How Did I Become Me?—Identical Female Twins Describe the Development of Their Individuality

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Abstract
The purpose of this study was to describe the development of individuality and identity in female twins in the light of their upbringing experiences as described by themselves. Twin studies have traditionally been quantitative comparisons to singletons. On the one hand, research has drawn a mythical picture of twins, and on the other hand, studies have focused on the difficulties of growing as a separate, individual person. This was a qualitative study in which five Finnish identical female twins participated. They were interviewed with a themed interview method. In addition, they were asked to write about their upbringing and childhood. The sets of data were analyzed with a qualitative content analysis method. The results show that the twins’ identity development was challenged with clues given by their parents, from school and wider community, as well as by the impression they themselves had given to others about twinhood. Their individuality developed within the interaction between the sense of belonging together and other social relationships. The study also shows the important role of upbringing in identity development.

Keywords: identical twins, development of identity and self, interaction, sociality

1. Introduction
The relationship between siblings is often a very important one and lasts for their life time. It is the only relationship in which both share the same home environment, values and important relationships with relatives and family. When it comes to identical twins, the sibling relationship is even more special, because they spend most of their lives with a same-aged sibling who resemble themselves by looks and personality (Abrams & Neubauer, 1992; Clark & Dickman, 1984). The relationship between identical twins is fascinating and puzzling; it is likely that it cannot be ever fully understood. This peculiar form of a human relationship has been widely studied for centuries and from many points of view (Burlingham & Barron, 1962; Leonard, 1961; Zazzo, 1976).

This study contributes to the discussion by introducing identical female twins’ description of their identity development. How do they perceive the phases and challenges of becoming an individual person? They were prompted to describe their experiences by introducing the picture of identical twins provided by earlier research. The purpose was to reach their personal experiences and voices, and reflect on them in the light of previous findings on identical twinhood.

2. Research on Identical Twins
The relationship between twins develops already in an early phase, and their influence on each other’s lives can be profound and lifelong. Twins form a pair but are two individuals simultaneously (Leonard, 1961). Their thoughts, experiences, and actions can be so similar that it is hard to tell them apart. On the other hand, they obviously complement each other, form an entity. Namely, one cannot be a twin alone but only if there are two of them (Conlon, 2009).

Some studies have proved that the relationship between twins start already before their birth. Indeed, they have the experience of each other’s existence in the womb. Likewise, the expecting mother can sense their movements and distinguish, for example, their different activation levels (Robin, Josse, & Tourrette, 1988; Tourrette, Robin, & Josse, 1989). Piontelli (2003) conducted a longitudinal research and followed four pairs of twins from their
prenatal time until they turned three. According to Piontelli, interaction between twins already in womb had special features that remained the same after birth.

Even if twins were not aware of each other before the birth, they would develop a close interaction relationship after the birth (Clark & Dickman, 1984). Twins develop their body awareness and sense of their body limits earlier than singletons. On the other hand, it apparently takes longer from identical twins learn to recognize and separate themselves and their twin from a mirror (Winestine, 1969). They are likely to use the word “I” to refer not only to themselves but to their twin sibling, too, in early childhood (Hay & Preedy, 2006).

When it comes to identity development, a secure and caring attachment relationships is needed to a child feel safe to explore the environment knowing that his or her guardian will stay and be present. This helps children to detach from parents. However, twins often develop a safe relationship with their parents and simultaneously with their twin sibling (Szajnberg, Skrinjaric, & Moore, 1989). According to studies, twins find it easier to detach from parents and start exploring their environment together because their mutual relationship makes them feel safe even when parents are not present (Gottfried, Seay, & Leake, 1994). Even though their build attachment relationships with parents and each other at the same time, it does not mean that parents would not be their primary object of attachment in early childhood (Robin, Josse, & Tourrette, 1988).

What is it like to be two instead of one and how does identical twinhood reflect on one’s individualization process (Cirillo, 1976) and identity (Schave & Ciriello, 1983)? Does growing as a twin have emphasis on similarity or are identical twins seen as each other’s halves (Conlon, 2009)? The separation development of twins has been compared to singletons (Pearlman, 1990) and, due to their strong affinity, the challenge of becoming separate individual has been studied (Bakkhus, Staton, Borge, & Thorpe, 2011; Winestine, 1969).

The phases of twins’ development have been studied in many ways and with different objectives (Olivennes et al., 2005; Vandell, 1990). For example, since twins spend so much time together, there have been doubts that their development would regress (Dale, Dionne, Eley, & Polmin, 2000) or that twinhood does not lead to a linguistical identity (Stromswold, 2006). Likewise, the cognitive development in twins was believed to be slower (Calvin et al., 2009; Webbink et al., 2008).

Twins’ strong affinity has arouse plenty of questions and juxtapositions. Are twins winners or losers (Miliora, 2003)? Do twins have difficulties in creating relationships with other people (Foy, Vernon, & Jang, 2001; Pietilä, Bülow, & Björklund, 2012; Sandbank, 1988) along the course of their lives (Dibble & Cohen, 1981; Pietilä, Björklund, & Bülow, 2013; Åkerman & Suurvee, 2003). In all, twin studies have been interested in possible distortions in twins’ development, and therefore, research has focused on such themes as health problems in twins (Aarnio, Winter, Kujala, & Kaprio, 2002), smoking (Kujala, Kapio, & Rose, 2007), alcohol abuse (Eaves et al., 1999; Penninkilampi-Kerola, 2006), and drug addictions (LaBuda, Svikis, & Pickens, 1997).

The viewpoint of positive development in twins is—like among every people—connected with balanced identity and personality development (Linley et al., 2009). At its best, identity development leads to positive recognition of one’s strengths, balanced life, and active citizenship and helpfulness toward others (see e.g., Lerner, 2009). Every one also needs support from other people and good social skills in life. This study focused on identical twins’ perceptions of their identity development. The purpose was to find out how their positive development can be supported.

3. Method

The similarity between identical twins challenges people around them but the twins themselves, too. How to develop as an individual when someone similar to yourself is growing next to you? The following research questions were set for this study:

How do female identical twins describe the development of their individuality and identity in the light of their upbringing and childhood memories?

Female identical twins (N=5) were interviewed in this study. They were recruited via an internet-based community or by contacting them based on their acquaintances’ suggestions. The participants were between 15 and over 50 years old.

The birth rates of identical twins is similar across the world: about 4/1000 births. In Finland, about a third of twins are monozygotic (“identical”), meaning that they develop from one zygote, which splits and forms two embryos. Rest are dizygotic (“fraternal”), meaning that they develop from two different eggs. Most of dizygotics
are boys, like most of newborns are. However, the majority of monozygotics are girls (Kaprio, 2007; Schwartz, 1996).

This was a case study focusing on a small group of female identical twins (Yin, 2013). The identical twins were interviewed first and then asked to write an essay. Interviews lasted from 45 minutes to 1.5 hours. Interviews took place in various parts of Finland. The themed interview method (Rubin & Rubin, 1995) seemed to provide good basis for hearing the women’s own thoughts and experiences of being and growing. Yet, the written data were considered necessary to hear the identical twins’ perceptions and read their descriptions without the presence of a researcher. The purpose was to strengthen reliability by data triangulation (see e.g., Wray, Markovic, & Manderson, 2007). The writing prompt was sent by email. The women’s essays complemented the interview data well.

The sets of data were analyzed with a qualitative content analysis method (Creswell, 2009). The data-based analysis (Malterud, 2001) focused on the emerging themes in the data. Thus, the analysis has emphasis on the women’s perceptions and the factors they considered the most important to their identity and individuality development. The purpose of the analysis was to give voice to the identical twins themselves.

When reporting the results certain issues had to be paid attention to. To ensure the participants’ anonymity, they are referred here with pseudonyms that are randomly selected from an English name calendar. The data excerpts are from the interview and written data, and they are translated from Finnish to English as literally as possible. In addition to giving voice to the women, data excerpts are included in Results to strengthen the reliability of the study. In qualitative case studies like this (see also Yin, 2013), it is important to aim at the so-called thick description that will give the readers a clear picture of the phenomenon studied. Naturally, researchers always make their own interpretations and conclusions: one way of ensure trustworthiness is to use researcher triangulation (Wray et al., 2007), which in this case meant that the group of researchers discussed the findings and conclusions together.

Another reliability issue in case studies is the number of people studied and generalizability (Baxter & Jack, 2008). Here, the difficulty was to find suitable interviewees from a small country of Finland. However, the ones participating in the study represented the case well and provided open, multidimensional interview and written data. Baxter and Jack (2008) remind that in case studies the main concerns are the forming and phrasing of research questions, developing propositions, determining the exact case under study, binding the case, and a discussion of data sources and triangulation. In this study, these principles are carefully paid attention when performing the various phases of study.

4. Results

4.1 Balancing between Individuality and Togetherness

The twins in this study seemed to have somewhat different opinions on their individualization development by the side of their twin sibling. They perceived their individuality mostly as easy and entitled—yet as challenging and difficult, too. They described their mixed feelings as follows:

“I have been able to fulfill myself a lot, but inevitably, the other’s choices have directed my own choices too.” (Mary)

“I have always liked to have a twin sister, but there is that problem too: how to think about yourself as you are as an individual.” (Sharon)

Certainly, the other twin’s similarity has functioned as a support in the participants’ identity development. However, some of the interviewees reported that their twin’s different features could arouse bewilderment or even envy. Identical twins’ similarity may have made them assume that they should be or do everything in the same way:

“Especially, when I was younger, I felt that everything should be in the same way and, particularly, if my sister could do something better than I, I had hard time accepting it...” (Sharon)

4.2 Parents and Childhood Homes in the Identical Twins’ Lives

The parents had supported their identical twin children’s identity development in various ways. Some of the interviewees reported that their parents had not paid much attention to their individuality or that their parents did not even consider individuality a very important goal in upbringing.
“I cannot say that they would have supported my individuality too much... It is hard to say. Perhaps, they did not think about it as such.” (Sharon)

For the women, clothing had served as a way to manifest their individuality. One of the interviewees described how they were always dressed up alike when they were children:

“We were dressed up alike ever since we were babies... When we went to day care, people could separate us from our different kinds of reflectors. So that they would not feed one of us twice and the other one would be left without food. But we were always dressed up alike, and we liked it. If one dirtied her clothes, the other would change her clothes, too. We liked that a lot. That was quite usual and normal, because were looked the same anyway.” (Mary)

The parents seemed to be sensitive and willing to hear the sisters’ wishes. If they wanted to wear alike, they were allowed to without pressurizing into individuality. However, some interviewees reported that their parents wanted to ensure that the identical twins would be easily told apart by dressing them differently, having their hair cut differently, or buying different kinds of eyeglasses to them.

“Our hair was cut at different lengths so that people would tell us girls apart more easily.” (Liza)

Some of the identical twins remembered how people used to refer to them as “girls” or “twins” without supporting their individuality. They could have used, for example, their real names. Although the twins considered that understandable, they found it also bothersome (see also Smith, Renshaw, & Renshaw, 1968).

“In my opinion, my parents have supported my individuality so that they have always encouraged me to have my own opinion on things and make my own choices, for example when shopping clothes. However, often when they talked to me and my sister, they would call us ‘girls’.” (Liza)

“A lot of calling us ‘girls’—and our dad would stick to that too, ‘girls and Maddie’. Maddie was our little sister, and we would laugh to it by ourselves that she is a girl too. So it was a generic name for us. As if we twins were just one lump.” (Mary)

This kind of lumping together took place in other occasions too. For example, one of the interviewees reported how their acquaintances had poured them coffee by asking only one of the twins.

“I guess we were spoken separately in certain situations, but usually we were lumped together. They would call as ‘Sharon-Sheryl’ by bunching up our names [laughing] because they were not always able to tell us apart.” (Sharon)

The parents did not always intervene in situations the identical twins found challenging. However, some twins’ parents had pronouncedly talked to them as individuals.

“Then my mom and dad started to treat us like ‘what does Kristen want’ and ‘what does Mary want’. They would support out individuality like this even if we could not even wish for that. Indeed, our mom would chat with each of us separately. She made time for both of us.” (Mary)

A child’s self-conception develops mostly based on how he or she is treated. Children notice tones in their parents’ speech and, thus, mold their conception of themselves and their families. Children also sense whether they are appreciated or not in different situations—and these situations are actually significant for children’s identity development. What they hear others say about them become parts of their self-conception. However, it is not only parents’ ways of speaking and treating children but also other environment, friends, school, and media influence on children’s self-conception.

4.3 Day Care and School

When talking about how others have encountered the identical twins, the participants of this study had various experiences and perceptions. They had been treated as a bundle in day care, which had been annoying for most of the twins. However, their school-related experiences varied.

“Because the teacher could not always tell us apart, he or she could say wrong and give Kirsten the turn when meaning me. Even if the teacher looked straight to my eyes, I would be just quiet and not helping in any way. So, it was really bothersome that the teachers couldn’t tell us apart. Like, don’t you see, we look totally different [laughing].” (Mary)

“At school, teachers treated me and my sister as individuals. Even if the teachers were talking to me and my sister, they did not use the plural form but our names. Also remedial teaching was individualized, meaning that
we both received it based on our needs, and not so that we both would have same kind of remedial teaching.”

(Lena)

Still, many of the female identical twins had to see the confusion in their teachers’ or classmates’ behavior when they could not tell the sisters apart or confused them with each other.

“Many times, they had gotten to know one of us and when they saw us together, they were so bewildered that they didn’t know how to take it. They thought that they were dealing with the same person, even if we are different persons.” (Sharon)

Along with time and age, people started to take the identical twins more as individuals:

“Then of course at the general secondary education when we studied different curricula, we were seen more like individuals.” (Mary)

4.4 Support and Affection between the Identical Twins

In this study, the participants reported that their relationships with their identical sisters were extremely close and important. As they had spent most of their lives together, their relationship had become very tight. More often than not, the identical twin was perceived as the closest and most important friend with whom the research participants could share anything:

“When we were small we talked, and when youngsters until the age of 20, we would tell everything to each other. At least, that was my experience: we could talk about everything and she was actually very—of the same opinion in almost everything. In those days, it was a resource, because you couldn’t think that someday you would live separate lives.” (Sharon)

Close relationships become an important resource. However, sometimes the special intimacy between identical twins can lead to a search of separation, comparisons, and one’s own space (see also Smith, Renshaw, & Renshaw, 1968).

“Indeed, you have those jealousy issues too, when the other has, you know, people who challenges your relationship.” (Sharon)

Balancing between mixed feelings could also increase self-knowledge and willingness to take care for the twin, too. Twins can develop in their empathy skills when learning to face various challenging situations (Zahn-Waxler, Robinson, & Emde, 1992).

“Yes, it has been very solid and close ever since we were children. If I got something that mom had bought, for example a cookie, the first thought is to give Kirsten, too. Everything was split in half at once, and we were supposed to share our candy bags automatically.” (Mary)

“I have a close relationship with my identical sister. My sister has always been the closest person and best friend of mine. One can guess already before the other says anything, that what she thinks about the issue and guess what she is going to say.” (Lena)

In the interviews, the participants described how they tried to emphasize their opposite sides when building their identities during puberty. When they were children, they had been alike, even if their individuality was supported by parents and friends. However, when entering adolescence, they had a need to emphasize their individuality by choosing their clothes and friends.

“We agreed about it consciously, not based on what you like. We just agreed that these are my clothes, and you have nice clothes. And yeah, these are your clothes. We wouldn’t want to mix them because we were thinking that people should start to see us separate persons. Even if we liked the same kinds of clothes, we didn’t let us use them because we had the feeling that we have to show other people that there are two of us.” (Mary)

Still, the identical twins in this study considered themselves equal with their sisters. They respected and loved their twin sisters, and thought that they are very much alike with them. Inevitably, comparisons and mutual competition could not always be avoided (see also McGuire & Segal, 2013).

“Well, of course we have had it a little [comparing]. You have wanted to support the other always but, in a certain way, there is this comparison issue, too. Especially, because there haven’t been other children, just the two of us. In some sense, you have always been compared to the other. Neither have you that, you know like singletons are used to it, that others are different than you. You have learned to deal with it.” (Sharon)

On the other hand, the interviewees’ stories included descriptions of unconditional support and care for the other:
“We never had the competition spirit between us. We were always sort of, for example, if you got an A in an exam, your first thought was 'I hope Kirsten got A+'. So, you kind of think that if your sister does better, it will help you, too. As if we both were doing better when one of us was doing well.” (Mary).

In this study, the identical twins did not report of any kind of negative, strong dependence on each other (cf. Leonard, 1961). They had perceived their sister as a resource, support, and protection; someone they could lean on in any situation. Despite their close and tight relationship, they had been able to develop as individuals in childhood, youth, and adulthood (see also Adelman & Siemon, 1986). In all, the relationship between these identical twin sisters appeared as a positive, lifelong relationship.

5. Conclusions and Discussion

This study focused on female identical twins’ descriptions of their identity development. As the findings show, their descriptions support earlier research in many ways. Still, this study showed even surprising differences in the quality of twins’ mutual relationships. This also supports the fact that even being identical twins does not mean that there are two similar persons but two different individuals, whose mutual relationship can vary by affinity, power, and other dimensions (see e.g., Penninkilampi-Kerola, 2007).

The perspective here focused greatly on the participants’ childhood memories. Actually, findings from twin studies challenge educators in homes and schools (Preedy, 1999). Twins have to share the parents’ attention already from their birth (Robin, Josse, & Tourrette, 1988), while singletons can enjoy full attention, care, and tenderness (Ellison et al., 2005). In practice, a twin’s moments alone with a parent are often interrupted as the parent has to check what the other twin is doing. Supposedly, parents of twins, triplets, and so on try to divide their attention equally with their children. However, this can be difficult if one of the children needs more time, for example, with eating or dressing (Clark & Dickman, 1984).

When a twin begins to realize his or her individuality and to see himself or herself as a separate person, competition or envy between twin siblings can occur (Hossain, Bisht, Segal, & Hershberger, 1999). Children differ from each other in the way they experience situations in which, for example, just one of the twins enjoys the parents’ attention. Some children may find this phase especially difficult because mother cannot be divided in two (Vandell, Owen, Wilson, & Henderson, 1988). Positive competition becomes possible if twins are able to build an image of a safe and good relationship with their mother or other caregiver. On the other hand, competition does not always occur if the twins’ needs for attention take turn naturally or in a balanced manner (Hossain, Bisht, Segal, & Hershberger, 1999). In addition, if both twins are able to and supported to find their own specific areas of competence and their strengths, their mutual competition may not become an issue—this also enhances their identity development (Penninkilampi-Kerola, 2007). It seems that it is crucial to pay attention to the strengths of each identical twin, and parents’, educators’, and other caregivers’ support may play the key role (Äärelä, Määttä, & Uusiautti, 2016).

In addition, the study implies that parents of identical twins need support for their parenting work. It is not easy to raise twins evenhandedly—regardless of parents’ willingness or awareness of the need for fairness (Glazebrook et al., 2004; Lutz et al., 2012). It is not unusual that parents feel insufficient in their parenting (Ellison & Hall, 2003) and lack of time (Beer et al., 2013). Everyday life with multiple children is also economically challenging and, according to some studies, may influence the quality of upbringing (Campbell, van Teijlingen, & Yip, 2004). Maternity clinics should prepare parents better for the challenges and special features of raising twins (Leonard & Denton, 2006), and support should continue after the birth of twins as long as parents need it (Bryan, 2002). Therefore, parents cannot treated as a one, homogenous group either (Amin, Lundborg, & Rooth, 2015).

The contribution of this study lies in the valuable data obtained from identical twins themselves. Their descriptions of their identity development and individualism are less heard. What can we learn from the research (Felson, 2014)? Even though upbringing and environment were similar to both identical twins, they develop as individual persons who differ from each other in many ways. This is how this study supports the criticism targeted at some twin studies. For example, identical twins’ similarity in cognitive skills is not self-evident (Sandewall, Cesarini, & Johannesson, 2014).

An eventually, the family’s social background or wealth does not determine the quality of upbringing but instead, parents’ awareness and attitudes matter (Gerdtham, Lundborg, Lyttkens, & Nystedt, 2016). Their knowledge of supporting their children’s ability to recognize and employ their own signature strengths (Seligman, 2011) which is the key to positive development, happiness, and flourishing in life.
References

Äärelä, T., Määttä, K., & Uusiautti, S. (2016). Caring teachers’ ten dos. “For the teacher, they might be just small things, but for the student, they mean the world”. International Forum of Teaching and Studies, 12(1), 10-20.

Aarnio, M., Winter, T., Kujala, U., & Kaprio, J. (2002). Associations of health related behaviour, social relationships, and health status with persistent physical activity and inactivity: A study of Finnish adolescent twins. British Journal of Sports Medicine, 36(5), 360-364. http://dx.doi.org/10.1136/bjsm.36.5.360

Abrams, S., & Neubauer, P. B. (1993). Hartmann’s vision. Identical twins and developmental organizations. The Psychoanalytic Study of the Child, 49, 49-59.

Amin, V., Lundborg, P., & Rooth, D. O. (2015). The intergenerational transmission of schooling: Are mothers really less important than fathers? Economics of Education Review, 47, 100-117. http://dx.doi.org/10.1016/j.econedurev.2015.01.008

Åkerman, B. A., & Suurvee, E. (2003). The cognitive and identity development of twins at 16 years of age: A follow-up study of 32 twin pairs. Twin Research, 6(4), 328-333. http://dx.doi.org/10.1375/twin.6.4.328

Adelman, M. B., & Siemon, M. (1986). Communicating the relational shift: Separation among adult twins. American Journal of Psychotherapy, 40(1), 96-109.

Burlingham, D., & Barron, A. (1962). A study of identical twins; their analytic material compared with existing observation data of their early childhood. The Psychoanalytic Study of the Child, 18, 367-423.

Calvin, C., Fernandes, C., Smith, P., Visscher, P. M., & Deary, I. J. (2009). Is there still a cognitive cost of being a twin in the UK? Intelligence, 37(3), 243-248. http://dx.doi.org/10.1016/j.intell.2008.12.005

Bryan, E. (2002). Educating families, before, during and after a multiple birth. Seminars in Neonatology, 7(3), 241-246. http://dx.doi.org/10.1053/siny.2002.0111

Cirillo, S. (1976). The process of identity in twins. Acta Geneticae Medicae et Gemellologiae: Twin Research, 25(1), 353-358.

Clark, P. M., & Dickman, Z. (1984). Features of interaction in infant twins. Acta Geneticae Medicae et Gemellologiae: Twin Research, 33(2), 165-171.

Conlon, J. L. (2009). One-whole or one-half: A case study of an identical twin’s exploration of personal identity through family perceptions. Retrieved from http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1862&context=etd

Creswell, J. (2009). Research design. Qualitative, quantitative, and mixed methods approaches. Thousand Oaks, CA: Sage.

Dale, P. S., Dionne, G., Eley, T. C., & Plomin, R. (2000). Lexical and grammatical development: A development of cognition in twin children. Child Development, 54, 317-330.

Dibble, E. D., & Cohen, D. J. (1981). Personality development in identical twins: The first decade of life. The Psychoanalytic Study of the Child, 36, 45-70.

Eaves, L., Heath, A., Martin, N., Maes, H., Neale, M., Kendler, K., & Corey, L. (1999). Comparing the biological and cultural inheritance of personality and social attitudes in the Virginia 30 000 study of twins and their relatives. Twin Research, 2(2), 62-80. http://dx.doi.org/10.1375/136905299320565933
Ellison, M. A., & Hall, J. E. (2003). Social stigma and compounded losses: Quality-of-life issues for multiple-birth families. *Fertility and Sterility*, 80(2), 405-414. http://dx.doi.org/10.1016/S0015-0282(03)00659-9

Ellison, M. A., Hotamisligil, S., Lee, H., Rich-Edwards, J. W., Pang, S. C., & Hall, J. E. (2005). Psychosocial risks associated with multiple births resulting from assisted reproduction. *Fertility and Sterility*, 83(5), 1422-1428. http://dx.doi.org/10.1016/j.fertnstert.2004.11.053

Felson, J. (2014). What can we learn from twin studies? A comprehensive evaluation of the equal environments assumption. *Social Science Research*, 43, 184-199. http://dx.doi.org/10.1016/j.ssresearch.2013.10.004

Foy, A. K., Vernon, P. A., & Jang, K. (2001). Examining the dimensions of intimacy in twin and peer relationships. *Twin Research*, 4(6), 443-452. http://dx.doi.org/10.1375/1369052012777

Gerdtham, U. G., Lundborg, P., Lyttkens, C. H., & Nystedt, P. (2016). Do Education and income really explain inequalities in health? Applying a twin design. *The Scandinavian Journal of Economics*, 118(1), 25-48. http://dx.doi.org/10.111/sjoe.12130

Glazebrook, C., Sheard, C., Cox, S., Oates, M., & Ndukwe, G. (2004). Parenting stress in first-time mothers of twins and triplets conceived after in vitro fertilization. *Fertility and Sterility*, 81(3), 505-511. http://dx.doi.org/10.1016/j.fertnstert.2003.10.020

Gottfried, N. W., Seay, B. M., & Leake, E. (1994). Attachment relationships in infant twins: The effect of co-twin presence during separation from mother. *The Journal of Genetic Psychology*, 155(3), 273-281. http://dx.doi.org/10.1080/00221325.1994.9914777

Hay, D. A., & Preedy, P. (2006). Meeting the educational needs of multiple birth children. *Early Human Development*, 82(6), 397-403. http://dx.doi.org/10.1016/j.earlhumdev.2006.03.010

Hossain, M., Bish, K. S., Segal, N. L., & Hershberger, S. L. (1999). Cooperation and competition between twins-peer and mother-child relationships. *Evolution and Human Behavior*, 20(1), 29-51. http://dx.doi.org/10.1016/S1050-5138(98)00039-7

Kaprio, J. (2007). Monikkouden yleisyys, geneettinen tausta ja biologia [The prevalence, genetic background, and biology of multiple birth children]. In P. Alkio (Ed.), Sylintäydeltä elämää–arki kaksosten ja kolmosten kanssa [Lap filled with life-everyday life with twins and triplets] (pp. 7-11). Helsinki: VL-Markkinointi.

Kujala, U. M., Kaprio, J., & Rose, R. J. (2007). Physical activity in adolescence and smoking in young adulthood: A prospective twin cohort study. *Addiction*, 102(7), 1151-1157. http://dx.doi.org/10.1111/j.1366-0260.2007.01858.x

Labuda, M. C., Svikis, D. S., & Pickens, R. W. (1997). Twin closeness and co-twin risk for substance use disorders: Assessing the impact of the equal environment assumption. *Psychiatry Research*, 70(3), 155-164. http://dx.doi.org/10.1016/S0165-1781(97)03045-X

Leonard, L. G., & Denton, J. (2006). Preparation for parenting multiple birth children. *Early Human Development*, 82(6), 371-378. http://dx.doi.org/10.1016/j.earlhumdev.2006.03.009

Leonard, M. R. (1961). Problems in identification and ego development in twins. *Psychoanalytic Study of the Child*, 16, 300-320.

Lerner, R. M. (2009). The Positive Youth Development perspective: Theoretical and empirical bases of a strengths-based approach to adolescent development. In C. R. Snyder, & S. J. Lopez (Eds.), *Oxford handbook of positive psychology* (pp. 149-163). New York, NY: Oxford University Press. http://dx.doi.org/10.1093/oxfordhb/9780195187243.013.0004

Linley, P. A., Joseph, S., Maltby, J., Harrington, S., & Wood, A. M. (2009). Positive psychology applications. In S. J. Lopez, & C. R. Snyder (Eds.), *Oxford handbook of positive psychology* (pp. 35-47). Oxford: Oxford University Press. http://dx.doi.org/10.1093/oxfordhb/9780195187234.013.0005

Lutz, K. F., Burnson, C., Hane, A., Samuelson, A., Maleck, S., & Poehlmann, J. (2012). Parenting stress, social support, and mother-child interactions in families of multiple and singleton preterm toddlers. *Family Relations*, 61(4), 642-656. http://dx.doi.org/10.1111/j.1741-3729.2012.00726.x

Malterud, K. (2002). Qualitative research: Standards, challenges, and guidelines. *The Lancet*, 358(9280), 483-488. http://dx.doi.org/10.1016/S0140-6736(01)05627-6

44
McGuire, S., & Segal, N. L. (2013). Peer network overlap in twin, sibling, and friend dyads. *Child Development, 84*(2), 500-511. http://dx.doi.org/10.1111/j.1467-8624.2012.01855.x

Miliora, M. T. (2003). “Losers” and “winners” within an intertw in dyad: A case of a twinship selfobject relationship of a twin. *Clinical Social Work Journal, 31*(3), 263-274. http://dx.doi.org/10.1023/A:1024032100966

Olivennes, F., Golombok, S., Ramogida, C., Rust, J., & Team, F. U. (2005). Behavioral and cognitive development as well as family functioning of twins conceived by assisted reproduction: Findings from a large population study. *Fertility and Sterility, 84*(3), 725-733. http://dx.doi.org/10.1016/j.fertnstert.2005.03.039

Pearlman, E. M. (1990). Separation-individuation, self-concept, and object relations in fraternal twins, identical twins, and singletons. *The Journal of psychology, 124*(6), 619-628. http://dx.doi.org/10.1080/00223980.1990.10543255

Penninkilampi-Kerola, V. (2006). *Implications of co-twin dependence for twins’ social interactions, mental health and alcohol use: A follow-up study of Finnish twins from adolescence to early adulthood* (PhD Diss.). Faculty of Medicine, University of Helsinki, Helsinki.

Penninkilampi-Kurola, V. (2007). Monikkojen keskinäinen suhde [The mutual relationship between multiple birth children]. In P. Alkio (Ed.), *Sylintäydeltä elämää-arki kaksosten ja kolmosten kanssa* [Lap filled with life—everyday life with twins and triplets] (pp. 39-51). Helsinki: VL-Markkinointi.

Pietilä, S., Björklund, A., & Bülow, P. (2013). “We are not as alike, as you think” sense of individuality within the co-twin relationship along the life course. *Journal of Aging Studies, 27*(4), 339-346. http://dx.doi.org/10.1016/j.jaging.2013.08.001

Pietilä, S., Bülow, P., & Björklund, A. (2012). Twinship and marriage-experiences during the course of twin relationships. *Review of European Studies, 4*(4), 45. http://dx.doi.org/10.1016/j.jaging.2011.10.002

Piontelli, A. (2003). *From fetus to child: An observational and psychoanalytic study*. New York, NY: Routledge.

Preedy, P. (1999). Meeting the educational needs of pre-school and primary aged twins and higher multiples. In A. C. Sanbank (Ed.), *Twin and triplet psychology: A professional guide to working with multiples* (pp. 70-99). London: Routledge.

Robin, M., Josse, D., & Tourrette, C. (1988). Mother-twin interaction during early childhood. *Acta Geneticae Medicae et Gemellologiae: Twin Research, 37*(2), 151-159.

Rubin, H. J., & Rubin, I. S. (1995). *Qualitative interviewing. The art of hearing data*. Thousand Oaks, CA: Sage.

Sandbank, A. C. (1988). The effect of twins on family relationships. *Acta Geneticae Medicae et Gemellologiae: Twin Research, 37*(2), 161-171.

Sandewall, Œ., Cesarini, D., & Johannesson, M. (2014). The co-twin methodology and returns to schooling—Testing a critical assumption. *Labour Economics, 26*, 1-10. http://dx.doi.org/10.1016/j.labeco.2013.10.002

Schave, B., & Ciriello, J. (1983). *Identity and intimacy in twins*. New York, NY: Praeger.

Schwartz, H. (1996). *The culture of the copy*. New York, NY: ZONE BOOKS.

Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and wellbeing*. New York, NY: FreePress.

Smith, J. A., Renshaw, D. C., & Renshaw, R. H. (1968). Twins who want to be identified as twins. *Diseases of the Nervous System, 29*(9), 615.

Stromswold, K. (2006). Why aren’t identical twins linguistically identical? Genetic, prenatal and postnatal factors. *Cognition, 101*(2), 333-384. http://dx.doi.org/10.1016/j.cognition.2006.04.007

Szajnberg, N. M., Skrinjaric, J., & Moore, A. (1989). Affect attunement, attachment, temperament, and zygosity: A twin study. *Journal of the American Academy of Child & Adolescent Psychiatry, 28*(2), 249-253. http://dx.doi.org/10.1097/00004583-198903000-00017

Tourrette, C., Robin, M., & Josse, D. (1989). Treating twins as individuals: Maternal educative practices. *European Journal of Psychology of Education, 4*(2), 269-283. http://dx.doi.org/10.1007/BF03172610
Vandell, D. L. (1990). Development in twins. *Annals of Child Development, 7*, 145-174.

Vandell, D. L., Owen, M. T., Wilson, K. S., & Henderson, V. K. (1988). Social development in infant twins: Peer and mother-child relationships. *Child Development, 59*(1), 168-177. http://dx.doi.org/10.2307/1130398

Webbink, D., Posthuma, D., Boomsma, D. I., de Geus, E. J., & Visscher, P. M. (2008). Do twins have lower cognitive ability than singletons? *Intelligence, 36*(6), 539-547. http://dx.doi.org/10.1016/j.intell.2007.12.002

Winestine, M. C. (1969). Twinship and psychological differentiation. *Journal of the American Academy of Child Psychiatry, 8*(3), 436-455. http://dx.doi.org/10.1016/S0002-7138(09)62232-9

Wray, N., Markovic, M., & Manderson, L. (2007). “Researcher saturation”: The impact of data triangulation and intensive-research practices on the researcher and qualitative research process. *Qualitative Health Research, 17*(10), 1392-1402. http://dx.doi.org/10.1177/1049732307308308

Yin, R. K. (2013). *Case study research: Design and methods*. Thousand Oaks, CA: Sage.

Zahn-Waxler, C., Robinson, J. L., & Emde, R. N. (1992). The development of empathy in twins. *Developmental Psychology, 28*(6), 1038. http://dx.doi.org/10.1037/0012-1649.28.6.1038

Zazzo, R. (1976). The twin condition and the couple effects on personality development. *Acta Geneticae Medicae et Gemellologiae: Twin Research, 25*(1), 343-352.

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