Understanding the Step-sibling Relationship Through Bibliometric-visualization and Narrative Analysis

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ABSTRACT
The study aims to reveal the dynamics of step-sibling relationship and its acceptance in families whose parents remarried after divorce. The study implemented qualitative systematic review research method to study on step-siblings from 2000 to 2020 (n =19 corpus; range of participants =11-33 years old). The corpus protocol used PRISMA diagrams, and the mapping was using PoP7 and VOS viewer software. The results of the bibliometric-visualization analysis revealed that eight large clusters were found in the study of step-sibling and remarriage families. Step-sibling studies were associated with family functions, processes, feelings, and family images, but not directly with studies on parental divorce and remarriage. While the narrative analysis explained qualitatively that the form of a step-sibling relationship affected conflict development in post-divorce remarried families. Step-sibling relationship was influenced by the child's acceptance of new family. The factors influencing the child’s acceptance of the new family structure were related to need fulfilment, age, sex, and intrapsychic condition.

Keywords: step-sibling relationship, divorced family, remarriage.

1. INTRODUCTION
Changes in family structures and family relations have been reported in several studies [1][2][3][4][5][6]. The presence of step-siblings can form different relationships within blended families [7][8]. Step-sibling refers to individuals who are the children of remarried couple [9]. The number of children who do not live with their biological parents due to divorce has increased [8][10][11]. Study on half-sibling has shown that 75% children living with remarried parents has at least one full-sibling, and approximately 1/3 step-children living with step-family have step-sibling [12].

Relationships shown between full-siblings and step-siblings vary according to their emotional closeness, in which step-siblings are found more emotionally distant than full-siblings [9]. The various forms of relationship between siblings are the caregiver relationship, buddy relationship, critical relationship, rivalry relationship, and uninvolved relationship [13].

Compared to full-siblings, the relationships between step-siblings are assumed to be distant and unsupportive [14][15]. Adapting to a new role of step-siblings can be challenging for some children, which potentially raises tensions amongst them and between children and their step-parents [9][16]. This may sometimes exclude them from regarding the others as siblings and family. Negative influences described as the long-term impact on the children are, among others, the emotional and social relationship problems when they reach adulthood [11][17]. These consequences suggest that children experience relationship complexity of new family system, particularly when parent with whom they live with decides to remarry and when they have step-siblings [17].

This study aims: (1) to map related studies on step-sibling linked to post-divorce remarried family, (2) to describe step-sibling relationships and their acceptance of their new family. Studies on step-
family setting using children perspective offer an insight that remarried family influences children’s wellbeing and may potentially cause tension for children [12]. Hanson et al [12] point out that children need to adjust to step-family life. Sibling relationships should be characterised by mutual relationship with one another [13], however, such relationship is likely to be overlooked within remarried family structure, and (3) to find alternatives for positive step-sibling relationships within remarried family.

2. METHOD

As previously stated, we created maps of “step-sibling” and “remarried family in post-divorce” topics. The science maps were created using the VOSviewer software that has been extensively utilised within the field of psychology [18][19][20][21]. The scientific mapping was created by using overlay visualisation and density visualisation. The overlay visualisation aimed to help authors identify related study topics based on citations, sub-topic clusters, and related sub-topics. Density visualisation helped describe the most investigated sub-topics within research of the most cited article publications [22].

We also used Harish’s Publish software or Perish 7 (PoP7) software to extract and select articles that met our inclusive criteria. The study comprised two phases: Phase 1 identified all articles published between 2000 and 2020 related to topic of “step-sibling” and “acceptance, relationship, and communication” in their title or abstract. Phase 2 employed narrative analysis using a contextual approach as a synthetic process focusing on research question [23]. We included inclusive criteria as follows: 1) articles published in journals/books/theses; 2) containing “step-siblings” and “acceptance, relationship, and communication” topics; and 3) published either in Indonesian or English. Articles using systematic/literature review studies, dealt with parenting topic, were not under category of psychology, and were incomplete in terms of missing identity and body parts, were excluded. The search involved online resources, such as Google Scholar, Scopus, Science Direct, Pro Quest, and EBSCO. The Google Scholar was selected in this study because of its reputation as ‘free’ publication and citation resources [24]. We also employed offline resource using the PRISMA flow diagram [25], as shown in Figure 1.

3. RESULT

3.1 Research Trend 2000-2020

The search using POP7 resulted in 173 publications related to step-sibling relationships in remarried family. The participants were 1,000 children aged 11-21 years old; more than 100 children were young adults (22-33 years old); and 130 families in 19 corpus. The results of our analysis are visually presented in Figures 2, 3 and 4. In each map, more frequent terms are presented larger than less frequently occurring terms. Figure 2 shows that the more frequent topics can be identified using colour and name size, such as divorce and remarriage related to step-children, adult age, and education. The terms step-sibling relationships in remarried family are identified as less frequent topics. The visualisation also describes that three terms are frequently applied for step-sibling: step-sibling, step-brother, and half-sibling.

Figure 1. PRISMA Flow Diagram

Figure 2. Bibliometric-visualisation map of step-sibling on post-divorce remarried families

The local map (Figure 3) shows that the terms are divided into eight clusters, identifiable by different

Figure 3. The local map of step-sibling research published between 2000-2020

Figure 3b provides a descriptive information that step-sibling issue was the most prominent research topic between 2005 and 2015. Step-sibling became the most prominent topic between 2005 and 2015. The information revealed that studies on step-sibling was indirectly linked to studies on divorce and remarriage, and predominantly focused on step-children. This could explain that studies on children in stepfamily relationship were primarily discussed using an adult perspective. Studies using perspectives of children as part of divorced and remarried parents were limited. However, the trend changes between 2015 and 2020 (marked by orange to red) to research publications about divorced families, legal problems and family history, including communication. Studies on step-sibling focused on step-family functioning, feeling, and family drawing, as shown in Figure 4.

Figure 4. The prominent topics on step-sibling between 2000 and 2020

3.2 Themes of Step-sibling studies

In the second phase of this study, we selected articles published as stated in Figure 1 and other resources. The selection resulted in 19 research corpus, which comprised 13 journal articles, two books, one dissertation, one master thesis, and two bachelor theses. Using a narrative analysis, themes derived from step-sibling studies were identified, as provided in Table 1.

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub Themes</th>
<th>Corpus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship</td>
<td>Influencing factors</td>
<td>[8]; [10]; [26]; [27]; [28]; [29]; [30]; [31]; [32]; [33]</td>
</tr>
<tr>
<td></td>
<td>a. Internal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. External</td>
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<td></td>
<td>Communication forms</td>
<td>[27]; [28]; [34]; [35]; [36]; [37]</td>
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<tr>
<td></td>
<td>Impact</td>
<td>[8]; [32]; [33]; [38]; [39]; [40]; [41]</td>
</tr>
<tr>
<td>Acceptance</td>
<td>Influencing factors</td>
<td>[27]; [35]; [42]</td>
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<td></td>
<td>a. Internal</td>
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<td></td>
<td>b. External</td>
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<tr>
<td></td>
<td>Well-being</td>
<td>[30]; [31]; [40]; [41]</td>
</tr>
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3.2.1 Relationship

Most of the study corpus clearly mentioned that step-sibling relationship was negatively described
The negative relationship was influenced by several factors: (a) inability to accept step-sibling, (b) feeling of disfavour, (c) envy, (d) fear, (e) anxiety, (f) parental discrimination. Some conflictual relationship could affect children’s psychological condition and behaviour, such as showing: (a) impoliteness, (b) externalising and internalising behaviour, (c) decreased wellbeing level, (d) academic problem, (e) social behaviour problem, and (f) aggressive behaviour [8][30][31][32][34][35][39][40][41].

Some studies explained positive step-sibling relationships could happen when step-siblings were (a) young, (b) willing to share, (c) cooperative, (d) creating companionship, (e) active in self adjustment, and (f) having parents who were able to build a sense of togetherness [8][10][27][28]. Positive step-sibling relationship developed when (1) psychological, economic, and moral aspects were fulfilled, (2) favour and respect are developed, (3) age gap was small, (4) contact was frequent, (5) personality was built, and (6) intrapsychic factors were absent [10][26][29][31][42]. This showed that positive relationship is not only influenced by age gap and personality, but also referred to parental intervention by fulfilling the children’s needs without showing favouritism or partiality in treatment. Children’s interaction quality had a significant role in creating positive step-sibling relationships [43].

Further, corpus explained correlation between step-sibling relationships and quality of family interaction and communication [28][36][37]. The terms used for greeting and disclosing personal and family secrets in step-family were solutions to develop positive relationship. For example, the use of the term “my sibling” represented positive relationship. When the term “my step-sibling” was used, it meant neutral or negative relationship. The reasons for using the term “my step-sibling” related to experiencing challenge and awkwardness, reducing tension, respecting biological family, and maintaining life balance of step-family. Therefore, individuals became more comfortable to disclose secrets to their biological family, but not to step-family due to their close relationship to their biological family. Parent’s role became significant when rules provided opportunity for members of step-family to interact. Another finding related to communication pointed out communication distance amongst step-siblings although they accepted one another. Having a positive relationship to all family members, either to biological or step-family, was the key to maintain harmony in mixed family relationship.

### 3.2.2 Acceptance

Acceptance towards step-siblings was shown to be more positive on girls than on boys [42]. Specifically, a change within step-family system, as described by corpus 8, happened as a result of the destruction of previous family system and demand for adjustment in new system, which caused step-siblings had to adjust with new family. Family relationships could be influenced by their children relationships. Obstacles came to family when a child refused the presence of new parent and family member, a child frequently lived with grandparents, and custody were at both parents. A child’s acceptance affected his/her adjustment to his/her new family [31]. A negative psychological adjustment between step-siblings made a considerable influence on psychological wellbeing, academic achievement, and social behaviour [31][40].

The outcome of a positive acceptance linked to the individual’s psychological wellbeing [30][31][40]. The child’s wellbeing was influenced by his/her relationship with his/her step-siblings and the father’s role. Step-siblings often experienced discrimination within a step-family. Parent’s marital status had a significant role in adolescence’s wellbeing. Adolescents who lived with their mothers’ post-divorce had a higher life satisfaction when their mother remarried than when their mother remained single without new relationship.

### 3.3 Discussion

This study sought to understand trend of step-sibling research within the last two decades (between 2000 and 2020) and the impact of the change on family structure using a science mapping approach. Two main arguments have been posited to describe step-sibling relationships in remarried family. First, the presence of step-sibling may cause significant life adaptation. Second, step-sibling relationship quality may affect relationship pattern in family life. As a system, family has to be viewed as a whole, structured, goal-oriented, balanced, bound, subsystemic, equifinal and equipotential, which can affect relationship quality [44]. Divorce and remarriage create a change in family structure, which requires family to build a functional new system that help each family member to adapt.

Limited studies were undertaken to raise children voice in relation to divorced and remarried family, realising that children have to make adjustment with new family structure, such as the presence of step-parent and step-siblings. Children potentially experience longer trauma and stress compared to
parents when it comes to parent/couple loss [17][45]. Children also find difficulty in adjusting to new family, especially when they are in the ages between 5 and 14 years [17]. This could explain that attachment figure is critical during nine years of developments [46]. It means that children are likely to develop problem when having step-mother or step-father after nine years of age. Children who have experienced security, care, guidance, and education from their former family for a period of time have difficulty to accept the presence of step-family members. As a result, relationships amongst step-siblings in this study are characterised as negative and conflictual. A step-family relationship tends to be distant and conflictual and remarriage potentially leads to conflictual relationships [16][47].

Children show different acceptance level due to the presence of step-siblings. They have to adapt with new life and rules that enable them to live with step-family. Children’s adaptability to new family can influence their psychological consequences: academic achievement, self-esteem, and wellbeing [48][49]. Likewise, studies stated that children from divorced families are more likely to develop high stress level, low self-esteem, and low family satisfaction [49][50]. Less cohesive relationship with step-family and step-sibling tends to have negative effect such as competition [11]. What is interesting from this study though, poor step-sibling relationship in a remarried family has a significant role in relationship pattern within family members. This indicates a correlation between children adjustment and step-sibling relationship quality. Children with positive step-sibling relationships show a more positive caregiving relationship. When children enjoy their relationships with their step-siblings, they develop a buddy relationship. However, when their relationships are dominated by conflicts and fights, they are more likely to build a critical relationship [13]. This shows that a step-sibling’s relationship quality significantly influence their socio-emotional development [43]. Children’s perceptions about the type of their relationships and environmental supports help them to adapt, accept and understand their situation in a positive way.

Parenting technique can be utilised to help children understand about their situation. Step-sibling relationships are considerably influenced by parents’ role in developing a sense of togetherness within their new family system, which minimises conflictual relationships that were believed to be unavoidable during early remarriage [51][17][47]. Building an effective communication is key to develop closeness and attachment [52][53]. This study indicates that parent’s role in developing new family-like interaction and communication system becomes a centre in creating positive relationships [51]. Interpersonal relationships are more likely to depend on the effort to build communication and character of each family member, rather than on the type of sibling characteristics (e.g. full-sibling or step-sibling), which are characterised by openness, empathy, support, and equality [54].

3.4 Conclusion

The bibliometric-visualisation mapping studies on step-siblings are not directly linked to divorced and remarried family. In general, step-siblings’ research describe step-sibling relationships as negative and conflictual. Children adjustment influenced how they develop relationship with their step-siblings. Efforts to build positive relationship with family members become critical and parents have significant role in developing such relationship.

Step-sibling relationship is impactful to remarried family’s atmosphere. Children need assistance from close-tied family members during acceptance process, either to step-family or to step-sibling within their new family system. Further exploration on step-sibling interactions in remarried family is needed to ensure the fulfilment of their basic needs which are potentially neglected after parent’s divorce or when remarried couple has new children. Acknowledging these relationship complexity should encourage us to understand them.

AUTHORS’ CONTRIBUTIONS

Devina Ratna Anggita made a major contribution on the conception and data organisation. Kartika Sari Dewi contributed to the conception, data analysis and discussion. Costrie Ganes Widayanti contributed to the data analysis and interpretation. All authors contributed to the final revision and approved on the final version for publication.

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