

Sibling Relationship Quality and Identity Formation: Testing of Gender Characteristics and Birth Order of Sibling as a Moderator

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Abstract

Siblings play a significant role in the process of forming identity among adolescents. Therefore, this research examined the role of sibling characteristics such as gender and order of birth in moderating the quality of relations among siblings and adolescent identity formation. The respondents were adolescents aged 12-21 years, with at least one sibling having a maximum age gap of 4 years. The data collection technique used two measurement scales involving the warmth and closeness subscale in the Sibling Relationship Questionnaire and The Utrecht-Management of Identity Commitments Scale. Additionally, the hypothesis was tested using a multiple regression test. The analysis showed that the role of same-gender characteristics and birth order strengthens the relationship between siblings with three aspects of identity formation, including commitment, in-depth exploration, and reconsideration of commitment. This finding indicates that adolescents having same-gender and older siblings have better relationship qualities that contribute to a more optimal identity formation.

Keywords: identity formation, quality of relationships with siblings, adolescents

Received 15 January 2022/Accepted 30 May 2022 ©Author all rights reserved

Introduction

Adolescence is a period of transition from childhood to adulthood through an identity formation developmental stage. Identity formation is the fifth phase of psychosocial development, characterized by identity achievement and confusion (Erikson, 1968). Achievement is attained by individuals who consistently define themselves as unique in relation to their roles, attitudes, beliefs, and aspirations. Furthermore, they are people who attain optimal identity would have positive self-esteem (Crocetti et al., 2020; Sznitman et al., 2019; Weisskirch, 2019; Yang et al., 2017), internal locus of control (Schwartz et al., 2011; Waterman et al., 2013), clear life goals

(Schwartz, 2007; Schwartz et al., 2009), and psychological well-being (Berzonsky & Cieciuch, 2016; Cakir, 2014; Ritchie et al., 2013; Sandhu & Singh, 2012). In contrast, the confused group carries people who cannot effectively carry out their responsibilities and functions. On most occasions, this group of people experiences stress (Seaton & Beaumont, 2011), social anxiety (Ritchie et al., 2013; Schwartz et al., 2015; Waterman et al., 2013), and are aggressive (Crocetti, Rubini, Luyckx, et al., 2008; Morsünbül et al., 2016; Schwartz et al., 2011).

Erikson (1950) initiated the efforts to understand the process of adolescent identity formation through the concept of identity achievement and confusion. In this situation, Erikson (1950) and Marcia (1966) proposed an identity status model based on exploration and commitment aspects. Additionally, Crocetti, Rubini, & Meeus (2008) developed a three-dimensional model, which was an improvement of the Erikson (1950) and Marcia (1966) concepts. The three-dimensional model indicates that identity formation is achieved by commitment, in-depth exploration, and reconsideration of commitment. In-depth exploration is an active and responsible process by which individuals reflect on an obligation to their identity. At the same time, commitment involves an individual's belief in determining their choice of identity (Crocetti, 2018). Individuals who do in-depth exploration are confident about their identity commitments (Crocetti et al., 2012; Crocetti, Klimstra, et al., 2013; Crocetti, Sica, et al., 2013). Furthermore, the reconsideration of commitment is the process of comparing other alternative identities with previously held identity commitments (Crocetti, 2018; Crocetti, Rubini, & Meeus, 2008). Individuals change to alternative identity commitments when they feel that the previous ones are no longer satisfactory.

Recent research found that adolescent identity formation in Indonesia cannot be separated from the significant role of parents, peers, or partners (Muttaqin, 2020). Parents help in the development of adolescent identity through the fulfillment of affection needs and the provision of autonomy support (Kaniušonytė & Žukauskienė, 2018; Rahman & Butt, 2016; Trost et al., 2020). Peers also offer support and create quality friendships to assist adolescents in achieving

optimal identity formation (Jones et al., 2014; Ominyi et al., 2019; Updegraff et al., 2002). In addition to friends, in romantic relationships, partners have a role in forming adolescent identity (Kindelberger et al., 2020). Previous research confirms that siblings' presence helps adolescents achieve optimal identity formation (Crocetti et al., 2016; Watzlawik & Clodius, 2011; Wong et al., 2010).

Although siblings play a role in helping adolescents, research on this part is still minimal (Ávila et al., 2012; Bosch et al., 2012; Crocetti et al., 2016; Meca et al., 2016; Soenens et al., 2011). For example, quality relationships among siblings help adolescents develop psychosocial functioning, social skills, and emotions (Deater-Deckard & Dunn, 2002; Updegraff et al., 2002; Whiteman et al., 2007). Statistical data shows that about 90% of adolescents have siblings, implying that interaction is inevitable (Milevsky, 2011). Sanders (2004) explained that people spend more time with their siblings than their parents. However, spending more time with siblings is among the most enduring interpersonal relationships throughout an individual's life (Noller, 2005).

Siblings have unique interpersonal relationships because their interactions are not only related to love and warmth but also to conflict and competition (Buist et al., 2013). However, individuals who remain positive in life have a significant impact on the psychosocial development of adolescents (Killoren et al., 2017; Ponti & Smorti, 2019, 2020; Smorti & Ponti, 2018; Wojciak et al., 2018). Positive sibling relationships achieve optimal identity formation characterized by commitment and exploration (Whiteman et al., 2007; Whiteman & Christiansen, 2008; Wong et al., 2010). The contribution to adolescent identity formation is inseparable from the concept of attachment manifested through positive sibling relationships (Ainsworth, 2013; Fraley & Tancredy, 2012). Moreover, the modeling concept developed by Albert Bandura (Bandura & Walters, 1977) explains the tendency of older siblings to act as role models for their younger counterparts (Whiteman et al., 2011). Therefore, younger siblings imitate the older persons' positive (Rogers et al., 2018; Vleuten et al., 2020) and negative behaviors (Kothari et al., 2014; Samek et al., 2015).

Although previous research shows that the quality of sibling relationships is related to identity formation (Crocetti et al., 2016; Wong et al., 2010), it has not considered the effect of sibling characteristics such as gender and birth order. There are different interaction dynamics in sibling relationships caused by gender and birth order. For example, siblings of the same gender tend to have a better relationship since they usually help and advise one another than siblings of the opposite gender (Furman & Buhrmester, 1985). Also, birth order characteristics affect the dynamics of sibling interaction. Previous research shows that older siblings strive to be role models and caregivers for younger ones.

Conversely, the younger siblings observe and imitate the behavior of their older counterparts (Whiteman et al., 2007; Wong et al., 2010). Therefore, there is a suspicion that gender characteristics and birth order influence the relationship between sibling relationship quality and identity formation. Adolescents with older and same-gender siblings have better quality relationships and are likely to achieve optimal identity formation as opposed to adolescents with younger and opposite-gender siblings.

Based on the explanation above, previous research explored the role of siblings in addition to parents, friends, and partners in identity formation. However, only two research examined the role of sibling relationships on identity formation (Crocetti et al., 2016; Wong et al., 2010). Furthermore, previous research has not considered gender and birth order characteristics that might affect the relationship between the quality of sibling relationships with identity formation. Therefore, this research examines the role of gender characteristics and birth order among siblings as a moderator between the sibling relationship quality with identity formation. The moderators include commitment, in-depth exploration, and reconsideration of commitment. The research will test two hypotheses as follows:

- 1) Gender characteristics act as a moderator between sibling relationship quality and identity formation (commitment, in-depth exploration, and reconsideration of commitment).
- 2) Birth order characteristics act as a moderator between sibling relationship quality and identity formation (commitment, in-depth exploration, and reconsideration of commitment).

Method

Participants

This research consisted of 592 adolescents aged 12-21 years who had at least one sibling with a maximum age gap of 4 years. Of the total participants, 154 (26.0%) adolescents were male, while 438 (74.0%) were female, with a total of 53 (9.0%) were in early adolescence, 159 (26.9%) in middle adolescence, and 380 (64.2%) in late adolescence. The participants with siblings of the same gender were 327 (55.2%), while 265 (44.8%) had opposite genders, 386 (65.2%) had older siblings, and 206 (34.8%) with younger siblings. Furthermore, the data was collected using the convenience sampling technique by contacting participants directly and disseminating information on social media. Participants who showed interest in participating were asked to fill out an informed consent form and online research questionnaire.

Measurements

Identity formation. The Utrecht-Management of Identity Commitments Scale Indonesian version (Crocetti, Rubini, & Meeus, 2008; Muttaqin, 2017), consisting of 26 items, was used to measure identity formation. The U-MICS consists of three sub-scales, including a 10-item commitment (“My education gives me security in life”), a 10-item in-depth exploration (“I try to find out a lot about my education”), and a 6-item reconsideration of commitment (“I often think it would be better to try to find a different education”). The U-MICS response uses five options ranging from 1 (completely untrue) to 5 (completely true). In this research, U-MICS had a reliability coefficient of 0.851 for the commitment subscale, 0.722 for the deep exploration subscale, and 0.780 for the reconsideration of commitment subscale.

Sibling relationship quality. The warmth/closeness subscale of the Sibling Relationship Questionnaire (SRQ) (Furman & Buhrmester, 1985). consisting of 27 items was used to measure the sibling relationship quality. The warmth/closeness subscale of the SRQ uses seven behavioral indicators of sibling closeness, such as 3-item prosocial behavior (“How much do you and your sibling share with each other”) and 3-item intimacy (“How much do you and this sibling-like the same thing?”), 3-item companionship (“How much do you and this sibling go places and do things together”), 3-item similarity (“How much do you and this sibling-like the same thing?”), 6-item nurturance (“How much do you show this sibling how to do things he or she does not know how to do?”) 6-item admiration (“How much do you admire and respect this sibling?”), Moreover, 3-item affection (“How much do you and this sibling love each other?”). The SRQ’s warmth/closeness response subscale uses five response options ranging from 1 (hardly at all) to 5 (extremely much). In this research, the warmth/closeness subscale of SRQ had a reliability coefficient of 0.955.

Sibling characteristics. The data for sibling characteristics was obtained from demographic questions concerning gender (male or female) and birth order of siblings (younger sibling or older

sibling). While the subject and siblings were of the same gender, code 1 was used (same gender), and code 2 was allocated in circumstances while the subject and sibling were of different genders. Also, the birth order was coded 1 for adolescents as older siblings and 2 for adolescents as younger siblings.

Data analysis

The hypothesis testing was conducted using SPSS 21 with Baron and Kenny's (1986) approach through multiple regression analysis, which involved the 1) sibling relationship quality, 2) sibling relationship quality, and gender characteristics/birth order of siblings, and 3) sibling relationship quality, gender characteristics/sibling birth order, and moderator (sibling relationship quality x gender characteristics/sibling birth order) to commitment, in-depth exploration, and reconsideration of commitment. If there is a significant change in the effective contribution ($p < 0.05$) on the sibling relationship quality, gender characteristics/birth order of siblings, and moderator (sibling relationship quality x gender characteristics/birth order of siblings), then it can be stated that the characteristics of gender/birth order act as a moderator.

Result

We used analysis of variance (ANOVA) to explore the effect of gender characteristics and birth order characteristics on the sibling relationship quality and identity formation (commitment, in-depth exploration, and reconsideration of commitment). Gender characteristics are divided into the same gender and opposite gender, while birth order characteristics are divided into younger and older siblings. The ANOVA results are reported in Table 1.

Table 1
Mean Variable According to Gender Characteristics and Birth Order of Siblings

Variable	Gender Characteristics		F	Birth Order		F
	Same Gender	Opposite Gender		Younger Sibling	Older Sibling	
Sibling Relationship Quality	3.73	3.66	1.433	3.73	3.62	3.681
Commitment	4.05	3.82	23.767***	3.95	3.94	0.028
In-Depth Exploration	3.84	3.54	20.059***	3.68	3.78	1.501
Reconsideration of commitment	2.98	2.52	40.829***	2.73	2.84	1.893

Based on the results shown in Table 1, gender characteristics have differences in identity formation (commitment, in-depth exploration, and reconsideration of commitment) ($p < 0.05$). Furthermore, same-gender characteristics have a higher average on the sibling relationship quality and identity formation (commitment, in-depth exploration, and reconsideration of commitment). The research variables did not differ based on birth order ($p \geq 0.05$). However, as an older sibling, birth order received higher average scores on in-depth exploration and reconsideration of commitment. In comparison, birth order as a younger sibling had higher average scores on relationship quality and commitment.

We used multiple regression analysis by Baron and Kenny's (1986) approach to examine the two hypotheses. We performed regression analysis which involved the variable of sibling relationship quality, moderator, and identity formation. First, examine sibling relationship quality and gender characteristics to commitment, in-depth exploration, and reconsideration of commitment. Second, examine sibling relationship quality and birth order to commitment, in-depth exploration,

and reconsideration of commitment. In addition, we also examine sibling relationship quality, gender characteristics, birth order to commitment, in-depth exploration, and reconsideration of commitment. The regression analysis results are reported in Table 2.

Table 2
Regression Analysis Between Sibling Relationship Quality, Gender Characteristics, Birth Order of Siblings, and Dimension of Identity Formation

	Model	Commitment		In-Depth Exploration		Reconsideration of commitment	
		ΔR^2	β	ΔR^2	β	ΔR^2	β
1	Relation	0.069***	0.262***	0.029***	0.170***	0.000	-0.008
2a	Relation	0.034***	0.253***	0.030***	0.162***	0.065***	-0.020
	GC		-0.184***		-0.173***		-0.255
3a	Relation	0.008*	0.513***	0.001	0.264*	0.018**	0.384**
	GC		0.281		0.009		0.469*
	Relation x GC		-0.529*		-0.207		-0.824**
2b	Relation	0.000	0.263***	0.004	0.176***	0.003	-0.003
	BO		-0.014		-0.064		-0.056
3b	Relation	0.009*	0.576***	0.003	0.367*	0.012**	0.373*
	BO		0.473*		0.233		0.528*
	Relation x GC		-0.606*		-0.370		-0.728**
2c	Relation	0.010*	0.267***	0.019**	0.177***	0.029***	0.000
	GC X BO		-0.099*		-0.138**		-0.170***
3c	Relation	0.016**	0.372***	0.008*	0.250***	0.042***	0.171**
	GC X BO		0.140		0.025		0.216*
	Relation X GC X BO		-0.294**		-0.202*		-0.476***

GC = Gender Characteristics, BO = Birth Order

Table 2 shows that sibling characteristics such as gender, which can be a moderator between the sibling relationship quality with commitment ($\Delta R^2 = 0.008$, $p = 0.025$, $p < 0.05$) and reconsideration of commitment ($\Delta R^2 = 0.018$, $p = 0.001$, $p < 0.05$). Furthermore, sibling characteristics such as birth order can be a moderator between sibling relationship quality and commitment ($\Delta R^2 = 0.009$, $p = 0.019$, $p < 0.05$) and reconsideration of commitment ($\Delta R^2 = 0.012$, $p = 0.007$, $p < 0.05$). Gender characteristics and birth order can also be moderators between sibling relationship quality and commitment ($\Delta R^2 = 0.016$, $p = 0.001$, $p < 0.05$), in-depth exploration ($\Delta R^2 = 0.08$, $p = 0.030$, $p < 0.05$), and reconsideration of commitment ($\Delta R^2 = 0.042$, $p = 0.001$, $p < 0.05$).

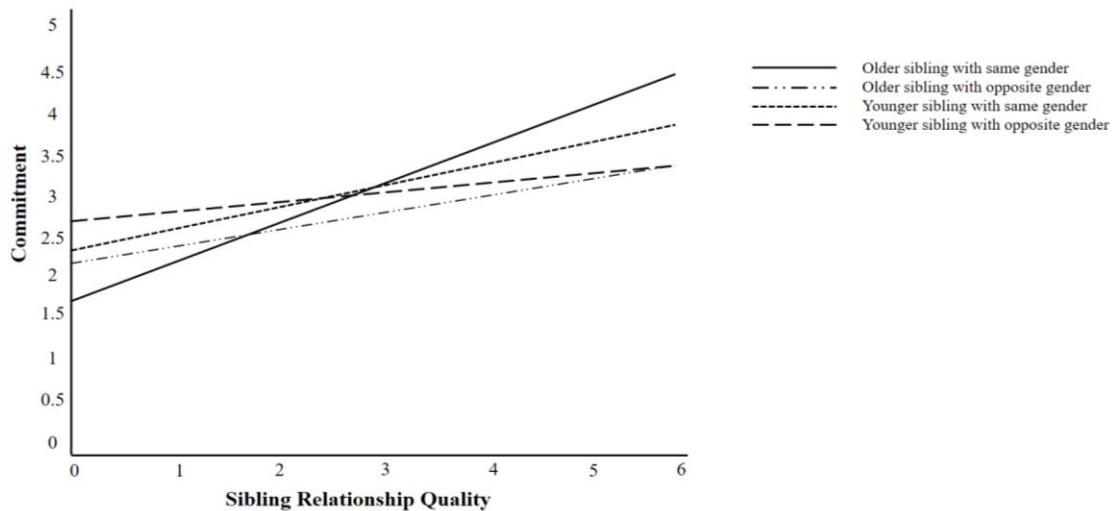


Figure 1. Relationship Between the Quality of Sibling Relationships and Identity Commitment with Gender Characteristics and Birth Order as a Moderator

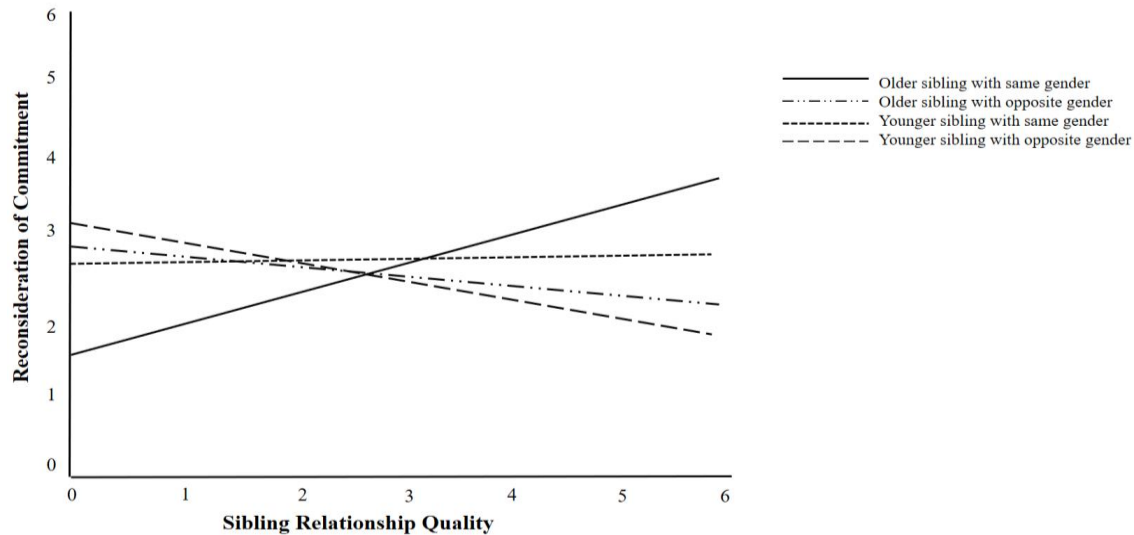


Figure 2. Relationship Between the Quality of Sibling Relationships and Identity Reconsideration of Commitment with Gender Characteristics and Birth Order as a Moderator

Discussion

This research aimed to examine the role of sibling characteristics such as gender and birth order in moderating the relationship between the aspects of sibling warmth on relationship quality and three-dimensional models of identity formation, including commitment, in-depth exploration, and reconsideration of commitment. The hypothesis results indicate that sibling characteristics such as gender and birth order can be moderators between the sibling relationship quality with commitment and reconsideration of commitment. Additionally, the gender characteristics can be a moderator between sibling relationship quality with commitment, in-depth exploration, and reconsideration of commitment. This research found that adolescents with same-gender siblings have quality relationships and achieve optimal identity commitment formation than those with a different gender. Moreover, adolescents who have an identity status as older siblings quickly achieve optimal identity formation. These findings indicate that gender characteristics and birth order also contribute to sibling interpersonal relationships and the process of identity formation.

Previous research found that the aspects of quality relationships among siblings positively predict commitment and identity exploration in adolescents (Crocetti et al., 2016; Wong et al., 2010). This implies that the closeness exhibited by the siblings to the adolescents plays a significant role in their development since they are a source of affection, role models, social and emotional support providers, and friends who learn from each other (Crocetti et al., 2016; Updegraff et al., 2002; Watzlawik & Clodius, 2011; Whiteman et al., 2007). This research found that gender characteristics play a role in moderating the relationship quality among siblings with commitment and reconsideration of commitment. Moreover, Furman and Buhrmester (1985) explained that gender composition might affect warmth and closeness among siblings. Therefore, same-gender siblings tend to have a more intimate relationship quality than opposite genders (Furman & Buhrmester, 1985).

Furthermore, adolescents with same-gender siblings have physical and emotional characteristics in common. Consequently, this makes them comfortable, open, sensitive, and close understanding of each other while discussing personal issues concerning making important decisions in life (Lam et al., 2012). It will be easy to recognize and solve the difficulties adolescents could be experiencing in choosing their identity, which will prevent them from falling into the trap of identity confusion. Adolescents with opposite gender siblings also have benefited because differences in physical and emotional characteristics enrich perspectives and insights in discussing how to choose identities. Moreover, the feedback obtained from discussions with siblings helps strengthen adolescents to make individual commitments (Crocetti et al., 2016). Adolescents with a conducive environment to exchange ideas will easily find their identity (Crocetti, Rubini, & Meeus, 2008; Crocetti, Sica, et al., 2013).

The research also found that birth order characteristics could moderate the sibling relationship quality with commitment and reconsideration of commitment. This finding supports the previous research conducted by Wong et al. (2010) that older siblings would have better identity formation

than younger siblings. This results from the older sibling receiving greater responsibility from parents as the caregivers and being the role model for younger counterparts (Abramovitch et al., 1986; Cicirelli, 1973; Kendrick & Dunn, 1982). The role of the older siblings as caregivers slowly forms the perception that they are people with authority as leaders while the young ones remain obedient (Cicirelli, 1973). Therefore, adolescents who are first in their families achieve their identity formation faster because the family places social demands on them, including being role models for their younger siblings. Furthermore, younger siblings benefit from these kinship ties because the older sibling can be used as a reference to develop their identity commitment. The presence of an older sibling in the family can help direct adolescents to imitate the identity choices or use it to instill a different approach to the young children, thereby avoiding identity confusion.

Furman and Buhrmester (1985) stated that relationships with siblings experience significant changes with age. When individuals grow up, the relationships amongst themselves are passive, egalitarian, and asymmetrical. However, where the quality of relationships is positive, the presence of siblings positively affects adolescent development (Crocetti et al., 2016; Updegraff et al., 2002; Watzlawik & Clodius, 2011; Whiteman et al., 2007) and correlated with the formation of identity commitment (Wong et al., 2010). This is suspected because many Indonesian adolescents live with their parents and siblings, thereby intensifying the interactions (Kementerian Pemberdayaan Perempuan dan Perlindungan Anak, 2019). The relationship between sibling warmth and identity commitment can be explained through attachment theory. Siblings who develop a harmonious relationship with their adolescent siblings provide warmth and emotional support (Milevsky, 2011). The better the quality of the established relationships, the more secure the adolescents because the older siblings protect from maladaptive behaviors during developmental stages (Buist et al., 2013). Positive relationships with siblings promote personal contact where individuals share values and interests besides having plenty of opportunities to observe and learn from each other (Crocetti et al., 2016). Adolescents who feel loved, cared for, and supported by their siblings will have the courage to choose their identities. Moreover, they

feel confident in carrying out further exploration concerning their identity choices (Crocetti et al., 2016; Wong et al., 2010).

Generally, the role of siblings is relatively small due to a significant age shift in people. Individuals still perceive the greatest support from parents and siblings in childhood and early adolescence. However, as they advance to middle adolescence, individuals seek more support from their peers (Buhrmester & Furman, 1990). Furthermore, while entering late adolescence, they expect more support from their partners. Emotional tension with family members may also drive the adolescents to seek freedom and emotional support from other parties than their immediate family members (Buhrmester & Furman, 1990).

This finding is expected to provide a clearer description related to the role of siblings in the process of identity formation. In particular, by considering the determinants of sibling type concerning gender (same-gender and opposite-gender siblings) and birth order (younger sibling and older sibling). Furthermore, this research presents a complete description of the dynamics of relationship quality with siblings in a maximum age gap of 4 years. However, this has various limitations, including using a cross-sectional research design that can only display a limited description of the phenomenon in a certain condition and period. Therefore, there are no known changes in the development of identity formation from time to time. Longitudinal research is needed to show changes or stability of sibling relationships that impact the process of identity formation. Additionally, the participants in this research were adolescent groups who grew up with a family system and parenting in Indonesian culture and come from family backgrounds with pure biological relationships. Therefore, it is doubtful that this research can be generalized to families with other biological relationship characteristics such as half-siblings and different cultural contexts.

Moreover, Deater-Deckard and Dunn (2002) found a difference between the quality of relations with siblings when viewed from the type of family, specifically in the aspect of siblings' negativity. The research showed that conflicts and aggression appear more in remarried families and less in pure biological relationships. Therefore, future research may also consider involving participants from different family types, such as families with half-siblings, single parents, or step-mothers and fathers. Furthermore, this research controlled the age gap between the respondent and their siblings to a maximum of 4 years. This makes it difficult to generalize the results to the adolescents falling outside the age bracket applied.

Conclusion

Based on the research findings, it is concluded that the characteristics of siblings in the form of same-gender composition and birth order provide more roles in shaping the sibling relationship quality and identity commitment. This is because same-gender siblings provide warmer and more intimate relationship quality, thereby providing optimal support for adolescent psychosocial development. Furthermore, following the birth order, older siblings are often perceived as role models who provide social demands for adolescents to form an identity.

Acknowledgment

The researchers sincerely appreciate all the participants who were willing to be the sample of this research.

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