Research Paper

The Biological Children of Foster Parents: A Comparative Analysis of How the Attachment Style and Socio-Emotional Wellbeing of Biological Children of Foster Parents Differ from Those of Non-Foster Parents in Singapore

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ABSTRACT

Although foster care has a large, growing culture in Singapore, little is known about the impact of fostering on the biological children of the foster parents themselves. This paper aims to understand further the impact of fostering on these 'foster siblings', and explores to what capacity adolescents and adults residing in a foster home have been impacted regarding how they form relationships with their parents and others, along with their attachment styles in relation to their socioemotional and psychological well-being. This study involved sample sizes of 2 age groups - 30 adolescents aged 10-18 years and 10 adults aged 18-30 - with a mix of both sons and daughters, discussing their foster care personal experiences. Data was collected through questionnaires, and inferential statistical calculations were conducted using the Mann-Whitney U test. 4 scales were used: Adolescent Attachment Questionnaire (West & Rose & Spreng & Keller, 1998), Social Emotional Health Survey-Secondary (SEHS-S) (Furlong & M. J. & Dowdy & E. & Nylund-Gibson & K & 2018), Psychological Wellbeing Scale (Ryff et al., 2007; adapted from Ryff, 1989), Adult Attachment Scale (Brennan, Clark, & Shaver, 1998). Open-ended interviews were also held to understand the experiences of the adolescents further, followed by a thematic analysis of each one. This research paper contends that fostering is damaging towards the psychological well-being and attachment styles of developing children and foster siblings, instead suggesting that the skills developed through fostering are crucial to their growth. This paper can help convince many people with preconceived notions and hesitations about fostering to participate in it, helping to promote it as new potential foster parents see the huge number of benefits that arise from being a foster family.

Keywords: *Foster Care, Psychological Well-being, Attachment, Relationships, Parent-Child Bonds, Foster Siblings*

As children grow up, they become the foundation for life on earth, which makes it crucial that they grow up in a healthy environment. Foster care provides this for children who may not have a home. In 2019, there were 423,997 children in care, 41 per cent of whom were under six. These children spend an average of 19.6 months in foster

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care, with 14 per cent spending more than three years in the system (Dawson, 2021). The Fostering Scheme is a system that aims to provide loving, temporary homes for children under the age of 18, with the ultimate goal of reintegrating them with their natural families. It provides emergency care for children who lack alternative kinship care arrangements and thus have to seek placement with a foster family. This ensures that children unable to take care of themselves can stay safe for as long as necessary before returning to their biological parents (Ministry of Social and Family Development, Singapore, n.d). In countries like the United States, fostering is similar to a job with a monthly salary earned, which can repeatedly lead to more problems forming, such as an unsafe living space for the child. This can often happen as the system would no longer be a volunteer one but would instead be done for the money. However, unlike other countries, in Singapore, this system has been incorporated by the public health care system as well as non-government associations. It is purely volunteer-based, ensuring there are no exterior motives such as money behind fostering. Often children are placed into foster care due to several reasons such as neglect, abandonment, or abuse, or if their biological parents cannot care for them due to economic reasons, physical or mental illness, or imprisonment. (Ministry of Social and Family Development, Singapore). Within these foster care homes, the foster parents reside, as well as their children. Introducing foster children into these homes can result in an unfamiliar environment and create change for all the residents (Serbinski & Shlonsky, 2014). Fostering can often create positive household experiences as bonds are developed, and relationships are built. The foster sibling's relationship plays a large role in how the foster children settle in, and many factors can influence this relationship. Foster's siblings may develop a sense of belonging with each other which can cause problems as they shift from house to house (Angel, 2014). The same can be experienced by the foster carer's children.

Some of the largest negative influences of fostering can stem from anxiety problems faced by the biological children themselves, as they may be introduced to feelings such as neglect. This can often result in attachment issues developing as well (Erozkan, 2016). For instance, these feelings can occur due to the daughters/sons feeling they aren't spending as much time with their parents. Generally, foster carers are concerned about how fostering may affect their own children, Höjer (2001) found that 24 percent of 366 foster carers stated that they sometimes neglected their children due to fostering (Höjer & Sebba & Luke, 2013). Ainsworth's attachment theory states that "children and infants need to develop a secure dependence on their parents before seeking unfamiliar situations" (Mary Ainsworth | Attachment Theory & Contribution to Psychology - Video & Lesson Transcript, 2021). This further reinforces how important the parent-child bond is, understanding how breaking this attachment early on can lead to issues in the development of the child, especially in their own attachment styles and well-being during their growth as a young adult. Furthermore, emotional well-being is adversely impacted as foster carer's children may feel more responsible for the foster kids that come to the place they live. Occasionally, they can face fear or grief as they feel a new life is on their hands, and they will be required to spend time taking care of them (Höjer & Sebba & Luke, 2013). Additionally, as these foster kids have often not experienced a healthy lifestyle until this point, many arrive with pre-existing health conditions ("UpToDate"), which can furthermore raise feelings of angst and concern within the biological children as they may have more responsibility and be scared of possibly falling sick themselves. They may cope with these factors by not spending as much time with the foster child, which can produce relatively worse situations for the foster children.

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Bowlby's attachment theory suggests that as humans enter the world as babies, they are 'biologically pre-programmed to form attachment' (McLeod, 2017). This relationship or bond is one of the key reasons for survival in infants, and the frequent disruption and new bonds that are required to be created may cause extensive problems. Attachment issues can often emerge, too, as the constant arrival and departure of new children to their house may deepen relationship problems and cause internal problems for future relationships that children may try and establish as they continue to grow. Children who develop a secure attachment with at least one stable attachment figure tend to have better developmental outcomes (West & Vanderfaeillie & Hove & Gypen & Holen, 2020), and having to continuously form new relationships may be detrimental to the fundamentals of childhood. Furthermore, the attachment styles of the sons/daughters can be impacted when observing the foster child's reaction to having to leave (Miranda & Molla & Tadros, 2019). As fostering usually occurs for only a few months per household, oftentimes the biological child may be aware of how the foster child has to leave quickly. However, the child themselves may be unaware, and these responses may be hard to handle, causing struggles for future relationships building, and possible feelings of sadness and grief.

However, the parents' biological children are not often recognised and researched. Frequently the foster parents are studied and reviewed, with mention of their children kept to a minimum. (Studer, 2014) and few studies have been conducted on attachment styles and the well-being of foster carer's children after experiencing years of living in a home that fosters (Part, 1993). As they are required to continuously create and end relationships, the way they form, these may differ from other children and be carried forward in life (Serbinski, 2015). A commonality across all studies currently conducted shows how children may change the way they behave with new people or even family/friends as they form relationships differently (Serbinski, 2015). The aim of this research is to understand better how the attachment styles of 'children who foster' differ from those who haven't experienced that lifestyle. The main research question proposed in this study was "How do the emotional well-being and attachment styles of adolescents and adults who have lived in a foster home differ from those who haven't".

METHODOLOGY

Aim of the study

This present study explored the conditions of how adolescents and adults residing in a foster home form relationships with their parents, along with their attachment styles in relation to their socio-emotional well-being. Many factors were evaluated, such as the general happiness levels of these foster siblings, their choices in forming relationships, and their feelings towards their bond with their parents. This process included writing many drafts whilst generating an open-ended interview schedule and four comparative surveys used as primary research.

Research Design

A mixed-method was used, relying on standard secondary research whilst also obtaining results from standardized testing and conducting interviews with these foster siblings. This provided a qualitative and quantitative outlook on the study. This descriptive and analytical research style considers residing in a foster home's impact on their attachment styles and the ways they may form relationships with others. It also analyses their emotional well-being/mindset to consider whether living in a foster home plays a role in them.

Consent and Ethical Issues
All ethical considerations were followed for the current study, including the confidentiality of all participants.

Informed consent was included within the shared surveys, containing information such as the description of the research paper, their ability to leave the survey at any given moment, and the option to stay anonymous, keeping their answer confidential at all times. If any questions presented themselves, they could contact directly, with no pressure to disclose their identity. The description included the relevance of the existing relationship between foster children and the foster carer's children (the foster sibling relationship) and the resulting hope to understand the emotional well-being of those who have lived in a foster home and those who haven't. All ethical guidelines of research were followed.

Sample
The recruitment of foster children required the help of a foster agency in Singapore to help get in contact with additional welfare agencies and the foster families within them. The 3 associations were emailed to help with the initial distribution of the google form, and the following interviews were conducted.

The purposive sample included sons and daughters who were the biological children of current foster parents affiliated with a public child welfare agency in Singapore, aged 12-17 years, as well as a different sample of age 18-30, and excluded any long-term foster children. The number of respondents amounted to 15 fostering adolescents and 15 non-fostering adolescents of age 12 to 17, and 5 fostering adults and 5 non-fostering adults of age 18-30. Sons/daughters were selected to participate in the interview regarding their responses to the initial survey and the informed consent within it. Participants had to experience the coming and going of foster children for at least a year to ensure they felt some feeling of attachment to the above-mentioned foster children and had responded with notions that their relationship with their parents had been impacted.

Data Collection Tools
Stage 1 - Secondary research was conducted to understand the foster care system in Singapore compared to places such as the US. Further research was done on past papers written on the foster parents' relationship with the foster children, as well as the foster sibling relationship.

Stage 2 - Questionnaires were used to begin the data collection process. These contained questions pertaining to the interested individuals' emotional well-being and attachment styles, asking linear scale questions to understand their level of happiness, self-awareness, persistence, etc. 2 such surveys were created, one distributed to adolescents and adults who have lived in a house that fosters, and the other to those who haven't. Informed consent was also included within these questionnaires, and if interested, these individuals could accept the follow-up interview discussed below. These questionnaires consisted of questions from 4 standardized tests. One called 'Adolescent Attachment Questionnaire: A Brief Assessment of Attachment in Adolescence' is a self-report questionnaire consisting of 3 scales of 3 statements each, with Likert-type responses from strongly disagree to strongly agree (West & Rose & Spreng & Keller, 1998). The second questionnaire about adolescent's emotional wellbeing called 'SOCIAL EMOTIONAL HEALTH SURVEY–SECONDARY (SEHS-S)'

is a 36-item self-report measure that includes 12 subscales that are linked to four first-order latent traits (belief in self, belief in others, emotional competence, and engaged living) which are hypothesized to load on to a second-order general factor called covitality (Furlong & M. J. & Dowdy & E. & Nylund-Gibson & K & 2018). A third questionnaire called "Psychological Wellbeing Scale", developed by psychologist Carol D. Ryff, the 42-item Psychological Wellbeing (PWB) Scale measures six aspects of wellbeing and happiness: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance (Ryff et al., 2007; adapted from Ryff, 1989). The final questionnaire, titled "Adult Attachment Scale", will create Bartholomew's (1990) four attachment styles (secure, preoccupied, fearful, dismissing) based on scores on the three attachment dimensions (close, depend, anxiety). It offers a broad overview of measurement issues and measurement tools, including self-report and interview measures of adult attachment (Brennan, Clark, & Shaver, 1998).

Stage 3 - An interview schedule consisting of questions to further understand these children's fostering experiences was created. Once consented to, if fitting the sample requirements, an interview was planned. Questions such as "What is fostering in your own words", and "Has fostering impacted your relationship with your parents, if so, how?" were asked to go in-depth into their situation, and possibly the factors they believed had the most influence on them during this fostering time. The interviews took place over 6 months, and will be audio recorded to allow for repeated review of the answers provided.

Data Collection Procedure

In order to distribute and collect responses from the questionnaires, a non-government supported fostering agency was contacted. A research proposal was created in order to gain approval from the organization's research board in which an informed consent form was created, as well as a written detailed methodology to be reviewed by them before authorisation. Once the approval was received, the organization helped in the distribution of these forms as well as helping to initiate contact between the respondents and the form creator. An interview schedule was then created, consisting of open-ended questions that were more up for interpretation by the interviewee. Interviews were conducted with respondents who answered yes to the follow-up interview question within the form whilst waiting for the remaining form responses in order to get a reasonable sample size. The surveys and interviews were then analyzed, and used to compare fostering and non-fostering adolescents through deducing the significant differences in the form responses between these two groups.

RESULTS AND DISCUSSION

In the results and discussions section, the questionnaire responses were analyzed through inferential statistical calculations conducted using the Mann-Whitney U test. These revealed the comparative results between adolescents and adults residing in foster homes, compared to those who haven't, all living in Singapore, portraying the significant results on what aspects of psychological well-being and attachment styles were the most impacted and different due to fostering. Interviews were also conducted only with foster sibling adolescents, and then analyzed thematically, finding similar themes that emerged from the 5 interviews.

Adolescents
Table 1a: Summary of Mann-Whitney U Analysis between fostering and non-fostering respondents on their belief in self in regards to their social emotional health (N=30)

Social Emotional Health Survey-Secondary	Sample Group	N	Mean	SD	Mann-Whitney U	Z	p
Self-Efficacy	Fostering	16	10.13	1.71	117.5	-0.1	.922
	Non- Fostering	15	10.2	1.82			
Self-Awareness	Fostering	16	9.75	1.73	115.5	-0.18	.861
	Non- Fostering	15	9.87	1.77			
Persistence	Fostering	16	7.88	2.09	90.5	-1.18	.247
	Non- Fostering	15	8.87	1.88			
Belief In Self Total	Fostering	16	26.5	5.57	89.5	-1.21	.232
	Non- Fostering	15	29.47	4.45			

The Mann-Whitney U test indicated that Self-Efficacy scores were not significant, U=117.5, p>.05. This suggests that both fostering and non-fostering adolescents's ability to act effectively to meet environmental demands was not significantly different (Table 1a). The Mann-Whitney U test indicated that Self-Awareness scores were not significant, U=115.5, p>.05. This suggests that both fostering and non-fostering adolescents behave similarly in how they perceive and attend to private and public aspects of themselves. The Mann-Whitney U test indicated that Persistence scores were not significant, U=90.5, p>.05. This suggests that respondents from both the sample groups felt similarly about themselves working diligently to accomplish their goals, including maintaining interest in the face of adversity and failure.
The Mann-Whitney U test indicated that Belief In Self overall scores were not significant, U=89.5, p>.05.

Table 1b: Summary of Mann-Whitney U Analysis between fostering and non-fostering respondents on their belief in others in regards to their social emotional health (N=30)

Social Emotional Health Survey-Secondary	Sample Group	N	Mean	SD	Mann-Whitney U	Z	p
School Support	Fostering	16	10.31	1.25	115	-0.21	.861
	Non- Fostering	15	10.4	1.72			
Family Support	Fostering	16	10.69	1.58	113	-0.3	.8
	Non- Fostering	15	10.8	1.74			
Peer Support	Fostering	16	5.69	2.12	14	-4.23	**<.001**
	Non- Fostering	15	10.47	2			
Belief In Self Total	Fostering	16	26.69	2.87	37	-3.3	**.001**
	Non- Fostering	15	31.67	4.01			

Table 1b depicts the Mann-Whitney U test scores which further indicates that School Support scores were not significant, U=115, p>.05. This suggests that fostering and non-fostering respondents felt similarly when assessing the caring and helpful nature of their relationships with their teachers. The Mann-Whitney U test indicated that Family Support scores were not significant, U=113, p>.05. This suggests that both parties felt similarly when assessing the caring and helpful nature of their relationships with their family. The Mann-Whitney U test indicated that Peer Support scores were significant, U=14, p=<.001. This suggests that when assessing the caring and helpful nature of their relationships with their

peers, non-fostering adolescents felt as though their relationships were more caring and helpful than fostering adolescent respondents.

The Mann-Whitney U test indicated that Belief In Others overall scores were significant, U=37, p=.001.

Table 1c: Summary of Mann-Whitney U Analysis between fostering and non-fostering respondents on their emotional competence in regards to their social emotional health (N=30)

Social Emotional Health Survey-Secondary	Sample Group	N	Mean	SD	Mann-Whitney U	Z	p
Emotional Regulation	Fostering	16	10	1.51	118.5	-0.06	.953
	Non- Fostering	15	10.07	1.16			
Empathy	Fostering	16	10.13	1.75	98	-0.89	.401
	Non- Fostering	15	10.73	1.03			
Self-Control	Fostering	16	9.38	0.96	113	-0.29	.8
	Non- Fostering	15	9.4	1.64			
Emotional Competence Total	Fostering	16	29.5	3.06	103	-0.68	.52
	Non- Fostering	15	30.13	3.31			

The Mann-Whitney U test indicated that Emotional Regulation scores were not significant, U=118.5, p<.05 (Table 1c). This suggests that both fostering and non-fostering adolescents felt that they were able to effectively express their positive emotions and manage their negative emotions in a nearly equal manner. The Mann-Whitney U test indicated that Empathy scores were not significant, U=98, p>.05. This suggests that both groups of respondents were similar in their ability to perceive, share, and consider the emotional states expressed by others. The Mann-Whitney U test indicated that Self Control scores were not significant, U=113, p>.05. This suggests that fostering and non-fostering adolescents are similar in how they effectively manage and express their behavior within given contexts.

The Mann-Whitney U test indicated that Emotional Competence overall scores were not significant, U=103, p>.05.

Table 1d: Summary of Mann-Whitney U Analysis between fostering and non-fostering respondents on their engaged living in regards to their social emotional health (N=30)

Social Emotional Health Survey-Secondary	Sample Group	N	Mean	SD	Mann-Whitney U	Z	p
Optimism	Fostering	16	9.56	1.93	102.5	-0.7	.495
	Non- Fostering	15	9.07	1.91			
Gratitude	Fostering	16	12.56	2.58	100	-.08	.446
	Non- Fostering	15	12	2.65			
Zest	Fostering	16	10.56	2.53	113.5	-0.26	.8
	Non- Fostering	15	10.67	3.6			
Engaged Living Total	Fostering	16	32.56	5.53	111	-0.36	.74
	Non- Fostering	15	31.73	6.7			

The Mann-Whitney U test indicated that Optimism scores were not significant, U=102.5, p>.05 (Table 1d). This suggests that fostering and non-fostering adolescents are similar in their expectations of the occurrence of good events and beneficial outcomes in their future. The Mann-Whitney U test indicated that Gratitude scores were not significant, U=100, p>.05. This suggests that both were similar in sensing thankfulness that arises in response to

one's benefitting from some kind of transactional means. The Mann-Whitney U test indicated that Zest scores were not significant, U=113.5, p>.05. This suggests that both fostering and non-fostering adolescents are similar in how they feel they experience their life in the present moment as exciting and energizing.

The Mann-Whitney U test indicated that Engaged Living overall scores were not significant, U=111, p>.05.

Table 1e: Summary of Mann-Whitney U Analysis between fostering and non-fostering respondents on their attachment behaviors (N=30)

Adolescent Attachment Questionnaire	Sample Group	N	Mean	SD	Mann-Whitney U	Z	p
Angry Distress	Fostering	16	9.38	2.22	29.5	-3.62	**<.001**
	Non- Fostering	15	5.87	2.2			
Availability	Fostering	16	5.69	1.82	100	-0.8	.446
	Non- Fostering	15	5.2	1.78			
Goal Corrected Partnership	Fostering	16	4.38	2.09	95	-1.04	.338
	Non- Fostering	15	4.53	1.13			
Adolescent Attachment Questionnaire Total	Fostering	16	19.44	2.71	50	-2.78	**.005**
	Non- Fostering	15	15.6	3.62			

The Mann-Whitney U test indicated that Angry Distress scores were significant, U=29.5, p=<.001 (Table 1e). This suggests that there was a highly significant difference between the fostering and non-fostering adolescents, and fostering adolescents felt significantly more anger in the adolescent–parent relationship. The Mann-Whitney U test indicated that both sets of adolescents had similar confidence in the availability and responsiveness of the attachment figure. Availability scores were not significant, U=100, p>.05. This suggests that The Mann-Whitney U test indicated that Goal Corrected Partnership scores were not significant, U=95, p>.05. This suggests that both parties felt similar in the extent to which the adolescent considers and is empathetic to the needs and feelings of the attachment figure. The Mann-Whitney U test indicated that Adolescent Attachment overall scores were significant, U=50, p=.005.

Adults:
Table 2a: Summary of insignificant Mann-Whitney U Analysis between fostering and non-fostering respondents on their psychological well-being (N=5)

Psychological Well Being	Sample Group	N	Mean	SD	Mann-Whitney U	Z	p
Autonomy	Fostering	5	31.8	31	9	-0.73	.548
	Non- Fostering	5	34.2	36			
Environmental Mastery	Fostering	5	36.2	6.72	11.5	-0.21	.841
	Non- Fostering	5	35.2	7.22			
Personal Growth	Fostering	5	35.8	8.67	8	-0.95	.421
	Non- Fostering	5	41	4.95			
Positive Relations with Others	Fostering	5	37.2	6.72	12	-0.1	1
	Non- Fostering	5	35.6	8.88			
Self-Acceptance	Fostering	5	35.8	4.09	12	-0.11	1
	Non- Fostering	5	33.2	8.56			

The Mann-Whitney U test indicated that all of the above scores presented in Table 2a were insignificant.

The Mann-Whitney U test indicated that Autonomy scores were not significant, U=9, p>.05. This suggests that there was not a considerable difference between the Autonomy scores of adult foster siblings in comparison to adult non-foster siblings, showing how both feel they have confidence in their opinions, even if it is contrary to the general consensus. The test also indicated that Environmental Mastery scores were not significant, U=11.5, p>.05. This suggests that both sample groups feel similarly about how in charge they are of the situation in which they are living. The Mann-Whitney U test indicated that Personal Growth scores were not significant, U=8, p>.05. This suggests that there is not a significant difference in how important fostering adults and non-fostering adults feel having new experiences that challenge how they think about themselves and the world is. The Mann-Whitney U test indicated that Positive Relations with Others scores were not significant, U=12, p=1. This suggests that both sets of adults would describe themselves in similar ways in terms of whether they are giving people, willing to share their time with others. The Mann-Whitney U test indicated that Self-Acceptance scores were not significant, U=12, p=1. This suggests that both feel similarly about how content they are with their life and how things have turned out.

Table 2b: Summary of insignificant Mann-Whitney U Analysis between fostering and non-fostering respondents on their attachment (N=5)

Adult Attachment Scale	Sample Group	N	Mean	SD	Mann-Whitney U	Z	p
Close	Fostering	5	3.94	1.04	7	-1.16	.31
	Non- Fostering	5	3.27	0.58			
Anxiety	Fostering	5	2.93	1.24	8.5	-0.84	.421
	Non- Fostering	5	2.9	0.49			

The Mann-Whitney U test indicated that all of the above scores presented in Table 2b were insignificant.

The Mann-Whitney U test indicated that Close scores were not significant, U=7, p=.31. This suggests that there was not a significant difference between both parties in how comfortable they felt with closeness and intimacy. The Mann-Whitney U test indicated that Anxiety scores were not significant, U=8.5, p=.42. This suggests that fostering and non-fostering adults both felt similarly about the extent to which they are worried about being abandoned or unloved, and there was not a significant difference.

Table 2c: Summary of significant Mann-Whitney U Analysis between fostering and non-fostering respondents on their psychological well-being (N=5)
Purpose in Life

Psychological Well Being	Sample Group	N	Mean	SD	Mann-Whitney U	Z	p
Purpose in Life	Fostering	5	36.2	6.91	3.5	-1.89	.056
	Non- Fostering	5	42.6	2.7			

The Mann-Whitney U test indicated that Purpose in Life scores were nearly significantly greater for non-fostering than fostering, U=3.5, p=.056 (Table 2c). This suggests that non-fostering respondents felt more strongly that they are not people who wander aimlessly through life, whereas fostering respondents felt more as though they were one of those people.

Table 2d: Summary of significant Mann-Whitney U Analysis between fostering and non-fostering respondents on their attachment (N=5)
Depend

Psychological Well Being	Sample Group	N	Mean	SD	Mann-Whitney U	Z	p
Depend	Fostering	5	3.27	0.41	4	-1.78	.095
	Non- Fostering	5	2.33	0.81			

The Mann-Whitney U test indicated that Depend scores were nearly significantly greater for fostering than non-fostering, U=4, p=.095 (Table 2d). This suggests that non-fostering respondents felt less able to depend on others to be available when needed, in comparison to fostering respondents.

For further analysis, interviews were also conducted to further understand the personal experiences of the foster sibling adolescents, who were currently residing in a home that fosters. These respondents ranged from ages 9-16, and were all females.

Table 3: Summary of interview responses from fostering adolescents on both their attachment and emotional well-being

Themes	Findings (Direct quotations from interviews)
Fostering's impact on the foster siblings' relationship forming and attachment styles	- "I've been able to build my communication skills and communicate more with people to understand their life more" - "I think that fostering has impacted my relationships with people and the way I form bonds by making me feel a little more empathic to other people and helped me understand what other people are going through and how lucky I am with my life. And it's impacted the way I form bonds because now I can talk to people even if they have really different lifestyles than me." - "It makes me more aware of what certain people have gone through before. Whether some things might be sensitive to them."
The benefits and positive impacts of fostering for foster siblings	- "Allowed me to understand other people's perspectives and to think about something that might be happening in their own personal life before lashing out, or making rash decisions with them because I've learnt that a lot of the times you don't know what's going on in someone's life, and you have to think carefully before you communicate with them." - "It has given me a chance to learn how to take care of people and

	help people who are less fortunate than me because I like in a really good life and I go to a nice school and I have parents that take care of me and foster kids obviously don't have all those things so it's giving me the chance to be kind to them and help them." - "It helps your family to be more open and bonded. And, helps us to communicate better."
The negative impacts of fostering for foster siblings	- "Sometimes even though I have work or I'm busy I have to take care of the kids instead of my parents if they're busy as well, which is a bit of a negative for me as I would like to prioritize my school work." - "Well, my mom gets more stressed and gets mad at me. And I could fight with them sometimes, I can fight them like about some like, small tiny stuff. Yeah. Or it can be more work for me." - "Yeah it takes up a lot of time. And you can't really focus on studying and taking care of the kid at the same time. Because it's just too much responsibility."
The impact of fostering on the parent-child relationship, inclusive of the amount of time available to develop this relationship	- "I think it's had a positive impact on the relationship with my parents because I feel like it's kind of like a family activity that we do together and that we can work together to help benefit the foster kid." - "Well, maybe my mom is getting a little more mad because she's stressed." - "I think it helped my family to grow closer and helped us to communicate more, and it was a positive experience for all of us." - "I think it's just a period of time where they need to give more attention to other people in the house"

The present study was conducted to explore the psychological and attachment factors impacted for the biological children of foster parents.

Throughout the course of the 5 interviews conducted with the adolescent foster siblings, 4 major themes emerged: Fostering's impact on the foster siblings' relationship forming and attachment styles, The benefits and positive impacts of fostering for foster siblings, The negative impacts of fostering for foster siblings, The impact of fostering on the parent-child relationship, inclusive of the amount of time available to develop this relationship. These themes are presented in table 3 alongside direct quotations from the interviews.

The first theme of relationships and attachment is significant as it interprets the foster sibling's direct experience regarding the difficulty or ease with which they are able to form relationships since beginning fostering. Through the interviews, what was discovered was contradictory to what had been hypothesized. The adolescents felt as though through fostering, not only were they able to build their communication, and empathy skills, they

were able to learn the perspectives of people around them. As they were regularly surrounded by children who were possibly less fortunate, they were able to understand "what certain people have gone through before" allowing them to become better individuals overall as they are able to connect to "a larger variety of people", allowing them to feel that it has become easier to form deeper more meaningful relationships. Fostering has previously been seen to have a positive impact on foster sibling's sense of perspective as they are able to "have a better understanding of children with hardships", and even "become more aware of society and open to kids and people of all backgrounds". Foster parents in previous studies have felt that fostering has taught their own children more from the experience than they ever could've themselves, and made them more welcoming, deepened their knowledge on others, and helped them make new friends who they wouldn't have made otherwise, altogether increasing their appreciation of their families (Younes & Harp, 2007)

Additionally, many of the interviewees stated that the constant leaving and arrival of foster children to their home, though was unexpected at first, did not seem to have a huge negative impact on them, and instead allowed them to learn a larger about a larger range of experiences from children with different backgrounds, helping to allow them to make better connections in the world around them. This further connects to Bowlby's theory of attachment as it suggests that children feel more comfortable forming attachments to others, even if these relationships are constantly disrupted, they are able to form deeper connections with the foster children as they feel more secure (McLeod, n.d.).

The second and third themes of the positives and negatives of fostering provides the study with additional information on the foster sibling's opinion on what benefits and drawbacks the fostering journey has had on them in the development of soft skills such as communication, self-awareness, and so on. The foster siblings mentioned that they personally overall had felt it had been a "positive experience", helping them to "become more of a good person". They shared how the journey had allowed them to learn how to communicate more carefully, and learn to take care of kids and have fun overall. It also made them happier, as they felt positively about being able to take care of others who may require their help, giving them "the chance to be kind to them and help them" This development of character in the foster siblings has also been shown in another study conducted in 2007 called "Addressing the Impact of Foster Care on Biological Children and Their Families". It was shown that the foster parents felt their own children were able to "appreciate their own life to a greater degree", and "they believed that fostering made their children better people", enhancing certain skills and qualities such as becoming "more compassionate", "accepting, loving, giving to people in need" (Younes & Harp, 2007).

The negatives of fostering that were uncovered were more in regards to the hesitance felt by the foster siblings in how much time they thought it might take, and more than they were able to provide. They stated that oftentimes their parents were busy and had been required to help take care of the kids instead, putting the burden of responsibility on them, and reducing time for them to prioritize other things such as school work. One respondent even mentioned how sometimes it may cause their mom to get more stressed, and possibly lead to their mom getting more angry at them, or the adolescents fighting with the foster children. This may also be acknowledged as displacement, as mothers when facing issues with their foster children or any other matters may be 'displacing their anger' onto their biological children instead.

The final theme regarding the parent-child relationship is significant as this bond is crucial in the emotional and social development of a child, and this theme allows us to analyze the impact of fostering on this fundamental relationship (Serbinski, 2016). The responses under this theme depicted how though the majority felt the time they had with their parents had reduced, they felt as though they still were able to spend time with their parents and "it wasn't as big of a deal". Some even shared how the fostering could be seen as a "family activity" where they were able to work together to help benefit the foster kid, allowing them to develop their family bond, grow closer, and even help to communicate more. However, as they still did have less time to possibly ask for help from their parents, many said things such as "you have to become a little bit more independent", as sometimes you may get "less attention" than you previously had, but as it is for a good cause they did not feel a huge impact on the actual parent-child relationship. However, in the study mentioned above conducted by Younes and Harp, this increase in the requirement to do things on their own, resulting in them becoming more independent was actually seen as a positive outcome for the fostering siblings themselves. Though they felt they had "a lack of parental attention", which they too viewed as a negative outcome of fostering, as well as an increase in the amount of "stress", and a feeling of responsibility in helping to take care of the foster children as they felt a reduction in the amount of personal time they had as they had "not as much time alone" (Younes & Harp, 2007).

Some findings from the qualitative data collection, however, contradicted what was found in the quantitative data collection stage of the research process. For instance, the adolescent-parent relationship. Within the quantitative data collection there were two subsections testing this relationship: The Family Support subsection of Belief in Others of the Social Emotional Health Survey-Secondary, as well as the Angry Distress subsection of the Adolescent Attachment Questionnaire.

Though the Family Support section revealed non-significant results on the caring and helpful nature of their family relationships, the Belief in Others section overall revealed that the scores were significantly lower for fostering adolescents siblings in comparison to non-fostering adolescent siblings.

Additionally, the Angry Distress section as well as the Adolescent Attachment Questionnaire overall suggested that there was a highly significant difference between the fostering and non-fostering adolescents, and fostering adolescents felt significantly more anger in the adolescent–parent relationship. Contradictory to the quantitative results, the findings from the interviews suggested that the adolescent foster-siblings did notice a fall in the amount of time they were able to spend with their parents, however on the whole did not recognise that as having a negative impact on their relationship with their parents. In another research paper conducted on the impacts of growing up with foster siblings, what was revealed was mothers/parents who created a safe environment, in which families were able "to honestly discuss their fostering experiences" felt more secure in the relationship, and felt more "heard by their mothers". This increased the likelihood of success for the foster family, and allowed the foster siblings to feel emotionally supported, maintaining the parent-child bond throughout the experience (Serbinski, 2016)

This is seemingly due to these adolescents having a positive understanding of the situation, as well as the reason for why the time spent with their parents has reduced. This can be

interpreted as one interviewee stated "I don't think it has affected me that much. Because I know they're only temporary and have a right to be here.". These children/respondents displayed signs of secure attachment, as they were able to "appreciate their own self-worth and ability to be themselves in their relationships", feeling comfortable with foster children frequently arriving at and leaving their home (Kim, 2022). In another interview, a further understanding was presented as a respondent shared that if given the choice, they "definitely would choose to (foster) because for these kids, there's not a lot of people who foster and they need a home and a place to stay".

The quantitative results of the negative impact on the parent-child relationship may be due to other reasons not tested or accounted for within this study. It may also be due to the limitations faced during the data collection procedure, such as the small sample size of adults who had recently resided in a fostering home in Singapore. Family is almost certainly the most important factor in child development (Jacobs, 2020). Not only are family members and caregivers involved heavily in the development of important skills such as building motor, language, and emotional skills, but they are also dependent on throughout the child's life as they continue to grow. Parents, family members, caregivers, teachers, and any other significant adults in a young child's life play a huge role in their values and beliefs, establishing what the child may grow up to see as right or wrong. Furthermore, their sense of emotional security, such as their confidence in forming new relationships can stem from the way their bond is with their parents, how the relationship was growing up. They can learn to express themselves, learn how to take responsibility, and show compassion, all in all leading to instilling values and setting the foundation for a healthy and happy current and future life for the child (Why Is Family Important in a Child's Development?, 2021). This study contradicts past papers suggesting the negative impacts on the parent-child relationship, with new evidence portraying the benefits of fostering on developing closer bonds within a family.

The other findings that were quite nearly significant, and are worth mentioning were firstly, the Depend section of the Adult Attachment Scale was nearly significant with a higher fostering adult mean average score compared to the non-fostering adult mean average score. This indicates how the adults who had resided in a home that fosters felt as though they were more able to depend on others to be available when needed in comparison to those who had not lived in a home that fosters. This contradicts the original hypothesis as this suggests that the experience of fostering enabled the adults to feel more comfortable depending on each other incase of needing help, implying that fostering does not impact attachment as much as presumed.

These quantitative results instead back-up the qualitative interview responses as it proposes that fostering has enabled adults and adolescents to form deeper, meaningful relationships, more easily than those who had not fostered.

Ainsworth's theory on how "Children with secure attachment styles are confident that their attachment figure will be available to meet their needs" (Mary Ainsworth | Attachment Theory & Contribution to Psychology - Video & Lesson Transcript, 2021) is contradicted here as originally children who were foster siblings were considered to have less secure attachment styles, however this suggests that these foster siblings may have formed better relationships with their parents and the foster children, therefore increase the security they

feel in the attachment figures, and allowing them to feel more safeguarded in their ability to depend on others.

Secondly, the Purpose in Life section of the Psychological Well-Being Scale was extremely close to significant, with a fostering adult mean average score lower than the non-fostering adult mean average score. This indicates that non-fostering respondents felt more strongly that they have a purpose or goal, whereas fostering respondents felt more as though they were wandering aimlessly through life.

Limitations
This study has potential limitations. Due to the nature of the data required, there was quite a confined group of individuals that fit the requirements of the study. As the surveys required adolescents and adults who had previously lived in foster homes working with a specific non-government agency within Singapore, the responses for the adolescents were sufficient, however the responses received from adults (age 18-30) was quite limited as many were at university or no longer in Singapore, and therefore did not respond. This resulted in quite a small sample size, which could be responsible for many of the anomalous responses. Furthermore, due to fostering being of such a large culture in Singapore, respondents may have felt coerced into only providing socially desirable answers. For example, when conducting psychological tests providing answers that they felt were considered to be 'correct'. This may lead to many not sharing their true feelings, especially in interviews where they were not anonymous with the interviewer and instead were having all their ideas heard immediately. This possibly meant that even if they provided accurate responses, such as negative feedback towards fostering, they may have quickly countered with the positives of living in home that fosters.

CONCLUSION
Early childhood experiences provide the foundation for all future learning, behavior and health (NCDHHS). Residing in a home that fosters provides a new variety of experiences, allowing the development of children to be furthered as they are faced with new challenges and difficulties which they must learn to overcome at a younger age. These unique encounters with other children around their age expands their understanding of different people's pasts and perspective, helping the younger generation to learn what it takes for families to be stable and safe (Jalkiewicz, n.d.). Due to the large research gap that currently exists in the area of the biological children of foster parents, more research should still be conducted in order to fully assess the impacts on these children in various countries and circumstances.

The respondents within this study indicated that fostering had impacted their time with their family, however in most cases improved their relationships as they were able to solve problems together, reinforcing their bond and improving their communication with each other. This study contends that fostering is damaging towards the psychological and emotional well-being of the biological children of foster parents, and instead suggests that the bonds made with the foster children, as well as the strong caring and empathy skills developed are worth the struggles faced. These bonds can often last years even once the child has left, reinforcing the friendly environment that both the biological children as well as the foster children were able to stay in, produced by more experienced and compassionate parents (Why Foster? | Benefits of Fostering | Fosterplus, n.d.).

Implications

This study was conducted in Singapore, quite well known for its substantial fostering culture, and high-quality fostering system put in place. However, many citizens and residents of Singapore are reserved when it comes to partaking in fostering due to worry about the impact on their own biological children. Though this may occur in other countries, this research paper presents how fostering not only minimal negative impact on foster siblings' attachment and emotional well-being, it further results in the development of many positive skills such as communication, and a deeper understanding of the perspectives in the society they reside in. The ability to humanize others, understand that everyone has a story, and appreciate one's own upbringings are just a few of the great lessons learned while foster parenting (Jalkiewicz, n.d.). This research paper not only can be used to help promote fostering as new potential foster parents see the huge number of benefits, but additionally help convince many people with preconceived notions and hesitations about fostering that their beliefs are mostly inconsistent with what has been found from this study. This paper helps to fill the knowledge gap about the impacts of fostering on the foster parent's biological children in Singapore, and further helps the government in encouraging citizens to join the fostering system, helping to increase the quality of life of those in low-income classes who are less fortunate and require help. Foster parenting is a powerful way to lift the spirits of children and youth, and show them that there is hope for the future (Jalkiewicz, n.d.).

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