masculinity		.01	1.16

issue (Hadi et al., 2016). In addition, the results revealed a medium effect size of the avoidance coping on academic adjustment. There were also medium effect sizes of femininity on positive thinking and problem solving.

Structural Model

Table 3 showed that femininity was positively associated with all coping strategies except avoidance, $ps < .001$, and that masculinity was positively associated with problem solving but negatively associated

with avoidance coping, $ps < .05$. Only positive thinking and avoidance were associated with academic adjustment, $ps < .001$, and only masculinity but not femininity was positively associated with academic adjustment, $p = .019$.

Table 3

Results of Direct Effects (N=196)

Direct effects	B	SE	T	p
Femininity -> Avoidance	.16	.11	1.45	.148
Femininity -> Positive thinking	.40	.08	5.34	< .001
Femininity -> Problem solving	.39	.08	4.76	< .001
Femininity -> Social support	.35	.10	3.46	.001
Femininity -> Academic adjustment	.01	.08	.07	.942
Masculinity -> Avoidance	-.33	.09	3.58	< .001
Masculinity -> Positive thinking	.10	.09	1.10	.271
Masculinity -> Problem solving	.17	.08	2.09	.036
Masculinity -> Social support	.01	.14	.06	.955
Masculinity -> Academic adjustment	.19	.08	2.34	.019
Avoidance -> Academic adjustment	-.37	.09	3.97	< .001
Positive thinking -> Academic adjustment	.33	.09	3.57	< .001
Problem solving -> Academic adjustment	-.03	.09	.27	.787
Social support -> Academic adjustment	.16	.11	1.48	.140

Mediating effect. As shown in Table 4, only the specific indirect effects of femininity on academic adjustment through positive thinking was significant, $p = .005$, which indicated a mediating effect. In addition, since the direct effect of femininity on academic adjustment was not significant and the total effect was positive, an indirect only

mediating effect was observed (Zhao et al., 2010). Also, the specific indirect effects of masculinity on academic adjustment through avoidance was significant, $p = .001$. Meanwhile, the direct effect of masculinity on academic adjustment was significant and the total effect was positive, suggesting a complementary mediating effect.

Table 4

Results of Indirect Effects (N=196)

	B	SE	T	p
Femininity -> Avoidance -> Academic adjustment	-.06	.04	1.44	.151
Femininity -> Positive thinking -> Academic adjustment	.13	.05	2.83	.005
Femininity -> Problem solving -> Academic adjustment	-.01	.04	.26	.797
Femininity -> Social support -> Academic adjustment	.06	.04	1.44	.150
Masculinity -> Avoidance -> Academic adjustment	.12	.04	3.26	.001
Masculinity -> Positive thinking -> Academic adjustment	.03	.03	1.05	.293
Masculinity -> Problem solving -> Academic adjustment	.01	.02	.24	.811
Masculinity -> Social support -> Academic adjustment	.01	.02	.05	.958

Discussion

Literature suggests that university attrition is relevant to poor academic adjustment (Sabtu, Noor, & Isa, 2016), and poor academic adjustment is related to the coping strategies adopted by undergraduates and their gender roles (Madhyastha et al., 2014; Matud, 2004). Accordingly, this study aimed to examine the relationships among gender roles, coping strategies, and academic adjustment in a sample of Malaysian undergraduate students. Besides, by using the theory of gender schema and the transactional model of stress and coping (Holt & Ellis, 1998; Lazarus & Folkman, 1984), we seek to investigate whether gender roles do affect academic adjustment through their adopted coping strategies.

The results showed significant differences between gender roles and coping strategies in that both gender roles are associated with problem solving. However, femininity, but not masculinity, is positively associated with positive thinking and social support, whereas masculinity but not femininity is negatively associated with avoidance. In other words, different gender roles did affect the participants' adopted coping strategies. These results are consistent with the findings of Mclean and Hope (2010) who reported that femininity is not significantly related to avoidance while masculinity shows significance to avoidance. Besides, the findings of Gianakos (2000) showed that females tend to be more socially active in seeking support from their surrounding and males tend to use less avoidance. Blanchard-Fields and Coats (2008) presumed that people high in masculinity could be more afraid to be labelled as gayish if they use more avoidance strategy.

In terms of coping strategies and academic adjustment, the results showed positive thinking and avoidance being associated with academic adjustment, while problem solving and social support are not significantly associated with academic adjustment. In other words, not all coping strategies are able to improve academic adjustment effectively. The results are consistent with the findings of Wang (2009)

who suggested that optimistic international students in America often see opportunities in difficult situations and are able to find solutions for their problems, thus are more likely to create a better situation that brings positive outcomes. The results in this study is also consistent with the findings of Abdullah, Elias, Uli and Mahyuddin (2010) who suggested that scape-avoidance as well as distancing had a negative relationship with academic adjustment, and that the avoidance may create other psychological effects leading to more problems with adjustment.

Likewise, the results are inconsistent with other studies that found social support as an important factor in one's adjustment during the transition state from high school to university (Friedlander et al., 2007). A possible reason for the inconsistent result is that most participants need to leave their homes and start anew in their studies, thus are unable to get social supports from their families and friends staying far away from homes. In addition, the results are also inconsistent with the findings of Abdullah et al. (2010) who reported strategic problem solving linking to better overall academic adjustment. According to them, some of the problems such as institutional factors and financial issues that are encountered in academic adjustment may not be under the students' control. Nonetheless, more studies are needed to examine the relationships between coping strategies and academic adjustment in the tertiary education context.

The results in this study revealed that not all coping strategies are the statistical mediators for the effects of gender roles on academic adjustment. Positive thinking is the statistical mediator for the effects of femininity on academic adjustment, and avoidance is the statistical mediator for the effects of masculinity on academic adjustment. However, problem solving and social support are not statistical mediators for the effects of gender roles on academic adjustment.

Limitation and Recommendations

Nonetheless, the results should be interpreted with caution. Since the participants were recruited from a university,

future researchers may need to recruit more participants from different universities to determine the robustness of the findings. In addition, as this study is a cross-sectional design that may not be able to explain its cause and effect, researchers in future studies may consider using a sessional or longitudinal design to further examine the mediating roles of coping strategies on the effects of gender roles on academic adjustment.

These findings support our prediction that most previous studies have not differential sex and gender roles and thus omit the possible cultural influences on gender roles and how the gender roles affect the use of coping strategies and academic adjustment. Therefore, the findings of this study further expand the transactional model of stress and coping by including the theory of gender schema (Holt & Ellis, 1998; Lazarus & Folkman, 1984) whereby gender roles can be important factors to be considered while comprehending the relationships among stress, coping strategies and outcomes. In terms of practical application, the findings recommend the raise of awareness among students about the issues of masculinity, as students who emphasis masculinity role are more likely to use avoidant strategy to cope their problems and thus more likely to have academic adjustment problem. Since gender roles are learnt through socialization and not attach to biological sex, both male and female students may adopt femininity role by using more positive thinking strategies, since this strategy has been found to improve academic adjustment.

Conclusion

In conclusion, the findings of this study found the influences of gender roles on coping strategies and academic adjustment besides the influences of different coping strategies on academic adjustment. In addition, the mediating roles of coping strategies on the effects of gender roles on academic adjustment are also observed. The findings indicate the importance of including gender roles in the transactional model of stress and coping.

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Availability of data and materials. The information about dataset and analyses for the present study is available from corresponding authors.

Ethics approval and consent to participate. The informed consent was taken from the study participants before administration.

Competing interest. The authors have no competing interests to declare.

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