

TWIN STUDIES IN SOCIAL SCIENCE

A selection of works
by the students and
researchers of the Twin
Research Workshop



EDITED BY
ANDRÁS PÁRI – ZSÓFIA DRJENOVSKY
RITA HEGEDŰS – ÁGNES ENGLER



KINCS
MÁRIA KOPP INSTITUTE
FOR DEMOGRAPHY
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Preface

"Multiple births are a very interesting natural phenomenon, which is of great importance from a medical, social and statistical point of view. The question is, how is it created, what is the reason, how many species are there, and what proportion does it occur in each social stratum?" (Saile 1928: 33)¹ – can be read at the beginning of the first social science-focused publication in Hungary. In the past nearly a century, we have already received answers for many questions, but there are still a lot waiting to be answered, not only from a natural science, but also from a point of view the social sciences.

This edited study volume can therefore also be called a volume of encounters. On the one hand, because it provides a platform for the collaboration of different generations of researchers. Among the authors, we find university students, junior and senior researchers, whose interest in the topic is fulfilled outside the pages of the volume in talent management and other professional workshops.

On the other hand, the collection of studies also provides space for the meeting of different scientific fields and branches of science. In addition to the social sciences (mainly psychology, sociology, demography, education) focus, the relevant results of medicine and health sciences are also published.

Thirdly, the volume was published thanks to the cooperation of different institutions, since the authors and editors represent three different universities, and the publishing tasks were undertaken by a ministry background institution.

The editors of the volume, which has intergenerational, interdisciplinary and interinstitutional characteristics, did not make any significant changes in the text and style of the studies, as they intended to ensure and preserve the originality of the encounters and the individual signature of the authors.

The Editors

¹ Saile Tivadar (1928) A többes születések statisztikája. [Statistics of multiple births.] Statisztikai Szemle, 6. évf. 1. sz. 33–43. https://epa.oszk.hu/01800/01814/00001/pdf/Statisztikai_Szemle_EPA01814_1928_01_033-043.pdf (Accessed: 12-14-2023)

Insight into twin research with a social scientific focus

Twins. How special they are: because they are identical; because they can replace each other (Métneki 2005); because they have a special language (Drjenovszky – Hegedűs 2020); because they are a rare phenomenon worldwide (Pári 2022). These and similar extreme phenomena are what people usually think of when they hear the word „twin”. However, twins, twin pairs, twin families are much more than that for researchers. More than that, if only because it is no longer such a rare phenomenon. Due to various types of medicine, artificial insemination and medical procedures, the twin birth rate is slowly but steadily increasing (Pári 2014, Hungarian Central Statistical Office 2021), so it is becoming increasingly justified to give priority to this social group. And although the above-mentioned peculiarities may indeed characterise a proportion of twins, in reality it only affects a relatively small part of this group (e.g. language research suggests that twin language is present in only a fraction of twins and typically disappears by school age (Drjenovszky – Hegedűs 2021a)). It is also relatively rare for them to resemble each other to the point of confusion, since this occurs mainly among identical twins (and there not necessarily, either), while it is rare among opposite-sex twins and unisexual fraternal twins (Métneki 2005, Métneki – Pári, 2020).

The world of twins offers a wide range of research opportunities for social scientists. In the past and also today, it is one of the priority areas of biological research and medicine (e.g. Darányi 1941, Malán 1962, Métneki – Czeizel 1986, Tárnoki et al. 2020). So-called classical twin research focuses mainly on the separation of genetical and environmental effects. Tárnoki et al. (2020) has compiled the relevant knowledge, providing both the professional and the general public with a comprehensive overview of Hungarian twin research, with a focus on biology, medicine and epigenetics. The latest results of international twin research are presented in the journal *Twin Research and*

Human Genetics and at the International Twin Conference, which takes place at various locations. However, twin research is still a neglected topic in social research in our country. There are much less studies about the so-called twin-focused research, which focuses on the problems of twin parents and families on the one hand, and on the twins themselves, their personalities, identities and lives (Hegedűs – Drjenovszky 2020), and their special communication (Drjenovszky – Hegedűs 2021b) on the other. Although there have been quite a few papers in the field of psychology (Bagdy 2020) and linguistics (Laczkó 2012), and in recent years there are some studies in sociology (Drjenovszky – Hegedűs – Pári 2013, Pári – Palagyi 2022) and demography (Pári 2014, 2022), but their number is very limited. The great advantage of the second group of studies is that it shows that it is useful to distinguish not only between the two types of twins (identical and dizygotic), but also between sets of identical girls, identical boys, dizygotic girls, dizygotic boys, and opposite-sex twins (OST), i.e. five separate groups should be examined. Furthermore, it is not enough to research twins isolatedly, it is also important to look at their environment and its relationship with the twins.

The world of twins has intrigued not only the aforementioned researchers, but also an increasing number of university students. The number of theses focusing on twins has increased. The aim of this volume of studies is to showcase this research in a single publication, alongside the work of senior researchers. To this end, a selection based on the related works of sociology students of the Corvinus University of Budapest (BCE), the Károli Gáspár University of the Reformed Church (KRE) and Pazmany Peter Catholic University (PPKE) has been prepared.

The topics are seemingly diverse, but it is obvious how various questions and problems this area poses, and all of these encourage further exploration. Yet the studies are connected by several points, as each study focuses on the stereotypes and societal expectations around twins. How similar or dissimilar are they? Because, or even regardless of this, to what extent are twins compared or treated as a single unit? How strongly does this external expectation manifest itself, how does it affect the siblings' relationship, how strongly do they bond, how are they able to separate? How does their identity develop? How does all this affect the twins themselves, what

problems and conflicts does it create, and what extra benefits does it bring? What do we know about their health behaviour? What are their attitudes to having children?

Given the very low number of relevant social science research papers in the Hungarian academic literature (and the high number of popular science papers, most of which focus either on the specialities mentioned at the beginning of the introduction or on practical, everyday tasks and problems), we consider the following compilation to be a valuable contribution.

Boglárka Forrási's qualitative research focuses on the competition and comparisons of twins. Her aim is to show how conflict situations can arise from the fact that twins are typically subjected to an automatic comparison by the environment. The author points out that the problem of sibling comparison and competition is a prominent issue for twins, yet it is not a general phenomenon, but is specific to the distinguished types of twins (five types in sociological terms). The conclusion is that similarity plays a very important role in competition. Moreover, comparability is most pronounced in the case of identical twin girls, since their spheres of life are most intertwined, making it easier to compare the performance of these twin pairs. This affects their school, out-of-school and family lives. Most conflicts are also the results of rivalry arising from comparisons. However, the effects of this decrease in adulthood, as they learn to manage it. In other words, the 'specialities' that characterise twins – even the use of twin languages – are observed to diminish over time, typically fading or disappearing by adulthood. Presumably this is why we mainly find studies on twin children or young people, with little focus on adults. This is why it would be important to explore the life and characteristics of adult twins in the future.

Erika Fülöp, also interviewing young sets of twins, focuses on socialisation processes, including the stereotypes surrounding twins in the environment. In her analysis, she shows how environmental influences affect the lives of twins, and how they help or hinder the twins finding their own identity. The main assertion of the study is that while during the socialisation process, parents are the first „referent power” for children, which later shifts to peers, this is different in the case of twins. From a very early age, twins become „referent power” for each other (they define themselves in relation to the

other, look up to each other, motivate each other), and this will permeate their later lives. The author points out the difference of the parent-child relationship, since the mother is placed behind the other sibling in the order of importance, and that the parent must also make a conscious effort to ensure that this close bond does not hinder the development of individuality and individual fulfilment later in life.

András Pári examines Hungarian and international twin literature to answer the question whether the fertility pattern of twins differs from the fertility pattern of the general population. Is the demographic approach to delayed childbearing 'the higher the childbearing age of the woman, the more likely she is to have twins' also true for twins? Recently a number of medical, biological and genetical articles have been published on twins and twin births, but there are very few sociological articles on the subject. As it is a narrow and specialised group, they are usually not the focus of analysis in social research, but rather used to compare different social groups or family types. It is interesting that in the last two or three decades, the study of twins by zygosity has gained ground, as more and more countries are establishing twin registries for focused research. This has led to a growing number of research questions being answered, but comprehensive biological, medical – neurodevelopmental disorders, backgrounds of dementia, depression, cancer predisposing factors – and social, demographic studies (e.g. fertility patterns, childbearing propensity) on adult twins are still to be conducted.

Emese Tóth examines the stereotypes and expectations surrounding twins. In her qualitative research conducted among identical twins in secondary school, sociograms drawn by the subjects complement the interviews. The aim is to illustrate the roles that identical twins take on in a community, their place in the group and their involvement in the community. One of the main findings is that identical twins appear as a single unit in the class community, with little individuality. They often share the same friends, and typically occupy a central place within the group. This article also examines the expectations of twins and how they themselves perceive their roles. It demonstrates that the confusing of the children is indeed a major problem for identical twins, who also face a number of stereotypes that affect their behaviour. The author highlights the crucial role that being a twin, plays

in the lives of the subjects, significantly affecting their social relationships, their vision of the future and their self-image, as the constant struggle to distinguish themselves has a major impact on the development of their personality. This raises the possibility of a longitudinal study, following the twins' adult life trajectories, to investigate the evolution of major milestones (e.g., career choice, relationship development, workplace...) and the influence of the siblings themselves on each other at these crucial points. The author also proposes to extend the sociometric study to the rest of the community in order to find out how the situation of the twins is perceived from the outside. It would be interesting to compare the results with the twins' point of view.

In her interviews, Petra Mór explored how twins' lives are affected by their twin status. In this context, she investigated how twins experience the expectations placed on them, what roles they take, and how their twinship affects their life trajectories in general. Her results show that twins do indeed encounter a number of stereotypes during their youth – such as the expectation of the same appearance, performance or the assumption of telepathy between them –, which bothers them. They also show role-sharing, with the two members of the pair often behaving differently, partly as a result of expectations (competition, mothering). An interesting difference between age groups is that older twins seem to face fewer of these strong expectations, or to be less affected by them. Twinship is no longer as important in the lives of the older generation, and therefore they remember their youth differently, when their identity was more strongly influenced by the existence of a twin. Further follow-up studies are needed to make the picture clearer. Another fascinating finding of Petra Mór is that twin type does not affect her subjects' experiences of twinship. The small number of cases in the study does not make generalisations possible, but if the results were confirmed in a larger sample, they would suggest that the way twins appear and therefore the way they are treated, or the way they experience being treated, is not fundamentally genetically determined. So either societal expectations are really strong in the case of twins, or their being a unit as twins is great. Perhaps the best way to investigate this would be to examine non-twins with very little age differences.

The next study also focuses on external factors. Petra Pataki examines specifically social stereotypes. The author uses the method of content analysis, first by the secondary analysis of material from a previous study, and then by presenting an independent data set. In the former, she analyses the similarity of twins in appearance and behaviour, whether birth order has any significance for twins, whether there really is a supernatural bond between twins, whether telepathy really works, whether twins are friends, accomplices or enemies, and she also explores the effects of name choice. The paper is unique, however, in that it explores stereotypes in a very novel way: it uses the role-playing subculture to examine twin roles, exploring social attitudes towards twins, in which (to quote the author) ‘twins are often seen as schematically identical’. She also creates a so-called „stereotype index” to measure stereotypical thinking, for which respondents rated statements about twins on a four-point scale. The author’s main objective was to highlight that community stigma is an integral aspect of twins’ embeddedness in society. The small number of subjects can be seen primarily as an experiment, but the idea of creating an index is novel and its further development, refinement and wider application could point in a new direction in the study of the social perception of twins and the presence of stereotypes.

András Pári and Réka Palagyi used data from the Hungarostudy 2021 large sample survey to investigate the addictological characteristics of twins. Namely, their smoking and alcohol consumption habits. Their hypothesis is that smoking and alcohol consumption are related to psychological state and demographic factors. Along this line, they hypothesised that twins who are unsatisfied with any aspect of their lives will be more likely to smoke and drink alcohol, and that the attitudes of identical twins will be more similar than those of fraternal twins. It is interesting that, mainly due to the sample size, only a few cases showed significant results, but the trends observed in literature could only partially be supported. Overall, the zygosity of twins does not show any effect on smoking habits, nor is education level an explanatory factor in the intensity of smoking. Although, related to the latter, the higher education level of twins is associated with a healthier choice of devices, i.e. smokers with a higher education spend more often on better quality imitation smoking devices. In terms of alcohol consumption, twin

men on average drink more often and more heavily than women, and it also appears that men drink heavily more often. Twin studies clearly indicate that identical twins are twice as likely to be alcoholics than dizygotic twins, but the authors found no significant difference between the frequency and amount of alcohol consumption between identical and dizygotic twins.

Most Hungarian twin studies are typically qualitative studies, with a smaller proportion of quantitative studies, which also typically work with a relatively small sample (this is also reflected in the methodological choices of the selected student papers). However, a Hungarian twin database is currently being developed (Tárnoki et al. 2019), which holds further perspectives for those working on the topic. To increase the number of twin studies is not only an important demand from the academic world, but also from the wider public, as the everyday life of families with twins could well be improved by their results.

Overall, the studies presented here provide an insight into the world of families with multiple children of the same age, although the authors of this paper still believe this selection to be only a small slice of the potential for further research in this area.

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Competition and comparison: the source of conflicts for twins

Abstract

The aim of the study is to explore possible sources of conflict between twins, and to examine the issues of competition and comparison. Literature on the topic reports differences in twin conflict between monozygotic and dizygotic twin pairs, and international research findings show different propensities for rivalry. The present study involved two identical twins and four dizygotic twins, aged 18-23 years. The survey was qualitative, using an interview method. The results indicate that the main source of conflict among twins is rivalry arising from comparison. In addition, the research outlined that twins who do not resemble each other did not experience comparison from their environment, and therefore did not experience difficulties and conflicts in performing in the same areas of their lives. Twins often compared because of their looks found competitive situations difficult, with the majority of their conflicts arising from this. Our findings match the findings of other studies in Hungarian and international literature, and complement those by exploring the relationship between comparison and competition.

Introduction

There are twins in every society. Most people experience the phenomenon in the immediate circle of acquaintances. Despite this, the relationship of twins has always been seen as a mystery. In mythology, we encounter characters such as Castor and Pollux, Romulus and Remus, who represent different forms of twinship, their stories highlighting rivalries and contrasts when showing this special bond (Segal – Knafo-Noam 2018; Métneki – Pári 2020; Pári 2022). Although twin studies are becoming more and more widespread, most of them present twins from the biological point of view;

literature on the social relationships, conflicts and social perceptions of twins is scarce in Hungary (Drjenovszky – Hegedűs – Pári 2013). Nowadays twins are born more frequently, due to the increase of the average childbearing age of mothers and artificial procedures (Pári – Drjenovszky – Hegedűs 2015). In Hungary, the twin birth rate – „the number of twin births per one thousand live births” (Pári 2014:1) – was 22.2‰ in 1990 and 32.2‰ in 2012, according to the Hungarian Statistical Office (KSH). The twin birth rate has steadily increased, both nationally and internationally (Pári 2014, Pári 2022). This special sibling relationship has special effects on family life, and also influences the twins’ environment, so it is worth paying more attention to the development, relationships and conflicts of twins. This study focuses on exploring the impact of competition and comparisons on twin sibling relationships.

Theoretical overview

Being a sibling is a life-defining status in itself, as it is likely to be the longest-lasting relationship (L. Stipkovits 2016). Sibling relationships vary in a myriad of ways, influenced by family composition, sibling personalities, environment and so on. In the case of twin siblings, the quality of the sibling relationship and its effects on individuals become even more specific. Due to co-development, the relationship between twins becomes very close, and a kind of communication is already established in the womb (Laczkó 2012). The closeness of the twin relationship can also be observed in the use of language; siblings who are closer to each other tend to develop a „twin language” (Hayashi et al 2013:7, Drjenovszky – Hegedűs 2021a, Drjenovszky – Hegedűs 2021b). However, some consider twin sibling relationships to appear relevantly different from simple sibling relationships because they are studied in early childhood. One such is the study by Mark et al. (2016), who found that most studies where the close relationship of twins was prominently closer compared to that of non-twin children examined them at a very young age. They suggest it may be relevant to assess the differences of closeness of twin and non-twin siblings’ relationships at older ages. The majority of research, however, reports striking differences regardless of the age of twins when comparing twin and non-twin siblings. Monozygotic

twins place their sibling significantly higher in the attachment hierarchy than non-twins, but all three types of siblings (monozygotic twins, dizygotic twins, non-twins) have an important role in the lives of the other sibling (Schwarz – Mustafi – Junker 2015). The attachment between siblings is therefore typically strong, and there is also interdependence between them.

Competition between twins

Many people think that twins are almost inseparable, they are attached to each other, they are the most alike. These children share the most significant events of their lives, typically go to the same school, and have similar interests (L. Stipkovits 2016). However, Laczkó (2012) suggests that competition for better conditions already starts in the womb. The first-born twin, especially if its parameters are better, may dominate. Movement and speech development of the stronger child also tend to start earlier, possibly increasing inequality. The dominant child will also talk more, so the other twin tends to be more quiet and withdrawn, and have different social relationships. However, opinions differ on the impact of competition on twins' relationships. Conlon (2009), in his case study of identical twins, suggests that 'competition' (Conlon 2009:26) is too strong a negative term for comparing twin outcomes. In his view, their community necessarily expects them to be similar, and they achieve almost identical scores on tests. There is no competition between them, but because of their common socialisation and similar traits, they share the same interests and are happy to perform together, alongside rather than against each other. In psychological research by Segal and Hershberger (1999¹ in Segal 2018), monozygotic twins performed tasks more cooperatively, helping each other, with greater efficiency than dizygotic twins, who tended to attempt to outdo their sibling. Rivalry is more intense among fraternal twins, especially in same-sex pairs, with less rivalry in opposite-sex pairs (Fortuna – Goldner – Knafo 2011). According to Segal (2018), competition between identical twins is typically for the attention and affection from parents, while in other areas of life they tend to be more

¹ Segal, N. L. & Hershberger, S. L. (1999) Cooperation and competition between twins: Findings from a Prisoner's Dilemma Game. *Evolution and Human Behavior*, 20. 29-51.

supportive. Competition, however, may arise from treating twins as a unit and comparing them.

Treating twins as a unit, comparisons

Twins are seen as special by society. They are admired and parents are usually proud of them (Drjenovszky - Hegedűs - Pári 2013). It is often the case that twin children are dressed in similar clothes and given matching names², in order to meet the expectations of the environment: people expect a strong resemblance. Being treated as a single unit may have negative consequences on the twins (Drjenovszky – Hegedűs – Pári 2013). Peers sometimes have difficulty distinguishing between identical twins because of the high degree of resemblance, and this mostly has a negative effect on the siblings (Drjenovszky – Hegedűs – Pári 2013). According to L. Stipkovits (2016), children are not only treated as externally similar, but often their internal characteristics are also perceived as identical by their environment. In many cases, parents also consider them parts of a unit, talking to them at the same time (*e.g. go outside to the garden*). Situations like these may strongly contribute to twin fusion, and may have a negative impact on the healthy development of twin identity. According to the author, when ‘fused’ twins choose separate career paths in adulthood, move to different fields of higher education, move to different towns, this all may have a particularly negative impact on their mental health, leading to the development of anxiety disorders, panic disorders or other mental health problems.

In Conlon’s (2009) case study, twins are treated and distinguished by the family as two separate individuals, but this causes problems for their community. They are often given impersonal nicknames – the author gives an illustrative example, ‘Peat and Repeat’ (Conlon 2009:20) –, and are only called by their real names by those who can tell them apart. However, twins should be treated separately so that they can manage on their own later (Drjenovszky – Hegedűs – Pári 2013). However, similarity can have benefits not only for the parents through social recognition, but also for the twin

² According to Conlon (2009), this is not typical, parents rather choose distinctly different names to avoid confusion.

themselves (Hegedűs – Pári – Drjenovszky 2014). The Olsen twins are a great example for this, who have become famous in recent decades and whose success has been driven by their similarity. For society, this kind of eccentricity is attractive and appealing, so Conlon (2009) questions whether the actresses would have been this successful as separate individuals. However, it is not typical for twins to abuse their identical features (Drjenovszky – Hegedűs – Pári 2013).

The research

Methodology

To explore this topic, empirical data was collected by eliciting specific personal experiences of twin siblings using the qualitative interview method. Twin siblings aged between 18 and 23 were identified as the target group for the research. This age range was chosen because at this age, respondents are most likely to be still living in the same household with their twin, or to have moved out recently. This means that their memories from their childhood spent with the twin and the events and relationships they shared are still relatively recent. Twelve semi-structured interviews were completed during the research. It was important to explore the experiences of both twins in the research, so that by listening to their stories, more impartial results could be obtained. We interviewed one identical female twin pair, one identical male twin pair, one dizygotic female twin pair, two dizygotic male twin pairs, and a opposite-sex twin pair. Respondents were recruited using a snowball method. The twins were interviewed separately. By the end of the empirical data collection, twelve separate interviews were available, with an average duration of 60 minutes. As regards the educational background of the interviewees, ten of them have a high school diploma, and nine are currently taking part in higher education. Two are still studying at secondary school, and one respondent has a full-time job after successfully completing high school.

Results

In the presentation of the results of the research, special emphasis is placed on the relationship between twins, which are also compared according to the five studied categories (*monozygotic female twins, monozygotic male twins, dizygotic female twins, dizygotic male twins, dizygotic opposite-sex twins*). In the analysis, fictitious names are given to the interviewees to protect their identities. To make analysis simpler, twin pairs had aliases with the same initials, but in reality, none of our interviewees shared their initials. This clarification is important, as the phenomenon of twins having similar names has already appeared in the theoretical review (Drjenovszky – Hegedűs – Pári 2013), but among the respondents, this was only partially true to the identical twin girls, whose first names both consist of three letters. The names of all the others are easily distinguishable, and therefore not considered to be ‘matching’.

Respondents’ relationship with their twins

The interviewees’ relationship with their twins was explored by several questions and blocks of questions in the interview sketch. Respondents recalled their relationship with their twin from early childhood experiences up to their thoughts at the time of the interview. By mentioning events they had experienced together and activities they shared, respondents revived their memories, making it easier for them to recall their impressions of these events and periods. The emerging life events and emotions were analysed. In the following, I will illustrate the relationships of the twin pairs one by one, and afterwards, I will use these results to compare the different categories of twins, analysing the issues of competition and comparison.

Lilla and Laura – identical twin girls, 18 years old

Lilla and Laura went to the same kindergarten, to the same class in primary school and high school, and they had shared hobbies. They played the same sports from an early age, shared a group of friends and a room all their lives. Lilla proved to be the most talented and hard-working, both in their studies and in sport. Lilla was the family’s priority, her achievements were spoken of with pride, Laura was not often mentioned. In the educational

institutions, Lilla's results were slightly better, but this slight difference was also highlighted by their teachers: even with her 'good' grades, Laura was considered a poor student compared to her twin sister's excellency. Lilla was not affected by the above, she felt a bit sorry, but never considered herself more successful than her sister. According to Laura, the constant comparison and inferiority to her twin sister scarred her throughout her childhood, until she became tired of struggling to live up to the expectations, and decided to stop trying altogether. She never blamed her twin for this, nor did she mention her negative feelings to her, but she resolved these bad feelings within herself by deliberately creating an identity that was the exact opposite of her twin's: an extravagant, rebellious, bad student character.

„I listened to them saying I was the bad one, and I was like, okay then, I'll be bad.” (Laura)

Nevertheless, their relationship is balanced and strongly trusting, and conflicts occur very rarely.

Botond and Balázs – identical male twins, 21 years old

Botond and Balázs have a younger brother, very close in age. All three of them currently have a strong relationship, as the result of a conscious relationship-building process with their younger brother, but the bond between the two of them has always been close. They share less of their areas of life than the identical female twins above. Although they attended kindergarten together, in primary school, they were in separate classes. They also went to separate secondary schools, by parental choice. Botond and Balázs also consider this separation as advantageous, as it gives them fewer possibilities of comparisons.

„We were brought up in this way so that we would not be the half of a whole, but would develop individual identities” (Balázs)

Their relationship was characterised by a struggle for dominance from early childhood until they became adults a year or two ago. Balázs was in every way stronger and more open than his twin brother. He made friends easier, was more sociable and more confident. For Botond, this was a burden

till adulthood. He considered his brother to be better than him in everything, and although his parents encouraged him to compare himself only with his former self and not with his twin brother, Botond found it difficult to develop a confident self-image and to come to terms with his own gifts and weaknesses.

Dorottya and Dalma – dizygotic twin girls, 23 years old

The two girls are almost perfect opposites: Dorottya is more comfortable with girls, and her dressing style is feminine, using beauty products every day. She is less assertive and shy. Dalma, on the other hand, has made mostly boy friends since they were young, is self-confident and assertive, and easily stands up for things that are important to her. Their interests are very different. Although they finished primary school in the same class, they went to separate secondary schools, and did not share any hobbies. To the external observer, it is hard to believe that they are related, and their being twins is almost unbelievable.

Kristóf and Kevin – dizygotic twin boys, 22 years old

Kristóf and Kevin are much more similar in appearance and dressing than the dizygotic girls. They have two older siblings with whom they are on good terms, but they have always considered each other closest in the family. They were brought up similarly to our identical male twin interviewees: they went to the same institution but separate classes in primary school, and attended separate secondary schools. They found common ground in adulthood, but earlier both of them had a competitive attitude towards their twin brother. Their rivalry showed mostly in their hobbies, as they had no opportunity to compare their performance in formal education. They were footballers, playing on the same team, in the same position. Kevin was considered the more talented of the two, which was difficult for Kristóf, who always wanted to outperform his twin brother. Not having the opportunity to do so in sport, he tried to beat his twin in other areas, such as arguing when they had disagreements. Kevin eventually preferred not to mention any problems to him, feeling that Kristóf would communicate his truth anyway, according to him:

„He made a sport of it, when we argued, he would explain why everything was absurd, why it was the way he thought it was, why he was right.” (Kevin)

Competition affected all their common activities, games, chores, and they both felt it was important to do better than the other. This was enhanced by their shared perfectionism.

Gábor and Gergő – dizygotic twin boys, 21 years old

Although Gábor and Gergő are also dizygotic twin boys, like those above, their relationship is totally different. They have had an unperturbed, peaceful relationship all their lives. They were in the same class at both primary and secondary school, and their friends were the same for a long time. There was never any competition between them, which may be because of their completely different looks. Neither they nor their environment could compare them in any way, and there was no conflict between them.

„We look so different that we can't be lumped together.” (Gábor)

Tamara and Tamás – opposite-sex twins, 22 years old

Tamara and Tamás studied at the same institutions, in the same class, and played the same sport at top level. They both told an interesting story of how, when they had to draw a family portrait in primary school, they handed in identical pictures at the end of class, without having seen each other's work in progress. There was no competition between them, probably because of the incomparability mentioned earlier in the case of Gábor and Gergő. In the case of Tamara and Tamás, this phenomenon is much more prominent. As they are of different sex, they were not considered rivals in sports or at school, and their environment took it for granted that they would perform differently. They had no intention of outdoing each other in any respect, and rivalry never featured in their lives.

The interviewees all have close, unusual relationships with their twins. There are a number of differences between the five twin categories of the interviewees in terms of their relationship with each other, but as my research

is based on specific cases, qualitative data collection and a non-representative sample, I am not in a position to study the categories extensively.

Competition

In literature, various degrees of competition are mentioned between monozygotic and dizygotic twin pairs. According to Conlon (2009), monozygotic twins tend to have a cooperative, supportive relationship in competitive situations, also supported by Segal (2018): his research shows that outdoing each other is more common among dizygotic twins than monozygotic twins, but that twins are mostly characterized by cohesion. Laczkó (2012), however, argues that twins have a competitive relationship even before birth, and that this competitiveness is prevalent throughout their lives. The research revealed that the real source of conflict was not rivalry itself, but the fact that the interviewees did not like competing with their twin. In the case of identical twins, this was mostly experienced internally, not as open disagreements between them. Lilla and Laura, for example, took up the same hobbies and sports, and Laura was always the underdog. Since she could not handle this situation for long, she always ended up dropping out and giving up the activity. Lilla, despite her success, did not cope well with these situations either: she had a bad time outdoing her twin sister, and always wanted to support her. This was evident in their academic performance: Lilla tried to encourage Laura, to help her and better her grades, but she failed. The conflict between the two girls was resolved when the areas of rivalry were removed. They no longer played the same sport, and Laura had to repeat a year in high school, so they eventually went to separate classes. Interestingly, both girls find this situation beneficial- Laura's grades are now as good as Lilla's, and they also feel better, as they are not forced into competition any more.

In the case of Botond and Balázs, it is striking that they are completely different. According to Botond, there was no particular competition between them, only in football, but he didn't want to outdo Balázs in that either. Balázs proved to be more talented in sport, and it was difficult for Botond to come to terms with this. He did not want to compete with his twin brother, so he stopped playing football. According to Balázs, it was different

for him. He experienced competition in all areas of their lives, even in terms of romance. He wanted to beat his twin brother in looks, in studies, in sports and regarding girls. As he was more assertive and charismatic, more dominant, he managed to excel in everything, which gave him a great sense of pride. He liked to outdo his twin brother, which is in stark contrast to scientific literature, which suggests that identical twins tend to be supportive of each other. However, this phase for Balázs only lasted till the end of adolescence. He now regrets that this period was painful for his twin brother, and would no longer like to compete with him in any area. According to both of them, the areas of competition formed the most critical in their relationship. Regarding literature, the interviewees, except for Balázs, support Conlon's (2009) suggestion that identical twins have little preference for competitive situations with their twin.

Of the dizygotic twins, only one male twin experienced conflict due to competition. Kristóf and Kevin also played football together, and played music instruments as a hobby. Kevin found it hard to accept that Kristóf was better at music than he was, and Kristóf was not satisfied with his own underachievement in sports. Consequently, they both stopped the activities in which they were underperforming. Their everyday life was characterised by competition in other situations. Conflict between them was frequent, and they openly acknowledged their disagreements.

No competition was observed for the other pair of dizygotic male twins, dizygotic female twins and opposite-sex twins. Notably, of the six cases, the three where conflict arose due to rivalry involved twins who resembled each other. In the case of identical twins, this is even more remarkable, but Kristóf and Kevin also have markedly similar traits, both physically and in character. In the other three cases, the twins are all surprisingly different, so much so that even their being related may be questionable to an external observer. In conclusion, similarity plays a very important role in competition. This is achieved by comparability.

Problems of comparison

The twin pairs who do not resemble each other all said that they have never been compared, nor had their performance been measured against

each other, because their differences made it impossible for their environment to draw parallels between them. For these twins, it was a positive experience to attend the same institutions, to experience life events together at the same place, to spend time with the same people. However, if the twins look alike, possibly confusingly, their rivalries and conflicts are mainly the results of constant comparisons. One of them will perform better, and even if the conflict does not arise specifically between the two, the less successful member of the twin pair may have dominantly negative feelings by being constantly compared to a better 'look-alike'. Identical twin girls experienced this to the highest degree from their environment. As their areas of life also largely overlapped, it was an everyday occurrence that their performance was compared against each other. They felt being compared not only in educational institutions and sport, but also in the family. The difference between the two of them in their school performance was not decisive, yet the communication within the family gave Laura the impression that she had failed Lilla and was therefore considered a failure by everyone.

„When your sister is an A+ and you're only a B, obviously no one is going to say you're smart because someone almost the same as you can do better.” (Laura)

Laura thought that the solution might be to make herself the opposite of her twin sister, so that no one would be able to compare them. Her aim was to achieve the same situation as that of dissimilar twins: those who cannot be compared externally will not be expected to be similar in their inner values and qualities. The existence of such effects in twins' environments has been highlighted by L. Stipkovits (2016), who pointed out that people tend to expect similar traits when two people look similar. For Laura, the development of her own, completely different style played a very decisive role. If her twin sister wanted to do something she did, she would immediately move on to something else.

The identical male twins also had difficulties because of being compared, but not to such an extent as the female twins, due to their more separate lives. Still, they remarkably drifted apart around adolescence, when they deliberately formed separate groups of friends, and took care not to confuse them. When they ceased

altogether ceased to compare themselves with each other, they formed a common group of friends.

The interviewees, when not compared, are very happy to spend time together, and move easily in the same circles. This pattern can also be seen in the un-compared twin pairs, who have enjoyed doing activities together throughout their lives.

Summary

The study used a qualitative interview method to investigate the relationship between twin brothers and sisters, among twin pairs aged 18 to 23 years old, highlighting the issues of competition and comparison. As usually found in literature, the majority of the participants felt a closer bond with their twin than with their other siblings. The life events they experienced together varied greatly, with some doing almost everything together and others doing almost everything separately. The conflicts of the twins in the study typically stem from rivalry arising from comparisons, but they all learned to manage this by adulthood. The relationship of the interviewees with their twin siblings are seamless when they do not experience that their performance is compared. They like to do activities together and are happy to introduce their friends to each other. The results of this exploratory, small sample study can obviously not be generalised, and the study is also retrospective, i.e., looking back as adults may put things in a different light. Therefore, the problems of comparison and competition should be explored by further, large-sample, quantitative research.

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Twins as reflected in their environment

Abstract

The study focuses on the socialization processes of twins and the social expectations placed on them. I investigated how twins experienced their own socialization, what influenced them, what stereotypes they faced. I made 11 semi-structured interviews with twin pairs between age 21 and 42, classified into 5 groups (identical female, identical male, dizygotic female, dizygotic male, and dizygotic opposite-sex twins). The strength of the twins' relationship and the success of their integration into society are determined by the character they are born with, and their parental upbringing. The environment plays an important role in how they succeed separately, and how they find their own identity. Based on my findings, twins become each other's „reference points” in early childhood, and it affects their entire lives. They are mutually role models and motivators for each other, which is a unique driving force for them throughout their lives.

Introduction

The socialisation of twins is special, as they are a small group of society, integrated into society, yet forming a separate world. In my research, I investigated how twins perceive their own socialisation, and their perceptions on how their environment relates to them and their twinship. On sociological terms, there are five types of twins (monozygotic girl, monozygotic boy, dizygotic girl, dizygotic boy, opposite-sex). Parental influence determines at the start which stereotypes and expectations build up around them as they enter the community. I was looking for answers to the question of whether this leads to rivalry or to a closer bond between twins, making it more difficult for them to cope independently in life. It is important how twins perceive what it is like to be twins in today's society.

Theoretical introduction, presenting the world of twins

„The most complete definition of socialisation encompasses the entire range of phenomena. It includes the efforts of formal agents of socialization (parents, teachers and educators, adults) to transmit, to adopt, to 'pass on' existing norms. Also an integral part of it are the efforts and negotiation processes present in all the social relationships (friends, peers, partners, spouses, colleagues), in which partners 'develop' and construct steady expectations of each other” (Vajda – Kósa 2005:2). Socialisation is important and indispensable for survival in all societies. In every society, different conditions constitute the basic norms which, once acquired, enable an individual to be considered socialised if he or she 'thinks, feels, believes and acts in a way that is basically expected of a community of the given age, gender and social class'. (Vajda – Kósa 2005:12). Primary socialization takes place in the family, the members of which share a deep emotional attachment. Family members help each other and provide emotional security, especially for children. Emotional attachment impacts children's development, they learn patterns of behaviour, values of family and society are transmitted to them, so that they can eventually stand on their own. We learn many patterns of behaviour throughout life, but it is the patterns of behaviour learned from parents that are most deeply ingrained. Children 'store' these patterns, which are integrated in their later personal development (Dr. Bújna 2009, Vajda – Kósa 2005). Later, institutional education, i.e. nursery, kindergarten, school complements the parental patterns, but the primary example that lasts throughout life is always the parental example (Dr. Bújna 2009, Vajda – Kósa 2005).

Educational principles differ in every society and within each family. Things learned in the context of social learning become internalized over time, at which point the individual no longer conforms to external expectations but manages themselves on the basis of the learned norms of behaviour (Vajda – Kósa 2005). „An important role of socialisation is that in the process, a biological individual becomes a social being” (N. Kollár – Szabó 2004:27). Parents play a decisive role in primary socialisation. As

the child grows up and enters the community, the role of peers becomes increasingly important, they become the „referent authority for children” (N. Kollár – Szabó 2004).

The family unit is closely linked to society, and family members are connected to society as a whole. „The essence of the family can be understood by looking at the functions it performs in society as a whole, and in the lives of the individuals who make up the family” (Cseh-Szombathy 2006:6-7). Family and environment play an important role in the development of individual identities in twins. The way parents treat their twin children and the role they assign to them in the family is of primary importance. Both family and environment often treat twins as a single unit, not as separate individuals. Twins are often spoken to in the singular third person, are dressed alike and called twins instead of their own names (Mezei 2010). Twins share a ‘special’ attachment, unlike any other attachments they may have. However, the symbiotic relationship, occurring mainly in the case of identical twins, may hinder the development of their individual personalities. Research suggests that the development of the individual identity in twins may be delayed till the age of 3 or 4, whereas non-twin children develop their self-image by 2-2.5 years of age (Drjenovszky – Hegedűs 2021a).

From the moment they are born, twins are exposed to a certain discrimination, which can even be described as a disadvantage, as they are given „roles and labels”. Who is the smaller, the weaker, the stronger, the first-born... This way the parents facilitate the development of a certain dominance order between their children, which can lead to serious self-esteem problems (Mezei 2010). According to the consensus of several researchers, twins, especially identical twins are often expected, either by their parents or by the school environment, to be as similar in body and soul as possible. Twins and twin relationships have to meet several expectations from the surrounding world (Métneki 2005, Drjenovszky – Hegedűs – Pári 2013).

The environment can support them to loosen these ties, and thus avoid the disadvantages compared to non-twin children. According to psychologist Jenő Ranschburg (Mezei 2010), a lot depends on kindergarten educators, who pay attention to the children separately, and treat them as separate individuals. Later on, it is better for them to go to separate classes, but in the

same school, to help them integrate into the community and find their own identities (Mezei 2010).

There is also a consensus among twin researchers that twins may show signs of this close attachment by being less able to cope on their own, and finding it hard to find their place in society (Drjenovszky – Hegedűs – Pári 2013, Csibra 2002, Métneki 2005, Mezei 2010). This often causes separation in adolescence or later challenging and painful. It can also cause problems forming relationships, choosing a spouse, or even the success of a marriage may be impacted, if the twin more affected by the separation or both twins are trying to replace the missing sibling. Research shows that identical female twins form the strongest bonds. They are followed by monozygotic twin boys and opposite-sex twins (Drjenovszky – Hegedűs – Pári 2013).

Parents and the environment play a huge role in ensuring that twins are treated separately, and talked to as much as if they were non-twins. Verbal expression is essential for learning and also in adulthood. In the upbringing and socialisation of twins, special emphasis should be placed on parents talking to them separately and encouraging them to communicate and play with other children. In their upbringing, parents should help twins to find their own tastes, interests, voices and ways of expression, so that they can grow up as independent individuals, and become adults without needing the „other”. To feel complete on their own and to dare to communicate with the outside world and approach others (Métneki 2005, Laczkó 2012, Drjenovszky – Hegedűs 2021b).

Methodology

In the framework of my research, I conducted 11 semi-structured interviews with the five types of twins (monozygotic female, monozygotic male, dizygotic female, dizygotic male and opposite-sex), aged 21–42. The interviews were conducted online, during October - November 2021, via Teams and Messenger apps, due to the Covid 19 pandemic. Among my interviewees, some were from the country, and some were expatriates. I could not have visited them in person anyway. The audio was recorded and a verbatim transcript was made. The questionnaire consisted of 60 questions and sub-questions, supplemented by a 10-word association section. The

duration of the interviews is between 21 and 47 minutes. I contacted my interviewees through acquaintances, using the snowball method.

I structured the analysis according to life phases, from early childhood to adulthood. I looked at parental and environmental influences to see what responses they elicited in the twins. I provide a thematic treatment of the interviews, organizing the findings around four major questions: what, if any, impact did parents have on the twins? What is the role of the community: stereotypes, expectations, developing rivalry? What factors had the greatest impact on the formation of the twins' personal identities? In what do they perceive themselves different from non-twins?

Results

Parental influence

Parental influence is the determining factor in childhood. During this period, the desire to be different was more prevalent in dizygotic twins, but they were not yet able to succeed. In the case of the identical twin brothers, the mother's excessive fear for the twins resulted in delaying the twins' exposure to the world, and thus in the development of their independent identities. By the age of 14, they themselves wanted to go their separate ways, perhaps as a result of the overprotective maternal influence.

„Well, we had a special case because our mum, let's say out of kindness and anxiety, but she was ... a great mother hen ... I remember when I was about 14, Armageddon came when my dad said well, that's enough, I'll take over the upbringing of the children on my own. And then the world opened up. Before that, I more or less wasn't even allowed to the playground. So, I say that I had a lot of friends before that, but they were more like schoolmates, and those were obviously common. Our whole adolescence, our life, our youth started around the age of 14, to open up. So, separate friends, separate company, strange events. I'd like to say earlier, but we sat at home and played together. So my brother had me and I had him.” (Zsolt)

Also in the case of the identical girls, most of their friends came from the parents' circles. They also had common friends from kindergarten.

„We have a very old friend, way back from kindergarten... her name is Timi... her parents were friends of our parents, and we were always friends with her.” (Orsi)

The relationship is similar in the case of a pair of opposite-sex twins at preschool age. The parents sent the children to the same kindergarten and group, make them play together, so they share all their friends. Later, during high school, their group of friends changed because of their different interests and gender. In the teenage years, parental influence weakens anyway, and children start to become more independent.

„Well, not really, because I remember playing football with my brother's friends, for example, so I kind of hung out with his friends. And we had those friends in the stairwell... in the block we grew up we grew up in... We had pretty much the same friends I think from kindergarten, and maybe even when we were in high school...” (Annamaria)

Overall, the parenting strategies were very similar in the case of twins, whether boys, girls or opposite-sex. These children had to go everywhere together, because it was safer, and simpler for the parents, as they did not have to collect them from separate places. So the twins' bond remains strong at this age and their friendships are the same. The development of their personal identity is pushed to the background.

The choice of secondary school was the decisive point in the lives of all twins, and in most cases, the parents did not interfere in their choice, or whether they went together or separately. Parental influence had by this time changed, becoming much more permissive.

Literature suggests that the parental socialisation effect is dominant in early childhood, becomes less and less prevalent as children grow, but it affects us throughout our lives. Our first gut reactions to situations will always be what we have learned and seen from our parents (Dr. Bújna 2009, Vajda – Kósa 2005).

Later on, as Katalin N. Kollár and Éva Szabó (2004) put it, peers become the role model, the „referent authority” for children in the community. As children enter the community, the role of peers becomes more important, instead of the parental model, they become the „referent power for children” (N. Kollár – Szabó 2004). Twins, because of their special attachment, are observed to be each other’s „referent powers”. If the other twin makes something and it works, they try it much earlier than if someone else had done or said it. One of the identical male twins mentioned that he had „fought” their mother to go out when he was 16 or 17, so his brother had an easier time. Several mentioned that they ask for their twin’s opinion, and take the advice to heart. It is easier for them to take on new things if their twin is supportive or has set a good example. In this way, they help each other on their way to adulthood, and also later as adults. Their lives are uniquely influenced by the fact that they become each other’s „referent power”. This is unique and special driving force that helps them through all difficulties. They are unaware that they have a source of energy that only twins have. They simply use it and it works.

„I think that’s a very good thing about twins, that I find it difficult or harder to accept things from others, but if I see that my twin likes it or has tried it and it’s really good, I don’t question it.” (Zoltán)

„Whenever I make a big decision, like changing jobs or a relationship, I always ask for her opinion.” (Orsolya)

The more the parents treated the twins as a single unit, or even restricted their friendships out of overprotection, the more they wanted to have their own space. For example, the desire for a room all to themselves, where they could invite their separate friends and not disturb each other. Separate environment, a separate school so that they could finally do something on their own. A separate birthday cake was also mentioned by the female member of the opposite-sex twins.

„I think it was just the fact that we did everything together and we were never apart. And there’s an individual decision phase in you that you have to go separate ways just for that. This was more of the career choice part. I think we definitely said we were definitely going to separate.” (Zsolt)

Twinship stereotypes

When the environment learns about the existence of a twin, reactions vary according to twin type. Dizygotic twins do not resemble each other as much as identical twins, so they often not believed to be twins. One of the stereotypes associated with twins is that they are very much alike inside and out. Their resemblance to each other and their „mystical” connection with each other comes to the fore in questions asked of twins.

„Well, my God, there really is another person who looks like you, and I said no. We’re fraternal twins. So everyone is surprised...” (Réka)

„Everybody, like: seriously, really? Because I think it’s still kind of a curiosity, and I think there are a lot of twins, but there are people who don’t know any twins at all...” (Orsi)

„...And then come these questions. Really? And do you look the same? and if he hurts, do you too...” (Zsolt)

Rivalry between twins

Environmental expectations of twins, usually based on stereotypes, can cause unnoticed tension between them, which manifests itself as rivalry or a desire to be different. Rivalry is more pronounced in male twins, but it may also be present among female twins. Literature suggests that rivalry is more typical to identical twins. Twins want to outdo each other, fight for better positions and for the mother’s attention (Drjenovszky – Hegedűs – Pári 2013, Csibra 2002, Métneki 2005, Mezei 2010). According to the interviews, the

female and the opposite-sex twins were more likely to share their knowledge and thus help each other. They emphasise their uniqueness, either in one way or another, by rivalry or by representing their special knowledge to the outside world.

„So I continued my studies. My brother started it anyway, but then he dropped out. So I'm the first to graduate in the family. Hopefully also the last.” (Zoltán)

„...And, I still don't care if someone won or lost, or who is earning more money, but anyway, I became a leader before him.” (Zoltán)

„It was deliberate, because the difference in knowledge was there. So my brother couldn't have done what I do here at Corvinus...” (Lili)

The word ‘*rivalry*’, mentioned at the end of the interview, was mostly related to learning abilities and achievements, in the sense that the parents expected them to have similar results. The words they associated with - *rivalry* - were „*play*”, „*enemy*”, „*bull*”, „*jealousy*”, „*healthy*”, „*boy - girl*”, „*aggression*”. They all reacted according to character to this word, no differences between the twin types can be detected in this respect. Most words give a negative connotation to the idea of competition. Due to their twin status, the interviewees are more exposed to comparison. This can lead to involuntary competition with each other, which is in turn more stressful, due to their stronger attachment. It is harder to compete with someone who is „like me”. The weight of the bond between is a real burden. There are situations when someone knows one of the twins, and expects the same from the other. People believe that if they know one twin, they know the other as well.

„Well, there was no such specific comparison... our parents expected us to study equally well, but it's probably so general, so it's not from being twins, I guess.” (Gábor)

„By the way, I remember the first days when I met his boss and he told me that your brother is pretty good, so he set the bar pretty high and it's going to be hard to beat him. That was my first day.” (Zoltán)

The development of independent identity

Understanding and appreciation are important for everyone. For twins, they is even more important, because for them the development of an independent identity can be delayed, causing internal uncertainty. Literature also highlights the role of parents and later those involved in the upbringing and education of children in dealing with children separately, in order to support the development of their separate individualities and to loosen their „common isolation” (Drjenovszky – Hegedűs – Pári 2013, Métneki 2005, Mezei 2010). The twins' attachment can create a kind of symbiosis in which they constantly support each other, complement each other, and thus reach a point later in their lives where they say, „I am now alone and I have to be able to stand on my own in life”. A non-twin child faces with this situation the moment their mother leaves them at day care. Not twins. They get this much later. In some cases, only around adolescence. My interviewees also mentioned situations and events where they missed their sibling, and wanted to have them around.

„I feel that I don't feel so good on my own even now, even as an adult. Let's say when I got divorced and then... I felt then that it was obviously a difficult situation, but I still feel that I can't do it alone. No. I don't know. So I'm not the independent type... I always attributed it to the fact that I always had my brother and obviously my parents, and that I'm not so independent.” (Annamaria)

Being a twin

Although some said that they did not feel that twinship was more than a normal sibling relationship, many of their sentences proved that their

relationship, their shared socialisation was a very special bond for them. The situations they experience together as children and later as adults trigger similar or identical reactions. In one interview, it was said that having been brought up by the same ‘parents’, similar influences provoke similar reactions. Littvay and Závecz (2020) also mention in their research on behavioural genetics that our responses to stimuli from the environment can be explained by the interaction of our individual genetic characteristics and the environmental factors that influence them.

„I don't feel special, but I do feel my situation is special, that I have a brother who is more like a friend. Someone who doesn't have a twin can never experience what a friend a twin makes. So, we will never fight, very rarely anyway, but it will never be the case between us that we will never talk, that I will tell you in an interview that I haven't talked to my brother in twelve years, I have no idea what's going on with him. And maybe that's what's special.” (Zoltán)

Most of them feel special because they were born twins. They do not feel alone in the world. They learn more quickly about the concept of sharing and about looking out for someone other than themselves. This is a really useful advantage of twinship (see also: Hegedűs – Pári – Drjenovszky – Kónya 2014), as these skills are much needed in life.

„I think it's a pretty good thing. And honestly, that you're not alone, that feeling, and that you're not selfish I think...” (Molli)

„Otherwise, I think it's a special thing. I think people understand it in a broad sense. Maybe what they don't understand is why you're so attached to your other half. So that, for example, somebody might think it's stupid that we talk every day on the phone... They might not understand that for us it's also a connection to know something about each other every day, even if it's only on the phone... maybe for somebody

it's too much, but that's what I'm saying, that they might not understand why we need that." (Orsi)

Summary of results

The results clearly show that parents play a crucial, and the environment a significant role in human development. In the case of twins, for example, in the strength of their attachment and thus the difficulties they have when developing an independent identity. The stimuli provided by parents can result in a lifelong bond or even a lifelong tension in twins, which can be exacerbated by social relationships and expectations. One of the main findings of the research is that twins become each other's „referent power" in their early childhood, which still remains in adulthood. They trust anything without hesitation that has worked for their twin. This is an extra source of energy and inner encouragement for them. This is a real twin trait.

Summary

Twins are still considered unique by their environment. Interviews with twins show that their parents almost invariably treat their twin children as a single unit. Even later, when they enter a community, there is no definite separation in the way they deal with their children, in order to help them develop their personal self-image. The majority of the interviewees said that they considered their twinning to be special. Their environment also reflects this, when their twinship comes to light. The fact that they have an everlasting friend in the person of their twin was perceived as a benefit by the interviewees. They are the same age, they socialise at the same time, they are exposed to the same influences, and thus, very similar in their thinking. However, this is also a disadvantage, because it makes it much more difficult for them to become separate individuals, to be detached from their siblings. They carry this ambiguity, which sometimes appears as a disadvantage, sometimes as an advantage, but unfortunately their environment perceives little of it. The myths surrounding them are still more strongly embedded in the public consciousness.

Limitations of the research and further suggestions

One of the limitations of the research is the scarcity of memories from preschool and school age. Another is that the interviewees are at different stages of life, so not all questions were relevant for all of them. Some questions came unexpected, as the interviewees had not considered their own twinship to such extent.

By increasing the number of interviews, the phenomenon of „referent power” among twins in early childhood could be confirmed and studied in more depth. Twins become „referent powers” for each other, and remain so all their lives, and, without them being aware of it, it simply works. It would be worth exploring this issue further: from childhood to adulthood, to locate the moments when this is clearly expressed, and thus becomes a unique source of power for twins.

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Fertility patterns in families with twins and the twin population - review

Abstract

The aim of the study is to present the fertility patterns of twins based on the available literature and to outline the demographic background of twin births. Since this topic affects a special area, the literature deals with the question of the fertility of twins on a small sample and in an exploratory manner, since it is an extremely small demographic group. On the other hand, we know much more about twin births, so presenting the fertility pattern of twin parents is a suitable starting point. An interesting and less researched question is whether twins continue the same fertility pattern as their parents, namely, in the case of dizygotic twins, the parents' delayed childbearing age, while in the case of monozygotic twins, genetic and other biological factors are definitely present. It is particularly interesting whether any differences or similarities can be observed in the five twin types (MZ female, MZ male, DZ, female, DZ male and DZ mixed pair), either compared to each other or compared to the fertility pattern of the entire population. Based on the results, it may be stated that no clear patterns arise, but the attitude of twins towards having children can be influenced by parenting patterns, relationship attitudes, and the experience of sibling relationships. There is no significant difference in childbearing attitudes between twins according to zygosity, however, we did not find an answer to what characteristics the five types of twins might have.

Introduction

Twin research is becoming more and more prominent nowadays, and the results are reported in several medical, biological and genetic articles (Euro-Peristat Project 2004, 2010, 2015), but in many cases, further questions arise, prompting researchers to carry out new studies. Twins form an extremely

exciting and specific, but socially narrow group (Smits-Monden, 2011; Pison et al. 2006, 2015; Pári 2011, 2022b). Research in this area has become a focus because of the increasing number of twins, typically dizygotic (DZ), born in recent decades (Monden et al, 2021), and biological, medical and sociological questions related to their genetic characteristics and adult twins remain to be answered (Pári – Drjenovszky – Hegedűs, 2015; Métneki – Pári, 2020).

Multiple births mean on the one hand mothers giving birth to multiple babies at a time, and multiple babies from a single birth. From these, at least twice as many babies are born alive at a time. Twin birth rate can be calculated from the latter, which is the ratio of live twin births to total live births. However, it is important to bear in mind when interpreting these ratios that they are also influenced by factors that affect births, namely the number of other multiple births, i.e. triplets, quadruplets, quintuplets, etc., and infant mortality. In 2018, 89,807 children were born in Hungary, of which 3008 from multiple births. Of these, 2940 were born as twin pairs, and 68 as triplets. The last quadruplet live birth was recorded in Hungary in 2016, and quintuplets were born in 1987, according to official data. The twin birth rate (the number of twin births per 1,000 live births) was 32.7‰ in 2018, which is the highest in the last few years (Source: KSH, Information Database), and is above the European average.

In Hungary, based on my estimations, approx. 140-170 thousand pairs of twins might live, that means that approx. 260-320 thousand people who have or ever had a twin. The exact number is difficult to determine, because different administrative registers and official statistics record the number of twins in different ways, and the data for special research purposes are therefore not registered at all or only partially (Pári, 2022a).

Background on twin births

Sir Francis Galton (1875), an English anthropologist, was the first to conduct twin research. He was the first to observe that if identical twins were raised under identical environmental conditions from the beginning, they would be exactly alike. (Biological typing of multiple births: twin births account for the vast majority (97-98%) of multiple births. Literature distinguishes between two types of twins: monozygotic (MZ) and dizygotic

(DZ). The two types of twins are formed in completely different ways: monozygotic twins have a normal conception, i.e. a single sperm cell fertilises a single egg, but it later splits into two for some reason, and the two embryos become implanted separately in the uterus. Their genetic make-up is thus (almost) identical, which is why monozygotic twins resemble more than dizygotic twins. In the latter case, two sperm cells fertilise two eggs. Thus, two independent conception events take place, with the special feature that the siblings are conceived and born (almost completely) at the same time (Czeizel 1976, Darányi 1941).

Galton observed, however, that in reality, monozygotic twins are not entirely identical, there are minor and major differences, and that since their genetic make-up is identical, the difference can only be attributed to the environment. In his 1876 work, he examined the relationship between genes and environmental influences (Darányi, 1941). Twin studies can therefore be used to distinguish between inherited and acquired traits.

Hellin (1895) found some regularity in multiple births, namely, if one set of twins is born for every 'n' number of singletons, then there is one triplet for every n^2 pregnancies, and one quadruplet for every n^3 births. It is important to note that the rule is applicable to spontaneous conceptions (Fellmann – Eriksson 2002, 2009). According to Hellin, in Europe at the time (late 19th century), the number fitting the form was generally $n=89$. Of course, this varied from country to country: in Scandinavian countries, 'n' took a lower value, while in Southern European and Eastern countries, it was higher. In recent years, in Hungary, this value has been around 60-65 (Pári, 2015), so the probability of multiple births has increased considerably since Hellin's time, i.e. fewer births are sufficient for a high probability of a twin birth. Behind all this is the postponement of mothers' childbearing to a later age, the increased use of assisted reproductive techniques and artificial insemination, and the wider use of fertility-related drug treatments. Acsádi and Czeizel (1970) already observed that if a woman has a child at an older age, she is more likely to conceive twins due to biological, genetic, environmental and demographic influences. Another major finding of Czeizel (1976) was that twin births are due to hormone secretion in the mother's pituitary gland that regulate sex hormones, and the extent of the secretion.

The very first Hungarian demographic and statistical paper on twins was written by Tivadar Saile (1928) both French and Hungarian. He was the first to analyse the frequency of twin births in Hungary in the period between 1900 and 1926, and his important finding was that the age at which mothers gave birth to children played a prominent role in multiple births.

The impact of twins on mate choice and sibling relationships

While medical studies have primarily used twins as a tool to investigate the heredity of certain diseases, little attention has been paid to the twins themselves, their emotional lives and their social relationships. Emőke Bagdy focused on the latter aspects, analysing, among other things, the mate choice patterns of twins, the closeness of the twin relationship and the specific twin phenomena observed, such as e.g., using their own language (Bagdy, 1983a). The latter, however, only affects a relatively small part of twins, as later studies have shown (Drjenovszky – Hegedűs 2021a, 2021b). The close affection between siblings makes mate choice difficult, and they have difficulty leaving the sibling bond. They fear that they will not have such an intimate relationship with their partner as they had with their sibling (Bagdy, 1983b).

According to Zazzo (1960), twins are in fact each other's prisoners, unable to separate, and thus unable to form normal adult relationships. Using data collected in Paris, he found that the proportion of unmarried adults is indeed higher among twins. He explained his findings by the fact that the intimate and happy twin relationship from birth limits the efforts twins make to become independent, so that there are fewer twins capable of forming mature relationships. (Zazzo, 1960). It is a statistical fact that fewer twins marry (Bagdy, 1983a). In researching the psychosexual behaviour of twins, Métneki and colleagues (2011) found that the divorce rate was higher among monozygotic twin women than among other groups. However, a positive trend can be observed in the past decade: the number of marriages has doubled, and the number of divorces has fallen (Agócs – Balogh, 2020; Murinkó – Spéder, 2021), but no information is available on the relationship preferences of twins during this period. In our country, before the of 2010s,

the divorce rate was high, but for identical twins, this is linked to other factors as well, in addition to the usual reasons. Closely related twins have difficulty in finding a partner with whom they can understand each other as well as with their sibling. Often, the twin bond remains stronger than the marital bond, which can lead to conflicts within the marriage, sometimes even divorce. This also affects the twins' willingness to have children and fertility patterns.

Stewart (2000) studied twins in the social structure of sibling relationships. The study analysed the role of twins, in contrast to that of non-twins, in the context of cultural expectations, and found that the fact that they are not treated as individuals (one), but as a unit (two as one), in many cases affects the development of the twins' personality and later life, including mate choice. Society's attitude to twins is as important in their personal development as that of their immediate environment, the family.

The role of assisted reproductive technology (ART) and infertility

In Hungary, the proportion of twin births to live births has increased significantly over the last nearly 25 years (Pári, 2014). Until the late 1990s, twin births reflected the total number of births quite proportionally, their trends did not differ particularly. Afterwards, however, the number of twin births and thus the twin birth rate rose spectacularly, alongside the decline in singleton births. This is mainly due to changes in the legal regulation of assisted reproductive techniques.

Chapter IX of Act CLIV of 1997 on health regulating special procedures for human reproduction, and the Ministerial Decree 49/1997 (XII. 17.) on infertility treatments available within the framework of public health insurance made it possible to participate in assisted reproductive procedures, as five types of treatment became free of charge for infertile couples. To ensure success, more embryos were implanted in the mother's uterus and more fetuses were born, thus increasing the number of multiple births. Following a change in the law in 2001, it became possible to have a second pregnancy after the success of the first, free of charge within the five funded treatments, but to be paid for afterwards.

In recent years, the regulations relating to infertility procedures have changed significantly. „Specific tests and interventions for human reproduction, as well as gamete and embryo donation, may be started at the expense of public health insurance until the woman reaches the upper limit of her childbearing age, but not later than the age of 45. Since 2020, the system of infertility care in Hungary has been significantly reformed, with 100% subsidies for medical treatments, the abolition of the performance volume limit for clinics performing state-funded IVF treatments, the public financing of diagnostic services, the reform of the financing of artificial insemination, and the state provision of infertility treatment. Overall, the amount of funding for infertility treatment has almost doubled compared to 2019. Priority funding for IVF treatment programmes could result in a few thousand additional births, calculated by a birth rate of around 90,000 per year.” (Vesztergom – Szomszéd – Balogh – Baraté, 2021:22). According to legislation in force, from 1 July 2022, only public infertility clinics will be able to treat eligible women in Hungary, and from 30 September 2021, no new procedures will be allowed in private clinics.

In general, 30-35% of women from European reproductive institutions who have undergone assisted reproductive procedures have a child, but this proportion is also highly age-dependent. In the course of assisted fertilisation, more babies may be born from several fertilised eggs and implanted embryos. While twins make up usually 2-3% of natural pregnancies, this rate has been around 20% for assisted reproduction in recent years (Euro-Peristat Project 2004, 2010, 2015). In Europe, most assisted reproduction procedures are performed in Denmark, Belgium, Iceland, Sweden and Slovenia. Assisted reproductive procedures are regulated in 3 different ways:

- through voluntary guidelines
- through government regulation
- through the social security system: the reimbursement of costs.

Typically, assisted reproduction procedures tend to be more strictly regulated. Access to the treatments is generally tied to social conditions, above all relationship status. Most countries allow sperm and egg donation, but the donation of embryos is much less commonly allowed. There are no accurate records, but it is estimated that one in five couples have difficulties

having children. It is important to emphasise that infertility is caused roughly equally by male and female deficiencies. Estimates based on international surveys (ESHRE) suggest that one in seven couples in Hungary is infertile, with their number estimated at around 150,000. Hungarian families also conform to the world trend of delaying the birth of the first child.

The number of women in Hungary who only have their first baby at the age of 35-40 is also rising steeply. From the 1970s to today, the proportion of first-time mothers aged 40 or over has increased sevenfold. Such significant delaying of the birth of a first child is surprising, as in research on young people's future plans, both men and women plan to have their first child at an earlier age (somewhat before the age of 30), with even earlier times for starting a family in the younger age groups (see e.g., Kopp 2008, Makay 2013, Engler 2014, Engler – Pári 2021, Engler et al. 2022).

Internationally, nearly 30% of children born in IVF facilities in the 1990s were twins. It is important to note that the proportion of triplets was around 0.5-1% of all children born from artificial fertilisation multiples, about 15-25 times higher than the proportion of triplets born naturally (Zeitlin, 2008; Euro-Peristat Project 2004, 2010, 2015). It is interesting to note that the proportion of triplets within multiple births has increased in recent decades. This phenomenon was therefore a precursor to the sharp rise in twin birth rates that started in the 1990s. The increase in the proportion of multiple births, including triplets, has been significantly influenced by the transformation of the political-economic system. After 1989, our country became more open and, as a consequence, the spread of contraceptive and assisted conception methods and devices from Western Europe may also have contributed to an increase in the number of multiple births and conceptions (Pári 2011, 2014).

Implications of and issues surrounding assisted reproductive procedures

ART also raises many interesting and deep religious and bioethical questions. In our country, the historical churches and other denominations offer definite positions and guidelines on this issue. At the state level, the first legal regulation of this issue was Act CLIV of 1997 on Health Care, which

regulates special procedures for human reproduction. As a policy instrument, assisted reproductive procedures cannot compensate for low fertility, and their impact on fertility rates is negligible (0.04-0.06%) (Childlessness and Assisted Reproduction in Europe, 2017). However, they are increasingly widely used due to the reduced costs of the interventions, changing social norms and values surrounding assisted reproduction, the increase of the average childbearing age of mothers, and the individual problems, faced by men and women alike, posed by physical or mental health, the environment or anything else, reducing the chance of spontaneous conception.

However, according to the above mentioned study (Childlessness and Assisted Reproduction in Europe, 2017), the increased number of twin pregnancies is clearly due to the impact of artificial fertilisation, rather than having children later in life. I do not necessarily agree with this statement, as we see from historical examples and data from developing countries, e.g. African countries that natural factors (average age of mothers at childbearing, number of births, genetic predisposition) are becoming a stronger influence in the occurrence of twin pregnancies (Fellman – Eriksson 1990; Pison 2006, 2015; Smits – Monden 2011; Monden – Pison – Smits 2021). However, it is important to note that women undergoing assisted reproductive procedures are primarily in the older age group, and that the procedure itself often results in high-risk pregnancies, precisely due to twin pregnancies (Zeitlin – Mohangoo 2008).

The effectiveness of assisted reproductive procedures decreases significantly when the patient is over the age of 40. It is the responsibility of policy-makers to inform those concerned and young women and couples. It would be important to regulate embryo donation, especially as the lack of regulation leads to many international legal problems and illegal activities.

There is also a need for the international harmonisation of regulation, the standardising of donation and implantation practices, in order to avoid this type of „tourism“. To bring this idea a little further, it would be worth to develop legislation similarly to that of international adoption. In twin research, separated twins have become a very fashionable object, with the issue of adoption in the background. (In my opinion, to care for twins takes

not twice, but several times as much effort from the parents, and especially for mothers, especially until kindergarten age.)

The most important issue, however, is to collect adequate, verifiable and reliable data on the number of assisted reproductive procedures and the effectiveness of treatments.

Fertility patterns in the literature on twins

In a Swedish study on the childbearing patterns of twin mothers between 1961 and 1999, it was observed that mothers have their children (twins) later, and thus twins are born to mothers of the same age as those who have their second (non-twin) child. It has also been observed that after the birth of twins, there is a lower probability of having more children (Hoem – Strandberg, 2004).

The Danish twin register and fertility database and the demographic analysis of persons born between 1945 and 1964 according to the Danish Central Person Register are excellent possibilities to get an idea about the fertility pattern of twins (Kohler et.al, 2002). The authors emphasise the importance of genetic characteristics and shared environment (twins growing up in the same household). They conclude that there is no significant difference between the fertility patterns of Danish twins and the entire population, except for the childbearing age of twin women, which was higher than the average. Since higher childbearing age is important for women, it is worth investigating this in more detail in the case of Hungarian twins. Furthermore, Kohler et al. found no differences between the childbearing patterns of identical and dizygotic twin mothers. It is interesting to approach from the perspective of childlessness and completed fertility: there is no significant difference between the entire population and the twin population, considering both monozygotic and dizygotic twins.

The role of registers in the research

Official birth records provide information on the number of twins and multiple births, the age of the parents, the gender of the children, the length of pregnancies, the birth weights and lengths, the rate of infant mortality, and the number of previous births, educational attainment and address of the mother (KSH). (Infant mortality rate among twins is still several times

higher than for single births (Unicef, 2016), which affects the perinatal and later psychosocial development of twins.)

The official European statistical services typically record the above data, but there are also very thorough twin databases going back centuries, such as the Swedish twin dataset, which goes back to the mid-18th century (Eriksson et al., 1967, 1995). However, current official databases, national statistical services generally do not keep medical and genetical data, and we have no information on the families (wider environment) of twin children (Pison, 2004; Martin et al., 2012). Furthermore, zygosity, i.e. whether the twins are identical or fraternal (Métneki – Pári, 2020), and the income status, ethnicity and religion of mothers are not recorded. Twin registries are being set up in a growing number of countries to make up for these shortcomings.

The British twin register is a good example, which has published a wealth of research data and results on registered twin pairs since its establishment nearly three decades ago. Interestingly and significantly, this twin database is the most specific register of twin appearance (phenotype) and individual genetics (genotype). The twin register also allows time-series analyses, such data can be searched for more than 4000 individuals from bone density studies, for example. Of course, in addition to medical data, many registers, such as the English one, also contain a wealth of demographic (sensitivity) data, which has been of lesser interest until now (Moayyeri et al., 2013)

In Hungary, the first twin database was started in 1970, at the proposal of Júlia Métneki and Endre Czeizel Endre, and the recording of the first official Hungarian twin data also dates from this year. Later a more serious register was started in Budapest. The capital's twin register, which contained data on nearly 8,000 twins, more than 100 triplets and 12 quadruplets, was unfortunately cancelled in the mid-1990s, for various technical and health policy reasons. The initiative for the establishment of the Hungarian Twin Register was launched in 2007, and in 2013, it was joined to the International Network of Twin Registries (INTR), which allows for cooperation with similar twin registries around the world, helping each other's operation, the harmonisation of data, finding partners and submitting proposals for large international grants together. The international interest in Hungary is best demonstrated by the fact that the International Society for Twin Studies

(ISTS) chose Budapest as its first Central and Eastern European venue for its biennial World Congress, which was thus organised by the Hungarian Twin Register in 2014. (Source: <https://ikrek.semmelweis.hu/content/rolunk>) A comprehensive demographic, statistical research titled “Ikerszületések Magyarországon” [Twin Births in Hungary] (Pári, 2014), and the method of applying Bourdieu’s capital theory to twinship, “Ikerség, mint tőke” [Twinship as a capital] (Hegedűs – Pári – Drjenovszky, 2014) were presented at this conference.

Censuses and various administrative registers are hardly if at all suitable to examine the fertility attitude of twins. However, data on twin births (e.g. Hungarian Central Statistical Office birth rate; National Tax and Customs Administration tax statistics; Hungarian State Treasury family support benefits) can be examined in time-series, but there are no records on twins in the adult population. In order to answer this question, it would be useful to examine large sample surveys and/or targeted research questions, the answers to which can be retrieved from expert databases, e.g. twin registers.

Summary

Twins are relatively little known, even today. Science still cannot answer the question of what causes a fertilised egg to divide into two, or two or more eggs to be fertilised at the same time, to result in the first case monozygotic, and in the latter, dizygotic or polyzygotic multiple births. Statistics on twin births are relatively accurate, but less is known about twins as persons. It is interesting to witness from fertility studies that as the average age at which mothers have children increases, the chances of conceiving twins – typically dizygotic twins – increases, and raises further questions about whether twin children continue this fertility pattern.

The research findings are diverse, provide a richly painted picture of twins, and can only broadly answer a variety of social scientific questions about twins. There are no official statistical records of twin families, which is obvious for data protection reasons. However, data and answers can be obtained from twin registers, typically for medical and genetic purposes. It is important to conduct social science research on twins, e.g. in the fields of

family or educational sociology, as little information is available, not only in Hungary, but also internationally.

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To be or not to be a twin? The roles and stereotypes facing twins in secondary school

Abstract

Twin research in social sciences is scarce. In my study, I examine the roles twins take on and the stereotypes that affect them. Central to this research are the expectations toward twins and the extent to which they meet these expectations. My questions are mainly based on the theoretical approaches of Stewart, Métneki and the Drjenovszky – Hegedűs – Pári trio of authors, and I will explore them qualitatively through interviews. A total of 6 pair interviews were conducted, supplemented by diagrams drawn by the twins mapping their class networks of relationships. The interviews focus on the twins' place and involvement in their communities, and the way their twinhood is defined in their everyday lives. In processing the interviews and sociograms, I first locate the twins within their own communities, and then analyse them thematically by comparing what the twins say. The results show that my subjects generally appear as units in their communities, and mostly share a similar status in class. The numerous expectations and stereotypes do not seem to have a major impact on their behaviour.

Introduction

My aim in writing this paper is to explore the social roles that twins take on, and the ways these are affected by the stereotypes surrounding them. Thus, the focus of the study is on the expectations towards twins, and how they perceive their roles. I examined the twins' perceived roles in a specific community, choosing the secondary school class community. This is because people in secondary school are generally more experienced in terms of what it is like to be part of a community, and have a more extensive network of relationships than in the years of primary school. It is important to note

that in this study, I am only working with identical twins for reasons of simplicity, and because stereotypes may be stronger in their case.

Theoretical background

Social role

The concept of social role first appeared in the mid-20th century. According to Márkus (2009), the function of social roles is to connect individuals to society, but when one is assigned to a certain (or even several) position/status, one also assumes the expectations associated with it, rewarded or sanctioned by society, depending on performance.

About twins in general

Twins' relationships can be examined in terms of the average sibling relationship. There is always a kind of competition between the two, but usually one of them is dominant. In the case of identical twins, it is often the first born (Drjenovszky - Hegedűs 2020). According to Orsolya Jánosy (2019), birth order is an influential factor for sibling pairs, so usually the oldest sibling becomes the leader in adulthood, taking on leading roles. This phenomenon is also present among twins. Their position is more special than that of the average sibling, as the two have a closer relationship, but usually the one who starts talking first becomes the spokesperson for both, more open and friendly, while the other tends to be more reserved.

Emőke Bagdy (2020) classifies twins into three groups, based on their attitude to their twinship. The *extreme individualist* perceives twinship as a disadvantage, the *environment dependent* loves their twinship and their twin, but also develops their own individuality and has separate relationships, and finally, members of the *close-knit pair* appear as a unit to both themselves and their environment, and therefore find it most difficult to separate from each other.

Stereotypes, social expectations

Regardless of classification, all twins have one important factor in common, namely, the stereotypes associated with them. These are accompanied by

social expectations, which are already present in childhood, as society treats them very similarly and as a single unit. In addition, presentations in the media also reinforce expectations of twins (Métneki, 2019). However, Stewart (2000) argues that the extent to which they allow themselves to conform to these images depends on their personality and individual choices.

Stewart (2000) highlights three main stereotypes about twins. The first is that twins are identical in character as well as appearance. This may stem from the fact that most people find it easier to cope with the existence of twins if they think of them as identical. In some cases, this can also hinder the development of the twins' individuality. The other most common stereotype is the concept of a special internal connection between twins, where twins know and empathise with each other's thoughts and feelings. This stereotype also has a detrimental side effect on twins, because if they cannot live up to this expectation, they feel frustrated for lacking this ability. The third stereotype mentioned by Stewart refers to the type of twinship. According to this, the monozygotic-dizygotic label only serves to confuse twins, because what really matters is what their peers think of them anyway. (Monozygoticism is usually assumed.)

When it comes to stereotypes, twins feel that the greatest disadvantages are comparison or confusion (Pataki 2016). Twins are often called by their sibling's name, which makes them feel that their peers do not really know them, as they do not even know their names (Stewart 2000). However, people who have twins in their environment are less affected by most stereotypes.

Class communities

It is worth taking a look at the structure and composition of secondary school classes, before placing twins in this community. According to Judit Erdélyi (1975), school is often the first word that comes to mind when students think of the word community, as it is an important place, where significant socialisation processes take place. In the process of socialisation, one adopts a pattern of behaviour appropriate to one's place and position. This is facilitated by role expectations, which are mediated by role partners, i.e. other members of the community, who set goals and reward or punish behaviour based on these expectations (Pusztai 2020). Twins therefore have

double work to do, as they have to take on an additional (twin) role as well. Stewart (2000) also mentions that the twin role expected by society often causes conflicts in twins with their other roles expected by society, and this causes internal tension.

School classes are organised according to some rules, but the community is often diverse (Weiss 1974). In most cases, it consists of several smaller groups and solitary individuals (Mérei 1993). The structure of school classes can be examined from several aspects, which I will enumerate on the basis of two studies. In his book on this subject, Carl Weiss (1974) lists the types of children in the classroom, which are: dominant type (bossy, but may also be helpful), submissive type (subordinate to the leader), positive/negative relationship type (open, friendly or withdrawn, shy). The different types of children form different small groups which eventually make up the entire class. I will describe the class types later.

The map of a class community is also largely determined by the type of its leader. Weiss (1974) distinguishes between five types of powerful class influencers: the leader (intimate relationship with the class), the ruler (violent), the tyrant (intimidating with external support, e.g. teacher), the suggester (usually in a group, subordinate to other leaders, giving ideas), and the organiser (implements the ideas of others, e.g. suggesters). However, regardless of the types, Weiss points out that leaders influencing the entire class are rare.

Twins in the classroom

After this, let us place the twins into the structure of the class. A big question for twins at school age is whether they should be placed in the same or two separate schools or classes. The advantages of being in one class, according to Drjenovszky, Hegedűs and Pári (2013) are that they can help each other to integrate into communities, they are braver, they find many common friends, and they are never alone and can support each other. Some twin pairs, on the other hand, close themselves off, and create a kind of common isolation. Before choosing a school, it is important to bear in mind that twins will eventually have to be separated, but the optimal timing of this depends on the above mentioned types. According to Météneki

(2005), a gradual separation is the most desirable. However, many twin pairs are still in the same class in secondary school, which may have the advantage, for example, according to the study of Drjenovszky – Hegedűs – Pári (2013), that they support each other academically and psychologically. Métneki (2005) adds that twins may be very popular in class because of their being special, and they may influence their peers. There are, however, several disadvantages to sharing a class with a twin. One disadvantage is the aforementioned seclusion, and another is that twins are often confused and compared. Besides, Métneki (2005) mentions that teachers often cannot or do not want to treat twins separately, for example when evaluating their work or at oral tests.

Methodology

With this in mind, I explore two research questions:

1. What roles do identical twins take up in the secondary school class?
2. How are the roles of twins affected by societal expectations and stereotypes?

My research questions will be explored qualitatively through interviews, based on the literature. I conducted six paired interviews with identical twin pairs of high school age (15-18 years old), more specifically three pairs of boys and three pairs of girls, to ensure that the sex ratio was equal. I conducted the interviews in a semi-structured manner using a pre-written interview schedule, five of the six online and one live. I was able to contact most of the interviewees using my personal contacts, using the so-called snowball method, but I also had the help of Dr. Ádám Domonkos Tárnoki and Dr. Dávid László Tárnoki, both researchers at the Hungarian Twin Register. Both members of the twin pairs participated in the interviews, so I was able to consider their reactions to each other's thoughts.

In addition to the interviews, the interviewees were also asked to complete a short task: I asked them to draw a network of relationships in their classes, based on who they thought they were close to ([subjective] sociogram = map of relationships forming a social field [Mérei 2001]). I have used these in my analysis based on some aspects of sociometric research by Ferenc Mérei (1993, 2001) and Carl Weiss (1974), which are: persons (circles) and the relationship

between them (lines), shapes (closed triangles and quadrilaterals, star, chain, pair, loner). Weiss (1974) lists the following types: star (many relationships), black sheep (loner), peripheral figure (closed), travelling companion (bum). Finally, the class structure can also be classified into five types: cluster-structured, loose-structured, single-centred wide-edged, multi-centred, and block-structured (Mérei 1993).

In the analysis, I first placed the twins in their own communities based on their accounts and sociograms, and then compared all the interviewed twin pairs, to find similarities and differences between them.

Results of the research

Profile of interviewees

I use made-up names in the analysis. Before the interviews, I asked the 6 twins to fill in a short demographic questionnaire, which showed that socially they were more or less similar. In terms of age, most of them are 17 years old, one pair of girls is already of age, and one pair of boys just started high school this year, so most of them have been members of their current class for several years.

Sociograms

When creating sociograms, the twins mapped their class communities similarly. This was partly because several pairs completed their drawings together.

In summary, the drawings show that my subjects are in different situations in different types of classes. It is true to all of them, however, that they are integrated into the class community as a pair, they are members of the same group, and they have friends in common. The twins I studied occupy a relatively central place in the class. The twin pairs Kiss and Kertész are exceptions, as there was no clear centre of their classes. The other four pairs, however, clearly occupy a place in the centre of the class. (Two of the sociograms are shown in the appendix.)

In the interview, after drawing the subjective sociogram, I asked my subjects to explain it, and I also asked them what role they would have in a group project, in order to map their role in the group.

According to their accounts and examples, in terms of taking on tasks, two of the twin girls are divided: one of them would more likely be a group leader and suggester, while the other is more withdrawn. The third pair of girl twins, the Polgár twins would both lead, not even just small groups but the entire class. The other two pairs of girl twins would rather be involved in smaller tasks and background activities in projects concerning the entire class. The twin boys tended to think similarly about their roles, in general all three pairs consider they have good ideas, but their level of activity is also influenced by the nature and topic of the given task, and the members of the given group. This is also true in the case of projects for the entire class for all three of the twin boys.

School

As I mentioned above, all the studied twin pairs appeared in their classes as pairs. Most of them are in close relationships, but the Kiss twins, Linda and Vanda, for example, behave at school as if they were just two girls in the same group of friends.

Following the classification of twin types by Emőke Bagdy (2020), my subjects, the Kiss girls, can be seen as an environment dependent couple who share a common circle of friends but take on a friend role at school. On the contrary, the Polgár girls can be considered a typical close-knit pair, emphasizing that they are each other's best friends and are always there for each other, but they do not seclude themselves from their peers. The Kertész girls are also a close-knit pair, they are important to each other in class, but they are more secluded than the Polgárs. Two more pairs, the Szántó and the Kovács twins are also close-knit, but are not secluded. They appear as a single unit and at social gatherings, and they tend to take advantage of attracting people's attention. Finally, Norbert and Dávid Molnár are also environment dependent twins. They like to be together, they have friends in common, but they were in separate classes in primary school and found it good. Norbert says: „*I liked being apart.*”

The twins also had similar experiences in terms of integration. Four of the six pairs also experienced their reception in their class positively. All of the interviewees mentioned that a sense of amazement always came over the class at first, so it was not difficult to make friends. The Molnár boys and the Kertész girls received a more neutral reception than the others, but they also attracted people with their specialty. None of them became secluded or got a hostile reception.

At school, five pairs mentioned positive things about their twinship and all six pairs could tell negative stories. On the positive side, most of them feel that there is always someone they can count on, four pairs mentioned most importantly support with their studies, and the Kertész and Polgár girls like to work together as a team, which they can use to advantage at school. Réka Polgár also expressed an advantage regarding social relations: *„I think the advantage of twinship is that if you don't have a friend in a group, you always have the other, and you can always be with her, so you are never alone.”* On the negative side, almost everyone talked about being confused with the other, and the Molnár boys and the Kiss girls can't stand being „lumped together”. As an example, the boys mentioned that at roll calls, they are only ever mentioned as Molnár twins, which bothers them, but they usually don't speak up about it. Linda Kiss said that she once complained when the teacher called them twins and not by their names. Vanda agreed that it is worse than accidentally being called by the other's name. The Kertész girls both mentioned as a disadvantage that as they work very well together as a team, it is not so easy to do so with others, and because they are together all the time, they do not have separate friends, which they sometimes wish they had. Drjenovszky, Hegedűs and Pári (2013) also mention that it is more difficult for twins to find common ground with others when they have a very good relationship with each other.

The interviewees also experience being confused and compared differently. They all mentioned that they are often confused by teachers (Drjenovszky – Hegedűs 2021a and 2021b also discuss this phenomenon), but not by their classmates. The exception are the Szántó twins, who are even more often confused by their classmates, but this is because they only started secondary school this year. The Molnár, Kiss and Kovács twins are sometimes amused

by being mistaken for each other. In the case of the other two girl pairs, their reaction depends on their mood, and the Szántó boys pay little attention to these cases. I also found it interesting that although all six sets of twins are identical, to me, three pairs were easily distinguishable at first sight.

Two out of the six pairs mention that in addition to being confused, they have been compared in terms of performance. Dávid Molnár and Norbert Molnár said that in their case, teachers usually highlight when they both write equally good essays. Dávid said: *„This just makes us feel that we are different from the others, just because we are twins.”* Another pair only told us about one teacher. Once, Ádám Szántó got an A where András failed, and because of that, the teacher asked András why his performance was so much worse than his brother's. András said about such cases, *„We don't usually say anything. It wouldn't make them compare us less anyway, so it's not worth the confrontation.”*

We can see that the sociograms drawn by the twins complement what they said. Overall, in all cases, the twins were well received by the studied community. None of the pairs broke up, they could all find common companions. Most twins face both advantages and disadvantages in school because of their being twins, and are often mistaken for each other, which is interesting because not all the twins I studied look very similar. As a result, many people do not even try to treat them separately, but simply label them as twins, which means that they also face a number of stereotypes. These also impact the twins' behaviour, but the interviews suggest that not extensively. I will discuss these effects in the following.

Expectations

The most common stereotypes about twins, as listed by Stewart (2000), were also familiar to the twins I studied. All six twins mentioned that they had encountered the idea that they had telepathic abilities, could read each other's thoughts, or could sense each other's emotions. I have heard several examples, this one is from Réka Polgár: *„One of the teachers said that one of us didn't know something, [and she said] but you're twins, you can read each other's minds, so why don't you?”* In addition, four other pairs mentioned the stereotype, also described by Stewart, that twins were identical inside and out.

Despite the negative examples, however, all twins feel, and believe, on some level, that they have a special connection. They say this mainly because many of them have experienced that they often say things at the same time or think the same thing in certain situations. Two of the girl pairs were a little sceptical about the subject. The Kiss girls believe in the bond between them but say they have not yet discovered the mysteries of it, and Martina and Franciska Kertész believe that these abilities may have something to do with the fact that they have spent a lot of time together for a very long time and have got to know each other so deeply that they have developed this very intimate relationship. Franciska says: „*There's a basis, but maybe I would say that if two separate people spent, say, that much time together, they might, I don't know, be able to tune in to each other in the same way.*” Martina added that she thinks it's those who don't have twins in their environment ask them these stereotypic questions, that is why they are so interested.

The twins often spend time together outside school, but they all mentioned that they like to study separately, for example. Apart from studying, only two out of the six pairs said they had separate hobbies, the Polgár and the Kiss girls. The other four pairs therefore spend a lot of time together outside school as well, as they have a common group of friends. Linda Kiss added that the two of them do not usually organize programmes for themselves. The Kovács boys, on the other hand, have a hobby that only the two of them do together. Three of the pairs are also members of some kind of extracurricular community based on their hobbies, and here too they had different opinions about the group. The Kertész girls, for example, are much more close to that group than to their school friends, whereas the Molnár boys reported that they do not have as close a relationship with their sports team as they do with their classmates.

So we can see that the studied twins all spend a lot of time together. This also implies that there is a deep bond between them, which may be due to the fact that all of them are in the same class at secondary school. If their bonds were not so close, they would probably have separated earlier. For my subjects, this is most likely to happen after high school. The interviews revealed that all the pairs think they will continue to be important in each other's lives, for example, the Polgár girls and the Kovács boys are thinking of starting joint businesses, as they think they can work well together as a team.

The interviews demonstrated that stereotypes about twins certainly have an impact. The most often mentioned was the one about the ability to read each other's minds and feel each other's emotions. Some of them felt that this was even true, the Kiss girls said that they had not experienced it but believed it to be true, obviously, because it was mentioned all the time. This demonstrates that they are trying to conform to this stereotype to some extent, as Stewart (2000) says, despite having little or no experience. On this basis, these six pairs also try to conform to the stereotype of "twins are the same inside and out", as can be seen from the fact that, although they speak up in some cases about their being different, those who do not know them only see that they go to the same school, have the same group of friends, often share hobbies and spend a lot of time together.

Summary

Finally, I would like to summarise the information in each section using the following table (1). The table clearly shows that most of the twin pairs I studied play central roles in their classes. It is also clear that all of them share a common group of friends with their sibling, and all of them are included as pairs in their communities. The twins were overwhelmingly well received by their classes, none of them experienced a negative reception. Overall, they mentioned similar amounts of positive and negative experiences at school, with some mentioning comparison and confusion, but the latter had no major emotional impact on them. They all encountered stereotypes about twins in their daily lives, most often about their internal special relationship or abilities (reading minds, feeling emotions), and they themselves believe in these, even if only a little. The stereotypes are only reinforced by the fact that the subjects have close bonds, often share hobbies, but even if they do not, they spend a lot of time together.

Finally, based on the twins' experiences and sociograms, it is clear that being twins plays a crucial role in their lives, influencing their social relationships, their self-image and their vision of the future. The fact that they constantly have to fight for their uniqueness and distinction is an important factor in the development of their personalities.

Aspect	Name					
	Csenge Polgár	Linda Kiss	Franciska Kertész	Norbert Molnár	Ádám Szántó	Bence Kovács
	Réka Polgár	Vanda Kiss	Martina Kertész	Dávid Molnár	András Szántó	Zoltán Kovács
Do they have a central role in the classroom?	Yes	No (no clear centre)	More yes (there are several central figures)	Yes	Yes	Yes
How shy are they? (1: very shy, 5: brave, open)	5	3	3	3	4	4
How many persons are in their groups of friends? (themselves included)	8	4 (+1)	6	14 (+1)	6	15
How were they received by the class?	Inclusive	Inclusive	Neutral	Neutral	Inclusive	Inclusive
Have they had positive/negative experiences? How many?	+, +, + -	+ -, -	+, + -, -	-	+ -	+ -
Does being confused bother them?	Mood dependent	Not typical	Mood dependent	Not typical	They don't care	No
Are they comparing their performance?	No	No	No	Yes	Yes	No
Which stereotype is the most mentioned?	Reading each other's thoughts, experiencing each other's emotions	Reading each other's thoughts, experiencing each other's emotions	Reading each other's thoughts, experiencing each other's emotions	Reading each other's thoughts, experiencing each other's emotions	Reading each other's thoughts, experiencing each other's emotions	Reading each other's thoughts, experiencing each other's emotions
Do they believe in the stereotypes?	Yes	More like yes	A bit	Yes	Yes	Yes
Do they have separate hobbies?	Yes	Yes	Yes (but the common is more important)	No	No	No
Will their relationship remain so close in the future?	Yes	Yes	Not sure	Loosens up a bit	Yes	Yes

Table 1: Summary of the analysis

Based on the results, other interesting aspects to be studied may follow. It would be useful to see the twins' life histories later, to see how much they influence each other's decisions (career choice, job, etc.), and what they think about their relationships as adults. Related research could also be conducted using sociograms, in which all members of the community would be asked about the twins' situation and the structure of the class, and these could be compared with the twins' version. This would also reveal how much the environment perceives from the twins' internal role conflicts, and how they are viewed from the outside.

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Appendix

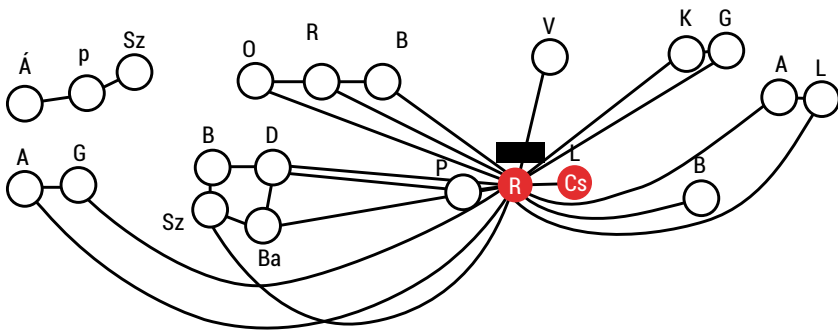


Figure 1: Sociogram of Réka Polgár (edited)

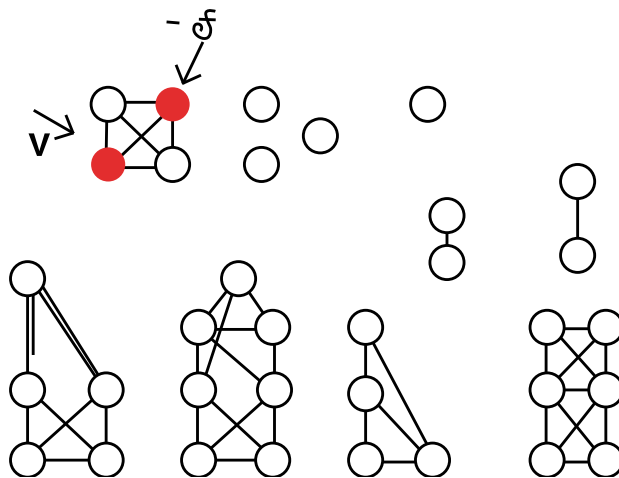


Figure 2: Sociogram of Linda Kiss (edited)

Twins in society – expectations, roles, life courses

Abstract

In my study, I investigated how the role division between twins influences their relationship and their self-image, how much they are influenced by expectations and stereotypes, and how this affects their life course. I also wanted to compare two different generations, as the lives of the older twins are less researched. In my questions and during the interviews, I also asked questions focusing on character, to understand how twins and the dynamics of their relationships ‘work’. The study was conducted through semi-structured interviews with one member each of 8 twin pairs. According to my interviews, twins are certainly exposed to some social expectations. The very first is that they should look the same, and if they don’t, then surely they are not twins, and they have to prove otherwise. They are expected to perform similarly in various areas of life, such as at school or at home, and if they are too different, typecasting begins automatically. The other stereotype, still prevalent today, is that twins have an inexplicable bond and can do things that no one else can, such as talking telepathically or feeling each other’s pain. In my experience, birth order and „who looks like which parent” can also cause problems in twins’ lives. In the case of my interviewees, those of the older generation were not as preoccupied with role assignment as the younger cohort. Finally, it is important to note that, according to my interviews, twin type is of no great importance. It had almost no influence on anything in my interviewees’ lives: neither on roles, nor on life trajectories or perceptions. In fact, twin type hardly matters.

Introduction

In my research, I investigated how role division between twins affects their relationship and their self-image, how stigmas and stereotypes affect

them, and how this influences their life courses. In my questions and during the interviews, I tried to go in detail with the questions aimed at the characters, in order to understand how exactly twins as persons (and not as medical instruments) and the dynamics of twin relationships ‘work’. I found it difficult to navigate the interviews so that they remained within the boundaries of sociology, and did not invade into psychology.

Another motivating factor for me to explore this topic was the fact that older twins are hardly ever heard of. Those who have no personal contact with older twins, only encountering twins in the media, for example, may usually see children or very young people, but not middle-aged or even older twins. So I found it particularly interesting to address older people and listen to their stories as well. An additional benefit of this was that I got an insight into how twins were perceived in the society or in everyday life 40-50-60 years ago.

Although the number of twins has increased both in Hungary and worldwide in recent decades (Pári 2014, 2022), the topic of twin research is relatively underrepresented in Hungary, especially in humanities (Hegedűs – Drjenovszky 2020), so I found it particularly exciting to research this topic. There are so many hidden possibilities that I think that I will later expand this research and explore the topic from even more perspectives.

What it means to be a twin in society – a theoretical framework

In her book *Towards the social analysis of twinship*, Elizabeth A. Stewart argues that the stigmatization of twins means that the archetype of twins is identified in them. Society treats twins as an anomaly and therefore stereotypes them and assigns them roles in order to manage them within its own system. This means that as we do not have overwhelming evidence if twins are identical or fraternal, we cannot identify or distinguish them, and our initial reaction focuses on twins as identical individuals or humans. Such social dynamics also generate further questions: do twins acquire patterns of behaviour and expectations that reflect society’s views about

them? Views that are reflected, for example, in literature, films, the press, or advertisements (Stewart 2000).

In her book *Twins in society*, Kate Bacon details how twins appear to society. In Western societies, twinship is largely treated according to three dominant types of discourse, says Bacon. These are identity, belonging and closeness. On this basis, twins are expected to look alike, to spend time together and to have a close relationship. Identical twins (the ‘embodiment’ of twins) are the symbol of all twins. According to the extent to which they possess these qualities, twins represent an amplified version of ordinary siblinghood. Therefore, in our society, to be a twin is also to be more than a sibling (Bacon 2010).

Being born a twin is special. Already in the womb, an almost supernatural bond is created between twins. No one can be as close as twins. So it is only natural that everyone is concerned about what it is like to be twins: they can often finish each other’s sentences or even understand each other without words, they almost have their own language and no one can get between them. According to a questionnaire study by authors Zsófia Drjenovszky, Rita Hegedűs and András Pári (Drjenovszky – Hegedűs – Pári 2013), the advantage of being a twin is the possibility of playing together, since twins have a playmate from birth of the same age, a constant companion, so they never get bored. And it is not just a playmate, but a partner, a best friend. Someone who perceives and understands your every move, someone you can count on at all times, someone you can talk to about your problems, someone you can rely on to protect you. According to the study, there are also factors which can be both an advantage and a difficulty, such as ‘double the pleasure, double the harm’. This means that although twins are a joy for the family and parents, they can also sometimes be a nuisance. Twins often encourage each other to be naughty and demand twice as much attention, but the parents also get multiple amounts of love. Another such an ambiguous factor is a too close relationship. On the one hand, they are a safe haven in each other’s lives: as I have mentioned already, there is someone they can always count on, someone they understand without words. On the other hand, they might have to pay the price of this close bond in social

relationships: it hinders the twins' making friends and forming close relationships with others.

According to Júlia Métneki (1997), the most significant influence in a twin's environment is the twin brother or sister, since they spend most of their time in each other's company. They learn a lot from each other and often strive to be alike – if one of them achieves something, it is an incentive for the other, so he or she wants to achieve it also as soon as possible. But as well as being loyal companions and allies in good times or bad, twins are often rivals. And there is another 'phenomenon' that makes them mysterious: their 'sameness'. It is not enough that they look alike, but because of their growing up together, experiencing the same parenting patterns, their facial expressions, gestures and body language are often almost identical. Twin pairs tend to have similar voices, so it can be startling to see two people who gesticulate in the same way, speak with the same tone of voice and react in the same way to a sentence. Especially if they suddenly think the same thing or say the same thing at the same time! No wonder twins are always such a „spectacle”.

If you are a twin, you will of course always encounter *stereotypes*. „Categorisation determines our thinking as a whole and plays an essential role in our personalisation”, says Judit Takács (Takács 2018: 77). According to Allport, we are unable to get to know everything in the world individually and thoroughly, which is why we are forced to rely on ready-made patterns (Allport 1999).

„Are you twins? So you can talk telepathically? Can you really feel each other's pain?” – such are the questions most twins face. Without exception, this is almost the first question people ask. It may become tiresome after a while.

Let us first approach the question of telepathy. Pamela P. Fierro's opening statement about the typical assumption that twins can engage in telepathic conversation is: “One of the magical mysteries associated with multiples is idea that they share a special connection beyond that of ordinary siblings. While the twin bond is a clearly unique relationship, sometimes people feel it's endowed with extraordinary, seemingly telepathic, qualities” (Fierro 2022). According to Dr. Nancy L. Segal, one of the most prominent twin

researchers, anecdotes about twin telepathy simply reflect the loving, caring bond between them (Segal 2017).

It can indeed be annoying when one is not recognised as an individual, but only as a member of a twin pair (this will be discussed in more detail in the section on identity-consciousness). “The first part of a ‘stigma’ analysis of twinship involves identifying the archetype of a twin”, writes Stewart (Stewart 2000: 726), and others have made a similar point. Sarah O’Connor, in an article in *The Silhouette*, explains that when people find out they are twins, the first question is: „Are you identical or fraternal?”. They look for a resemblance between them, but it’s hard to see because they’re physically different. They do resemble, but not in the way that society „expects” of „typical” twins. „It’s after this question that things start to go downhill and my sister and I start to become an oddity. The questions of telepathy, dominance, which one of us is the good and evil twin, and fantasies start rising. We got the cruel prospect of death brought to us by the children we went to school with who told us that if one of us died the other would follow” (O’Connor 2013).

Relationships, role assignment

In any healthy family there is a hierarchy, which is important, because the family is a dynamic unit that changes and evolves. In a well-functioning family, the roles of children and parents are clearly separated, the levels of hierarchy are given. Twin pairs also usually encounter role divisions. This is a consequence of the ‘couple effect’, as it is inevitable that roles will be divided between siblings living together for long periods, just as between spouses. However, Métneki cites several cases where twins ‘take on’ specific roles that have become attached to them over the years or during their development (Métneki 1997). One example is when one of the twins is ahead of the other, learning, for example, to speak earlier, which gives them a certain advantage, and is reinforced by the environment. Thus, for example, the twin who learns to speak earlier becomes the „spokesperson”, and the other one will be more withdrawn. Dominance relations are also evident: the dominant partner is usually the one who is the „representative” to the outside world. The more dominant twin will be more independent of the other sibling, less attached,

and the other will be the more clingy one. However, dominance may also depend on age and gender: in general, in single-sex twins the older sibling becomes dominant and controls the relationship, even into adulthood. In opposite-sex twins, usually the girl becomes „dominant”. There is a reason for this: girls mature earlier than boys, and the family also plays an important part: they treat the mature girl an adult, while her later maturing brother is still treated like a child. After a while even the girl regards her twin as a younger brother to be looked after.

Identity

We can have a sense of identity about many things: it can determine what kind of nationality we identify with, where we place ourselves, our own abilities, our own values in the world, how we define who we are. Our self-image, our self-awareness, plays a decisive role in how we behave in a situation, how we perform in performance situations. The self is an important aspect of personality, an expression of the way an individual grasps his or her own identity (N. Kollár – Szabó 2017).

Júlia Métneki (Métneki 1997) reports cases where twins, especially in infancy, are not yet aware that their twin is a separate person and not the same as them. Perhaps when one of them puts the other’s hand in their mouth and bites the other’s finger, the other senses that it was not them. But adult twins also have stories where they make the other to try on clothes when shopping together, to see how they would look on themselves.

This is furthered when parents purposefully dress twins in identical clothes, make their hair the same, or put the same accessories on them, reinforcing that they are twins, the same, one whole consisting of the two of them. Parents who make an effort to raise twins as siblings, but as separate individuals, from an early age, do much better by their children later in life. In this way, they can develop the awareness from an early age that, even though they are twins, they are still separate persons, and so no conflict or identity confusion will occur later in life as their search their own ways.

It can’t be easy for a twin to cope with this: after all, he is a twin as well as himself. It can be difficult for twins to find the path that leads to their own identity, separately from their twin. Or rather, for the outside world to

identify them not only as twins, but also as individuals. This is something they can also struggle with during their school years: schoolmates and teachers treat them as one, rather than separately, for example when they have to introduce themselves, they are called forth together. Names are another source of difficulty. Métneki (1997) writes that many twins, when introduced, immediately say the name of their twin, because the next question is usually, „And what’s your brother’s name?”. This is not made any easier by the fact that even if people do not refer to them as „the twins”, they do not separate their names, but call them as one, for example „Tóth Kati and Rozi, come here”. Parents systematically refer to them as „the children”, „they”, etc., thus also relegating their individual names to the background and portraying them as a unit. The frequency of this is also shown in the research of Drjenovszky and Hegedűs (2021a and 2021b).

These are sensitive topics for twins, especially in adolescence. They usually do not want to be „twins”, but separate individuals. Many wish they weren’t twins, so they wouldn’t have to face comparisons all the time, reports Métneki. It can be tiring to be asked the same questions over and over again: „So, do you look alike?” „What’s it like to be twins?”. At this age, twins typically do their best to be different from each other, even if not in the most obvious ways: they wear their hair differently, they have different styles, they wear different colours.

Another problem can arise when twins are constantly compared to each other. One twin may unwittingly feel that he or she is never good enough, that the twin is much smarter, prettier, more popular. This can lead to an exaggerated feeling of inferiority.

Results of my research

In my research I chose the interview method, using semi-structured, in-depth interviews. I had eight interviewees, four of them young (in their early twenties) and four older (over 45 years old). I interviewed only one member of a twin pair.

The demographic characteristics of my interviewees range very widely. Some are from the capital, some from the county, some from villages. Many

are students, some are still working and some are retired. I interviewed 3 males and 5 females, 3 of them identical and 5 fraternal twins.

My central question was: how did twinship itself, and the roles associated (suggested or imposed by family and environment) on twins in general or one or other of them in particular, influence the twins' identities and life trajectories?

What were the roles suggested by the environment to the twins as a pair?

Stereotypes: we have all come across twin stereotypes, and perhaps we ourselves have some questions about them. Most of the people interviewed reported that the first question they are asked is always one of many stereotypes.

The first question is: „So can you really use **telepathy**?”. This is a misconception that „outsiders” still believe to this day. Many twins smile enigmatically, or even laugh outright, and deny that this was ever true. *„When we were kids, we often made people believe that we could talk telepathically. We used to talk about what we were going to say to people beforehand, and then we'd say, 'Listen, we're going to talk telepathically,' and then it would be, 'Yes, Saci just told me that she thinks this and that,' and people would just stare, it was very funny,”* said Virág. This telepathy often comes from the fact that the twins know each other intimately, because they grew up together, they know each other's every move, so they can often guess what the other is thinking from a single movement or an expression.

Society assumes twins must **look** the same. If they are twins, it means they look the same. If a twin is on their own, but their twinship is revealed, the question immediately arises, “So, do you look the same?”. But what if they don't? Many twins have reported that they look the same, or they resembled more when they were little (even opposite-sex pairs), but there are twins who look completely different. For example Ábel and his twin do not resemble each other, and many people did not even believe they were twins because of their differences. He recounts: *„[...] but anyway, yeah, there are these stereotypes, 'You're definitely not twins!'. [...] 'Show me your ID!', so that*

we usually have to prove that we are twins, we have to have the ID, we have to show it, look, the mother's name is the same, the date of birth is the same..."

Separation is not made any easier if parents **dress twins in identical clothes** when they are young. Of course, one can understand the parents, and it is indeed spectacular if the twins are identical in every way. Lilla's mum took care to avoid this. She had read several books on the subject while bringing up her twins, so she did not dress them identically. Apart from her and Paula, everyone reported that they were dressed in identical clothes, except for the colour of their shoelaces or their earrings and other accessories (so they could be distinguished).

Once established as twins, the next question follows: **„What is it like to be twins?"**. In other words, it's as if twins themselves should understand the importance of being different from the rest. Máté says: *„And there's one question I always get, [...] or we get, but I think everybody gets it. What's it like to be a twin? [...] And I always say, I don't know, because I only have one sister, and they don't understand why I don't know what it's like not to be a twin"'*. And how right he is! How could they answer this – they do not know „what it's like to be a twin" any more than „what it's like not to be a twin". They were born twins and will never experience anything else in their lives.

Twins as a unit: this is a typical phenomenon that twins often experience outside school as well. When they are treated as one person or referred to as „the twins" all the time. Let some telling quotes from the interviews speak for me:

„That's, I think that's the hardest thing about twins, especially as kids go to school and wherever, [...] that we were always, we were the Hajdús, but always. And everybody called us that and we weren't very separate and it was very difficult." (Máté)

„Well, when we were younger, I think in primary school, when we were talked about like that, it was the Fekete twins. That's what they called us." (Zsombor)

„Well, [...] when they asked who was coming to the game, they would say the Balázs Bírós or the Ábels or Bírós, and there was that we were always treated as one, so to speak.” (Ábel)

„That we’re treated like, ‘Oh, yeah, the Novák twins’, and I personally find that very offensive, and I always tell everyone, ‘Listen, say Lilla and Reni.’” (Lilla)

During the interviews, I concluded that this referring to twins as one was, for the most part, more offensive to female interviewees than to males. Of my 3 male interviewees, 2 responded that being referred to as the „XY-twins” or treated as one did not bother them. The others all felt that they were not perceived as individuals, only as twins.

What different roles did the environment suggest to each of the twins separately?

Dominance: twins are used to being treated as a unit, but also to being assigned conflicting roles. First among these is the image of the „strong” and the „weak” or, in other words, the „dominant” and the „subordinate” member. It is of course questionable if this is just an expectation or there is real psychological challenge arising from the dynamics of their relationship, but there is no doubt that the twins are concerned with this issue.

„Actually, I would say that basically, she gets her way. [...] I would say that she’s the more dominant twin, that if she asks me for anything, it’s a priority for me. So if she tells me to do something, I do it [...]”. When I asked him if it was the same the other way round, he replied, „Not always. And by the way, this is where I feel the dominance. But not out of malice [...]”. When I asked if it would have been different if he had been born first, he replied: ‘Well, if it depends on a minute, maybe. Maybe, because it’s been so drummed into me that I’m her younger brother that, yes, I think it would have been different.’ (Máté)

„Well, I’ve always been more modest, or I’m more... It’s not that I give in, but I’m better at doing anything. [...] If he’s so stubborn, then no, it’s like he said.” (Zsombor)

„That’s definitely me. Well, I usually decide what we do or how we’re going to do it [...] I usually adjust people to myself. [...] And then he totally has to go along because I found it, I mean I know I’m leading. I’m the one [...] who plans things and can carry them out. So in that respect I’m absolutely the [...] more decisive.” (Ábel)

So, as you can see, according to the twins, dominance does not depend on which one of them loves the other more or would do more for the other, but more on personality traits. My interviews suggest that the more dominant partner is usually the one who is more able to assert their will – because of certain character traits, such as being stubborn or extroverted. The other determining factor, however, may be the age difference of a few minutes, because although those few minutes are short, in the twins’ relationship the older member still fills the archetypical role of the older one, as in any other sibling relationship – and this effect is reinforced by the environment. Even if it is only a few minutes, those few minutes imply more experience (this, of course, only applies to those twins who claimed that being older is a definitive factor in their relationship). Literature also suggests (e.g. Bacon 2010) that birth order is often brought up in the case of twins, that there is a kind of expectation in society about the roles of twins.

Rivalry: Similarly to the previous issue, this twin trait may also stem from the characteristics of average relationships, but external encouragement or behaviour towards the twins may reinforce it.

Rivalry is one of the most typical phenomena occurring in any family or sibling relationship. By rivalry I don’t mean playful competition, but when siblings regard each other as something like enemies, and compete in various fields, always trying to outdo each other. For example, for the attention of their parents, or who gets more crushes, who has more friends. I was curious to see how much of this is present in twin relationships, but I got surprising

results: among my interviewees, it was almost completely absent. In some cases, the reason for this was that the twins were so different that they had nothing to compete in, and in others, because they were so similar that they truly loved each other.

I had only one interviewee who claimed that they were rivals: Lilla. *„[...] so we both had our own safe environments, and then obviously we compared each other's lives with our own, and where each of us was going, and what our desires were [...] When [...] my sister had this boyfriend [...] then [...] they became a couple [...] among some friends [...]. And so I wasn't jealous of that boy in particular, but I was just jealous that [...] she had this „*

In the relationship between Lilla and her twin, jealousy is also often present. They were jealous of each other's successes or goals. Based on what she said, we can say they were rivals for boys/relationships, for popularity, or rather perception, or in terms of life goals or vision of the future. But Lilla also stated that they can easily discuss these feelings, and they talk about them much sooner than they would for example in a group of their friends.

Birth order: for most of my interviewees, this difference of a few minutes was not decisive, neither their parents nor their environment made them feel that it was all that important. However, for some it was.

„Yes, it's very decisive who is older. So I think it's a bit of a social pressure that the older one is the one who always has to earn more, has more responsibility, has to take care of the other, has to stay at home with them, etc., and there was a time when my sister took care of me and we were born like a minute apart.” (Máté)

„For us it was significant, even though we were born only 3 minutes apart. When we were with our cousins and the adults went out, they always said, 'Virág, you look after everyone because you're oldest,' and my mother had surgery and she gave me as a contact person and I had to do everything, just because I was the oldest. We were treated as if we were at

least years apart, so I always had to be the sensible one, the responsible one, and my sister could remain a child.” (Virág)

This demonstrates that although this tiny age difference is irrelevant for many, for others, it is of extreme importance. The older twin has to be the more responsible, they have to get things done etc., while the younger one has no tasks at all.

Good student – bad student: one of the typical roles is the „organized, eminent” twin. This implies, of course, that if the other twin’s grades are not always that good, he or she will unavoidably become a „bad student”. Zsombor reports that his brother, Ákos, was always an A student while he was a C, so he often copied his homework, or Ákos would prompt him during tests. So he was forced into a role, he had no chance to be a good student. When they went to their separate ways after primary school, he felt lost, not knowing what would happen to him. When he got a series of A’s, he was very surprised that he was able to study well on his own.

„And then in the second year it was bad that we were in the same class, in a way [...] my sister was so precise and so hard-working with her homeworks, and I always asked her, ‘OK, let me copy his.’, (Lilla)

During the interviews, I noticed a pattern: if one twin is always very precise or an excellent student, and the environment often remarks upon it, or even directly tell the other, „Why can’t you be more like your twin?”, then the other person, instead of trying to be better, will turn into a rebellious, „I won’t” type.

Who resembles whom: another interesting topic that occurred in almost all of my interviews separately (I did not ask them directly, my subjects started talking about it themselves). Almost all the twins said: “I’m more like my mum and my twin is more like my dad”, or the other way round. They account for their differences by resembling one or the other parent (who are themselves, of course, different personalities).

„I'm very mum, so I'm like, I don't know, she's kind, she's hospitable. [...] and Balázs is totally like my dad, he's like this, he's more indifferent, quiet..." (Ábel)

„And basically, I was more like my father, mentally, and Endre was more like my mother, but mentally, too, so in a way. My father and I were terribly honest." (Paula)

„I'm told that I look more like my mum, and he's more like my dad. [...] I am somewhat gentler. I'm not saying I'm a wimp, but gentler. He was always so much more determined. He's more forceful." (Zsombor)

„We got that a lot, that I'm pure dad and Saci is pure mum..." (Virág)

Of course, in every family, there is a tendency to treat who takes after whom as a fact. Yet, when twins account for their differences, and these are extreme differences indeed, it always boils down to who is mum and who is dad. Not one of my interviewees has ever claimed that they both look like one of their parents. In my opinion, the family and they themselves, unwittingly, look for differences so that there is at least one thing in which they are not so similar. And if they hear from a very young age that „you are just like your father, and your sibling is clearly like your mother”, then it becomes a part of their identity to adopt traits from that parent, to actually become similar to them, and thus emphasise the difference from the twin.

Gender roles: finally, let us see the most straightforward of roles: gender roles. I interviewed two opposite-sex twins, and gender roles naturally came up, although surprisingly they were much more prominent in the narrative of my younger interviewee than that of the older one.

The main point Paula made was that precisely because they were of the opposite sex, they could never form a deep connection, only a „normal” brother-sister relationship.

However, Máté has more experience and had more expectations towards them: *‘[...] the boy has to do better, and that was always very much part of it, so that he has to be smarter etc. About my sister, or to see her side as well, she always had to be feminine, pretty, not like your brother, etc., I think it was not easy for her either.’* „When we started to work, a few years ago, there was a lot of pressure from my parents that for me, it was ‘time to go to work’, but my sister didn’t have it, she was even told ‘you can stay at home, you don’t have to work’, and I was told [...] that it wasn’t because of the money, but en bloc because a man has to be able to stand on his own. Really, I started working a year and a half earlier than my sister.”

Since I did not interview any more opposite-sex twins, I cannot draw any conclusions, but it was interesting to see how gender stereotypes were expected in the younger generation, while less so in the older generation.

Are roles different in the various age groups?

I have described in detail the roles that emerge, especially those that the twins get from their immediate environment, or even from themselves or each other. There are no consistent patterns, the roles were shaped individually in each case, according to their own lives and characters.

However, the analysis shows how the environment shaped the roles, and influenced which character traits the twins acquired during their identity development. In the following, I will consider whether these roles differed in certain respects and how they influenced the twins’ life courses.

In my opinion and experience, role assignment was not as prevalent in the older generation as in the younger cohort. Twins were treated differently then, in elusive ways that are somewhat difficult to explain. It was considered special, a curiosity, to have twins, but also somehow not treated as the seventh world wonder. It was treated as a fact, as a curiosity, but then people moved on. Nowadays there’s a lot more hype about twins, even though there are more of them. This may be due to the way the world has evolved: science has recognised the potential of twins and has been able to explain how twins can be conceived. By understanding them better, people also find them more interesting. And they have also started to mystify twins, seeing a supernatural bond between them.

According to the interviews, twins are treated differently by society today than they were some generations earlier, and that they are raised differently. The younger generation of twins I interviewed were all aged 21-23, so when they talked about their childhood and upbringing, it meant 15-20 years ago. Again, I would probably get different results if I asked young twins (or their parents) of the conditions today. Overall, based on the interviews, I think that the roles themselves have not changed across age groups. The main topics are all there: dominance, rebellion, one being a better student than the other. However, earlier they were not compared to each other as much as they are nowadays, so there was more room for their own personal development, which is perhaps why older twins tend to see each other as ‘normal’ siblings.

Do roles differ according to background factors?

Residence: twins were better known in small towns or villages. Tamara, for example, grew up in Parádsasvár and said that they were the first twins in the village at the time, and this was something huge. Zsombor also reported this: he grew up in Tarnalele, also a village, and there was another set of twin girls. Everybody knew them and they were known as ‘the Fekete Twins’ and ‘the Kovács Twins’. In addition, several twins mentioned that twins somehow tend to find each other – each twin pair knows at least 3-4 other twins. This is a good way for them to connect.

Roles, however, did not differ based on the twins’ birth place or type of environment.

Education: I could not draw any conclusions regarding education either. Most of my interviewees were intellectuals, university graduates. If there is a difference between the answers of twins who do not have a university degree or a high school diploma and those who do, I think it is not because of education but of other reasons.

Twin type: when talking about twins, distinguishing between identical and fraternal twins is usually emphasised. Most of my interviewees tried to point out that while identical twins are almost really identical (same skin, nails, hair, eye colour, voice, etc.), fraternal twins are basically „normal” siblings born at the same time. Métneki (1997) has discussed in detail how

this can influence both roles and life courses. Differences according to zygosity are also crucial (Métneki – Pári, 2020)

In the interviews I conducted, there was no indication that twin type was definitive. It had almost no influence on my interviewees' lives: neither on roles, nor on life courses or their perceptions. In fact, twin type hardly matters. Of course, we could see examples of people who were so different that the outside world could not believe that they were twins (Ábel's), but fraternal twins who resembled strongly were treated similarly to identical twins.

I had three identical twin interviewees: Erika, Virág and Lilla. They look clearly very similar, by their own account. However, Máté and Dóra, Zsombor and Ákos also resemble strongly, despite being dizygotic twins. Moreover, it may be stated that twin type had no effect on their roles, their courses of life, or the strength of their relationships.

The relationship between roles and life course

Resourcefulness: the example of Zsombor and Ábel is the most eloquent to show how the roles they played influenced the course of their lives, although I would like to point out that in my opinion, their roles did not determine their life paths, only shaped them and added a little to the outcome, but did not necessarily impact them deeply.

Zsombor and Ákos have different personalities, as I have already explained. *„I really like being in the centre. I like to talk a lot. I like to be in the centre and everyone listens to me. He was never like that. He didn't go to the disco either, he very, very rarely went. I'm not saying that he didn't have his friends [...] but I think one, maybe two people [...] he kept in touch with. But only ever them'.* Zsombor is an extrovert person, who like to be in the centre. He is popular. He told me that even Ákos's colleagues often invite him to parties and gatherings, even though he is not their colleague. But Ákos is a very private person. According to Zsombor, his brother was also influenced by being a policeman, as he dedicated his life to his job. He is a bachelor, working almost 20 hours a day. But that was always the case, according to the interview. This has influenced his life course to such a degree that Ákos (according to Zsombor) lives his life completely alone, with no friends, no one to look after him. Once, when asked why he was saving money, he

replied, „And you know what he said? He said he was saving. For a nursing home. When he gets old, he can pay for himself so he has somewhere to live, because he won't have anybody”.

Ábel gave a detailed explanation of the roles between them. Balázs, his twin seems to be living in a dream world, he is enchanted, he has been studying for years, he has never worked. Ábel, however, although he started university after high school, dropped out, and is now working as a barista. Since he has a job and his brother does not, he feels obliged to take care of him. „I've made a savings account for him so that when he makes his PhD, I can pay for his school, because that's something, I don't know, millions. [...] I try to take care of him knowing that he's not working, he's studying. He has put his life into it, so to speak, that he will get these years back one day. But the fact that he's now [...] broke, [...] which I know that I had already lived through in high school, I hated it, so I started working almost immediately, so to speak.

Being the same: here I would like to give the example of Erika and Emese. They could be called the archetypical twins, the twins imagined by an average person. They have never been separated. They lived together almost their entire lives. Of course they have their own lives: marriage, children, family, but they have never been far apart. They always went to the same school, the same training, the same job. They even got married on the same day! They also had their honeymoon on the same days, but not in the same place, although both in Hungary. This was an interesting event: the honeymoon is usually about newlyweds celebrating their marriage. However, for Erika and Emese, this was not necessarily the case, as this was the first time they spent several days separately, and Erika said they had a terrible time, missing each other badly. Today they are practically neighbours, they live in the same street, they talk every day, they often have family gatherings.

In their case it is true that neither of them has been able to assert herself in the world as a real, independent person, because they see themselves as a single unit, as united in all aspects of life. There is no separate Erika Sipos and Emese Sipos. They are inseparable. And we can see that this has affected their lives in many ways: their studies, their work, even their marriage.

Life course: apart from Erika and Emese, all 7 of my other interviewees said that their life courses were different from their twin's. The twins (with

whom I spoke) were separated during their school years: they either started school in different institutions, or went their separate ways in secondary school or at university. Different studies also lead to different life courses, in more ways than one. Firstly, because most of them realised that they are able to succeed as individuals, not just as one of a set of twins. The new people they met didn't necessarily know they had a twin, but they certainly didn't judge them on that basis. Different circles of friends influenced them in different ways. And, of course, different studies also brought different opportunities: each in their own field of study. Although not one of them moved far away from the other, and most of them live in the same town/village, but they have their own separate lives.

In my opinion, „separation” is an important stage of twinship. This is when they face their first major challenge, when they have to learn to re-socialise and to exist without their other half. At the same time, they embark on a journey of self-discovery. Most twins argued that the sooner this happens the better, but it should definitely happen during the school years.

Summary

The aim of my study was to get a general idea of the impact of twinship on the lives of individuals, through interviews with twins from two different generations. The way different roles and expectations imposed on them by their environment and by themselves shape their life course, the dynamics of their relationship, and their image of themselves. I have described these effects in detail, both individually and in groups.

Twins are certainly exposed to certain social expectations. The very first is that they should look the same. If not, they cannot be twins, and they have to prove otherwise straight away. They are expected to perform similarly in different areas of life, such as school or home, and if they are too different, there is an immediate reaction of typecasting roles, as I have shown throughout this essay. The other stereotype, still alive today, is that twins have an inexplicable bond and can do things that no one else can, such as talking telepathically or feeling each other's pain. Yet twins are human as everyone else, and are capable of nothing more or less. If there is a particularly strong bond between them, it is obviously because twins are

special, and they are each other's confidants. No one knows them the way they know each other.

In my opinion, the outside world – society – plays a decisive role in how twins view themselves and their twinhood. Twins who do not have a close relationship feel that they are missing out on something, just because society has given twins the impression that they are somehow obliged to have a close relationship.

During my interviews, I touched on a number of things that I cannot describe here due to space limitations, such as the crucial stages of separation, when twins first move into separate rooms; what it is like to experience gender differences in a opposite-sex twin relationship, when they start to mature as teenagers and start to notice their differences; and role changes, when something makes previously typical roles disappear or be reversed. All of these would be worthy of a separate analysis, which unfortunately I have not had the opportunity to conduct.

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Being similar is "not mainstream"

Abstract

In addition to describing the social stereotypes of twins, I will attempt to support or refute them using the results of the 2012 Drjenovszky – Hegedűs – Pári twin survey regarding parents, and I present my data collection on twin roles within the role-playing subculture, with special reference to the stereotype index applied for data interpretation, and its potential further uses.

Elizabeth A. Stewart (2000) in her book *Exploring Twins*, discusses twins as a specific social phenomenon. The stigmatisation and stereotyping of twins are, according to the author, integral aspects of the social structuring of twinship, so she examined their role in the context of the expectations facing them. I myself have taken this approach in examining social attitudes towards twins, along the lines of her observation that 'laypeople' often regard twins as superficially identical.

In addition to Stewart's ideas, the Hungarian research of Zsófia Drjenovszky, Rita Hegedűs and András Pári was an important reference point (Drjenovszky – Hegedűs – Pári 2013 and Hegedűs – Pári – Drjenovszky – Kónya 2014). According to the authors (and I agree), psychological and sociological research on twins is scarce both in Hungary and internationally. Most of the research considers the phenomenon from a medical point of view, and there are also demographic descriptions (e.g. Pári 2014). This prompted the authors to conduct a questionnaire survey in the summer of 2012 among twins and their parents on the negative and positive aspects of twinship.

In the first part of my study, I analyse the findings and distributions of this open-ended survey research, specifically from the perspective of my own thematic issues, using thematic content analysis, placing the results in a literary context. I will then describe my own data collection, where I will attempt to create my own index using quantitative data. The methodology of the surveys is described in more detail below.

Social stereotypes about twins based on the 2012 twin survey

Is there anyone who doesn't know the captivating story of *Eric Kästner's* Lisa and Lottie, or the figures of twin girls appearing in horror films, whispering alluringly in the dark, so you come to play... Modern stories in pop culture „perpetuate” the ideas and generalisations about twins in the society.

In the following, I will discuss these in an attempt to scientifically confirm or refute them, based on the parental aspects of the previously mentioned study of Drjenovszky – Hegedűs – Pári (2013). This speciality of twins is best understood by those who live together with it, who have to cope with it in everyday situations, both in good times and bad.

In their exploratory research, the authors conducted a questionnaire survey with both closed and open-ended questions among adult twins and the parents of twins, both on paper and online. They asked questions about the advantages and disadvantages regarding education, social relationships, the joys and frustrations of mixing, and how society views twins in general. The subjects were contacted in a targeted way; in addition to the research website, twins (N = 222) and their parents (N = 575) were recruited at twin festivals and meetings. Due to the nature of the sampling, there was a serious methodological problem of representativeness, i.e. the results of the survey cannot be generalised to twins and twin families in Hungary. In the following, similarly to the study, I analyse the textual responses of the parent questionnaire.

The first generalisation is familiar to everyone: *Twins not only look alike, they also act alike.*

Whether monozygotic or dizygotic, twins undoubtedly share many more similarities in appearance than average relatives, due to their common genetic ancestry. The similarity in appearance is primarily typical of identical twins, but even between twins who appear to be the most alike, there may be minor distinguishing features: they may have 'extra' birthmarks, minor facial differences (longer ears, slightly different shape of the face), different bodily strength, differences in health (Burlingham 1952). Similarity can also be influenced by external factors outside their control, such as individual

injuries or upbringing (whether they are dressed alike, have the same haircut, etc.), and at certain stages of life, twins often make a conscious effort to counteract similarities between them (Fierro 2015).

Although the other half of the stereotype, namely, that twins are identical not only in appearance but also in character, has been disproved by several studies, there is still a strong social tendency to regard twins as a single unit. This attitude was experienced by the parents who took part in the research, who, in response to the open questions, stated that their environment addresses the twins in the plural, they do not know their separate names, they are called simply „the twins”.

And why is this so? „*I think it's a matter of convenience, because you would really need to look more carefully*”, admits one respondent in the study by Drjenovszky et al. (2003:79).

The survey found that just over half (53%) of the parents partaking in the survey were against emphasising the fact of twinship, and two-thirds of parents consciously dress their children in different clothes.

When people talk to twins, they are almost certain to ask the question: Which one is the older/younger? The answer already leads to the assumption: whichever twin was born first is certainly more grown-up, rational, or even charismatic than the other. In other words, birth order determines the personality of twins.

This kind of division is indeed typical of twins. There is a differentiation in their characters in the first 2-3 years of their lives, towards the assignment of an active and a passive role, with which come specific traits: the dominant sibling will be „aggressive, possessive and selfish”, while the submissive one will be more „gentle and altruistic” (Burlingham 1952). These traits obviously do not at all depend on birth order, the younger sibling can be dominant as well as the older one.

Perhaps the most popular ability attributed to twins is *some kind of inexplicable, supernatural bond between them*. It is hard for a non-twin to imagine the strong bond that may develop between twins, so it is not surprising that they would like to attribute it to a kind of ‘superpower’ when twins can easily guess each other’s thoughts or finish each other’s sentences.

Although researchers have not yet been able to scientifically prove the existence of telepathy between twins, there are many interesting stories of hunches, coincidences and apparent telepathic connections between twins. It is not surprising, therefore, that many TV shows and novels are based on the telepathic communication between twins – sometimes even if the fictional world itself is not full of magical elements.

As twins are born almost at the same time, they spend more time together from the start than two siblings of different age. The time they spend together, the fact that they are the same age, and the similar situations they find themselves in can lead to a kind of shared mindset and a common „language”, which brings them closer together than the average sibling relationship. „*An invisible bond that they really feel*” was how one of the interviewed parents described the special relationship between their twins (Drjenovszky et al. 2013: 66).

This may explain the close bond between the twins and the belief that *twins are each other's best friends or worst enemies*. They tend to look out for each other from a very young age, to fear for each other in strange places or situations, and even to support each other against their parents. „*When there is a fight, if I scold one of them, the one I have been protecting also gets angry and offended...*” – states an interviewee (Drjenovszky et al. 2013: 64).

More than half (61%) of the parents had experienced this kind of protective and supportive behaviour in their twins, supporting the view expressed above, in the first half of the statement – that their children are not only siblings but also best friends for life. Too close a relationship, however, often results in experiencing the absence of the other as a personal tragedy, and finding it harder to cope in every aspect of their lives without their sibling.

There is a noticeable tendency of twin pairs in fiction that in the vast majority of cases, authors primarily use negative stereotypes about twins, making them the schemers in the story, intensifying the dramatic situation. The most common depiction is *twins as incorrigible pranksters*, mischief-makers, who quarrel over the smallest trifle and attract trouble like magnets.

Of course, this type appears not only in negative roles. They often appear as the comic element with their constant bickering. The truth in this portrayal is acknowledged by the parents in the research, who say that their twins have

a highly developed sense of humour, they have a lot of fun in their families, so the popularity of this character portrayal cannot be a coincidence.

As Drjenovszky et al. say, „Double the fun - double the mischief” (72). As one parent said in the research, „*You always have to keep an eye on them because they can do surprising (creepy) things together*” (Drjenovszky et al: 77).

And speaking of creepy things... Twins often appear in various horror stories, lending a certain ominousness to the atmosphere by their mere presence. For these roles, casting directors look for identical twins who eerily resemble in appearance, movement and speech. This type often builds on *the telepathy between twins*, mentioned earlier.

One of the oldest and most widespread characterizations of twins, dating back to antiquity, is *twins portrayed as opposites of each other* in character, dress and interest. In such cases, the twins must, in the course of the story, realise that “unity is strength”, and confront the problem they face together, or else they play out a duel between good and evil: the good twin is blamed for the actions of his evil counterpart, and must therefore fight and destroy the misconception of himself. This is a popular theme in soap operas and TV shows.

The dramaturgy familiar from folk tales is also typical: the triumph of the younger brother, the proof of his resourcefulness. In almost all cases, the younger twin is motivated by the plight of his elder sibling – serious illness, dying, actual death –, and his aim is to prove that by assuming the role of his ‘doppelganger’, he can prove that he too can fill an important position just like his stronger/smarter/braver twin. The idea of „swapping places” for twins with opposite characters is not uncommon, in order to experience what it is like to live each other’s lives. The end of the story is almost always a lesson that each twin’s life has its own upsides and downsides.

In reality, the results of the Hungarian survey show that, according to their parents, most school-age twins do not abuse their similarity (56%), or only occasionally fill in for each other in oral tests (21%). In many cases, children also resent being mistaken for someone else and not being recognised.

Finally, I think it is worth mentioning one more phenomenon, namely *the choice of names*, which is not only present in fiction, but also raises important questions in real life, both for parents and for the twins’ social environment.

Robert Plank (1964), studying the names of twins, concluded that there are similar patterns of name choice between identical and dizygotic twins. In his study, he found that only 21% of the twin names he studied were so different from their 'counterparts', that they could really be considered different. The situation of identical twins is much worse than that of dizygotic twins. 90% of the former have similar names, opposed to 75% of the latter.

According to Plank (1964), parents most often choose first names for their twins beginning with the same letter (Barna and Bence) or rhyming or having a similar ring (Kitti and Betti). There are, of course, many other patterns in the choice of names, such as twins receiving anagrams of each other's names (Adél and Léda), or twins whose formal names sound completely differently (Nikoletta and Viktória) having similar nicknames (Niki and Viki).

As I mentioned earlier, the overwhelming majority of parents who participated in the survey are of the opinion that it is unfortunate to portray twins as a single unit and are disturbed by society's attitude towards their children. This attitude explains the results of the responses to the question about names: the vast majority of respondents (70%) did not consider it important to have a similar sound when choosing names for their twins, but there was a not negligible minority of 10-15% who did.

Overall, although the parents of twins face many difficulties, they are primarily happy to have twins, and the feedback from society reinforces the special nature of their situation. „*Wherever we appear, we are a spectacle*” (Drjenovszky – Hegedűs – Pári 2013), noted one interviewee.

Whether they are good or bad, the popularity of twin characters and their role in perpetuating stereotypes is undeniable. From the responses to the survey given by parents, it is clear how much they have to contend with the stereotypes about twins in mainstream society in their daily lives, whether they are well-founded or simple misconceptions. The environment is inquisitive; twin parents are often approached with questions on the street, they are easily the centre of attention wherever they are, they are noticed, they are listened to and people are more helpful to parents who are 'strolling' with two children. The majority of respondents to the questionnaire experience this feeling of „specialness” (47% often, 39% sometimes), and many of them enjoy this kind of attention.

Of course, they can only get this attention if they comply with society's image about twins having to be identical. For this reason, parents tend to emphasise the resemblance of their children, typically in the case of identical twins and at a very young age, by clothing (13% of the respondents usually dress their children in identical clothes), because the recognition and admiration that surrounds twins acts as some compensation for their double of effort.

Exploring stereotypes in the role-playing subculture

The possibilities for examining stereotypes about twins have virtually no limits. In my own data collection, the world of role-playing games, a hobby close to my own, combined everything that was important to me in selecting my subjects: they are ordinary people who have played with the idea of being a twin and then made their ideas about it come true in the context of the game.

Even as an insider, the term role-playing game is difficult to summarise succinctly and concisely, but the clearest definition is on Wikipedia, which states that *„A role-playing game (RPG) is a board game in which players verbally create a shared fantasy world, where the game's plot is very similar to that of a shared book or movie. Players personify fictional characters in this imaginary world. The basic idea of the story is set by the game master, who also uses the rules to pass sentence in the case of disagreements. The game master does not have a character, but drives the game and the supporting characters and provides motivation and complication for the characters. This is what the players try to solve using the characters' knowledge.”*¹ In other words, a role-playing game is a form of collective storytelling in which the creators of the story (the players) are responsible for the actions of a character, shaping the situation outlined by the coordinator (the game master) in the form of dialogue, until the complication is resolved. The aim is clearly to entertain themselves and their peers by re-enacting the atmosphere of various films or novels, or even historical periods. For this reason, it is possible that elements

1 <http://hu.wikipedia.org/wiki/Szerepj%C3%A1t%C3%A9k>. (2015-04-09)

from the story of a book or a film that many people know may complement the adventure.

And why have I „limited“ my research to individuals who are engaged in what might be called a very specific hobby? The very first step in role-playing is the creation of a character, which is in fact a description of its previous life, its rough appearance and its basic character. As the player's subjective world and personal experiences play an important role in the creation process, I consider it inevitable that the process of character creation should reveal social stereotypes which carry stereotypes stemming from the character's appearance, gender, nationality, ethnicity, occupation or even twinhood.

Background of the research

The process of character construction, the way someone builds their characters, their personality traits and personal background from personal experiences and well-known social situations, is interesting in itself, although more within the scope of psychology. I myself was curious to see whether the players (if you like, people who are not directly related to twins; neither parents nor members of a twin pair) hold different ideas about twins. The more a player is subject to stereotypes, the more this will show in the way they build and shape their characters.

In line with my research goals, I tried to find pairs (or trios) who have twin characters and are actively involved in the hobby. They were approached directly, through groups in social media or through personal contacts.

The data was collected in the summer of 2015, conducted by questionnaires with both open and closed questions, and semi-structured interviews. With the latter, I tried to explore the twin characters themselves and the process and driving forces of character creation, while the questionnaires asked questions directly about the individual (non-twin) players behind the characters, in three major fields. Following questions exploring general demographics and family background, I asked about their role-playing characteristics and their habitual character creation, and finally, about their perceptions of twins.

The study involved 16 participants, with a significant predominance of women. This can be explained by the fact that just as „women are much

more willing to participate in twin research" (Drjenovszky – Hegedűs – Pári 2013), an interest in twins is also more typical to females, who create more such characters. The characters of the participants include 6 sets of twins and 2 sets of triplets.

As in the case of the research of the above study, the question of representativeness is a methodological difficulty. My target group is very specific, representing a very small segment not only of society but also of the role-playing community. For this reason, and due to the sampling methods, my results cannot be generalised to members of the role-playing subculture, and especially not to society as a whole.

In the following, I will present exclusively the indicator designed to measure stereotypical thinking in the studied group, and the results obtained with it. It was clear to me during the interviews that this group is very open and accepting of „otherness”, of being different from the norm, and thus they consciously confront rather than incorporate social stereotypes in their characterisation. As one respondent put it, „... *It would be non-mainstream to make twins with the same character. In every way.*”

Stereotype index

I interpreted the answers to the questionnaires by calculating to every respondent the so-called stereotype index that I created². This required respondents to rate on a four-point scale how much they agreed with stereotypical statements about twins, as described above. The exact questions and the results are detailed in Table 1. The results confirmed my suspicion that the respondents on the whole do not have a stereotypical attitude towards twins. On a scale of 1 to 4, the highest score was 2.9 and the lowest 1.7.

Thus, to make testing my hypotheses easier, I divided the respondents into two groups based on the median of the stereotype indices. Those with an index value above 2.1 became the group of those who agreed more with the stereotypes, and those below the median became the group of those who agreed less with the stereotypes.

² The index shows the degree of agreement (averaged) of the individual with the twin stereotypes on a scale of 1 to 4.

	Not at all	More like no	More like yes	Very
I think twins are weird.	9 (56.3%)	5 (31.3%)	1 (6.3%)	1 (6.3%)
I believe that despite the (often) identical appearance, twins have opposite characters.	- (0%)	4 (25%)	12 (75%)	- (0%)
I find identical twins more special than fraternal twins.	2 (12.5%)	2 (12.5%)	7 (43.8%)	5 (31.3%)
I believe that the birth order is crucial in the development of twins' character.	4 (25%)	7 (43.8%)	4 (25%)	1 (6.3%)
I think one half of the twin can sense when the other is in trouble, no matter how far apart they are.	4 (25%)	2 (12.5%)	8 (50%)	2 (12.5%)
My sexual fantasies sometimes involve twins.	10 (62.5%)	3 (18.8%)	3 (18.8%)	- (0%)
I find it nice when a pair of twins not only look alike, but also dress alike.	5 (31.3%)	7 (43.8%)	3 (18.8%)	1 (6.3%)
I find it bizarre when the members of a twin pair are completely identical in both gestures and style of speech.	2 (12.5%)	6 (37.5%)	3 (18.8%)	5 (31.3%)
I find it nice if the names of the twins sound similar and have the same initials.	6 (37.5%)	4 (25%)	3 (18.8%)	3 (18.8%)
I think that twins in books, films and TV series are a constant source of trouble.	3 (18.8%)	8 (50%)	3 (18.8%)	2 (12.5%)

Table 1: Players' attitudes towards twin stereotypes

Although the small sample size of 16 does not allow for a statistical analysis, I have experimentally examined the stereotype index in terms of educational attainment, educational attainment of the parents, number of siblings and experience with twins.

The results showed that there is no difference in terms of stereotypical thinking among those whose fathers have college, university or higher education (4-4 persons both in the stereotypical thinkers and the less stereotypical groups). It is interesting to note, however, that the children of fathers with technician training or vocational training are all (4) less stereotype-driven.

Overall, mothers are more highly educated than their partners, but the children of women with college or university degrees are somewhat different from the children of men with a similar level of education. 7 of them are less stereotypical, while 4 are more likely to think stereotypically about twins. Regarding the respondents' educational attainment, we find a remarkable difference, similar to the results of highly educated mothers: those with college or university education were less driven by stereotypes (ratio 7:4).

With regard to my first two ideas – the more educated one's parents are, and the more educated oneself is, the less likely one is to „believe” in stereotypes – it can be stated that respondents with higher educational attainment and the children of highly educated mothers (the two categories often coincide) are less likely to think stereotypically.

Apart from the educational attainment of the parents and the individual, I hypothesised that the number of siblings may also influence the way one views twins, and the amount of credence one gives to certain stereotypes. Based on the responses, this assumption seems to be almost certainly disproved, as the distribution of stereotypical and less stereotypical thinkers is almost equal in all three categories (no sibling, one sibling, and more siblings).

The majority of respondents (10 persons) contact twins mostly through friends; only two of them has twins directly in their family. Interestingly, based on their responses, one of them is less stereotypical and the other more so. In my opinion, one explanation for this could be the extent to which the twins in their family correspond to, or differ from, the social image. But their

responses may be equally influenced by their parents' parenting style, their attitude towards the twins, or their being identical or fraternal. Unfortunately, these assumptions cannot be clarified on the basis of the questionnaires. On the other hand, it was clearly shown that those who have twins in their circle of friends are less likely to believe in stereotypes (6 persons).

What is undeniable, however, is that – despite their not being particularly stereotypical – half of my respondents (8 persons) would like to be twins themselves.

Summary

Since statistical analysis is not relevant at this sample size, we cannot confirm or refute the results of the experimental study. It is possible that a larger, broader sample would confirm the expectations – based on the results, I see a chance for this, especially in terms of education –, but we cannot rule out the possibility that completely different factors have a major role in the degree of influence of stereotypes on the mindset of individuals.

The basic objective of my exploratory thesis was to highlight that stereotypes and social stigma are an integral aspect of twinship, of twins' place in society. Just as Stewart explored the role of twins in the context of cultural expectations with regard to similarities in identity and behaviour, and the Drjenovszky – Hegedűs – Pári trio approached the issue of social expectations surrounding twinship from the perspective of twin parents and twins themselves, I focused on a specific (sub)cultural milieu in this regard.

I believe that the more sophisticated development of the twin stereotype index, and its application in a broader, representative sample could bring us closer to a deeper understanding of how society – or a certain segment of society – views assumptions about a certain social phenomenon, for example twins.

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Health behaviour of twins based on smoking and alcohol consumption habits¹

Abstract

The primary scene of socialization processes is the family, and its effects actually last a lifetime. Health behaviour is also a part of socialization, which can best be grasped in sociological terms with smoking and alcohol consumption habits. During the Hungarostudy 2021 data collection, the living conditions, family and health behaviour attitudes of adult twins will be presented, linked and referring other results of twin research. During the Hungarostudy data collection series – the sixth data collection took place in 2021 –, it became possible for the first time to examine the attitudes of twin persons according to zygosity on a large, nationally representative sample.

Introduction

Whether we are talking about identical or fraternal twins, people still consider twins to be something special, even though twins are becoming more and more common today. Sir Francis Galton (1875) is credited with the first professional twin research, and with establishing that the birth and development of twins is influenced not only by genetics but also by environmental factors. The results of twin research shed light on the extent to which the development of certain traits, diseases or habits depends on genetical factors inherited from our parents, and how much they are influenced by the environment.

¹ This paper analyses in detail the questions related to twin persons in the Hungarostudy 2021 data collection, which was part of Réka Palagyi's thesis „*Twin research: heredity and genetics*”, completed in 2022 at the Institute of Sociology, Pazmany Peter Catholic University. In Hungarostudy 2021, a chapter presents significant findings on the health behaviour of twins, including the importance of sibling relationships (Pári and Palagyi, 2022). The volume was published under the title Engler – Purebl – Susánszky – Székely (eds.) *Magyar lelkiállapot 2021 [Hungarian State of Mind 2021]*.

Literature review

Health behaviour means essentially the impact of our behaviour and lifestyle on our health. A Hungarian study has found that genetics has a major influence on health outcomes, with identical twins having a higher concordance in their health status and their own physical attitudes (Bartha, 2014). In addition to genetically determined characteristics, we are responsible for our own health, and our health behaviour depends primarily on the models we acquire in our families and schools. This is particularly true in twin families, where twin members are often treated as a unit – not as separate individuals –, and this is decisive in many aspects of their lives, from personality development to communication and health behaviour (Drjenovszky – Hegedűs, 2021). In fact, if a family has an unhealthy diet, or if smoking is accepted in the family, it becomes an example for the child which it can follow. It is shown in a Hungarian study emphasising the role of the family that individual health behaviour can be influenced by the family or the quality of marriage and partnership (Engler et al., 2020). Widowhood, for example, is associated with psychological factors that turn health behaviour in a negative direction (Konkoly et al., 2008).

Besides family, friends also influence our lifestyle, especially at a younger age. It is also important to mention environmental factors such as workplace and place of residence, as our relation to our workplace also affects our social and mental health, which can lead to a deterioration in our physical health. In short, there are many factors that shape our health behaviour, but the most important of these is the family.

Smoking and alcohol consumption habits

Average per capita alcohol consumption is very high in Hungary, but it is also recorded that half of the population aged 15 and over smoke or have smoked cigarettes regularly at some time in their lives (Demjén et al., 2008).

According to the European Health Interview Survey, 32% of men and 21% of women smoked regularly in Hungary in 2009, which did not change significantly by 2014 (Demjén – Kiss, 2018). By 2019, the proportion of smokers among men decreased, with 27.7% of men and 22.3% of women

smoking regularly (HCSO [Hungarian Central Statistical Office], 2019). According to this survey, there was also some improvement in alcohol consumption, as the proportion of alcohol drinkers decreased from 2009 to 2014. The decrease affects both men and women and all age groups (Elekes, 2018). Between 2014 and 2019, the number of people who did not consume alcohol increased (KSH, 2019).

So, while there is a slight improvement in the health behaviour of the population, the number of smokers and drinkers is still high in the population. These harmful habits are often a reaction to life's pleasures, sorrows or challenges, which makes them more difficult to quit. In the following, we will describe the smoking and alcohol consumption habits and motivations of twins, and the relationship between these habits and environmental factors, through our own analyses and literature.

Sociological aspects of alcohol consumption

Based on WHO data from 2010, Hungary ranked 8 in the consumption of alcohol. The per capita consumption of pure alcohol (ethanol) among people aged 15 and over was 13.3 litres/year in 2010. Alcohol consumption is influenced by environmental and social factors, and a predisposition to addiction may be hereditary. The question of which factor has the greater influence in the interaction between environmental and genetic factors has long been a matter of debate. A 2012 study described several studies that drew conclusions from examining twins and adoptions. The results show that genetic factors are responsible for 50-60% of alcoholism, and that monozygotic twins are more similar in terms of drinking habits than dizygotic twins (Farkas et al., 2012). In addition to genetic factors, social factors and the family also play a major role. This is because attitudes towards alcohol are strongly influenced by the drinking habits of parents and friends. Stress, today present in all areas of our lives, may be regarded an environmental factor.

Rhew et al. (2020) studied twin pairs in Washington State (USA) and found that the genetic background is only a secondary determinant of the individuals' lifestyle. Furthermore, the research confirmed that common and

individual circumstances significantly catalyze unhealthy levels of alcohol consumption in adults' in case of serious residential deprivation.

Sociological aspects of smoking habits

Several studies have shown that smoking habits may be shaped by environmental and psychosocial factors. Stress and society, as environmental factors, also influence smoking habits (Bakkné et al. 2013). According to this research, one of the parents being a non-smoker significantly reduces the chances of the child becoming a smoker. The effect of one twin on the other was even stronger than parental influence, as the results showed that the twin being a non-smoker reduced the probability of the other twin becoming a smoker significantly, by 86%. The company of friends also appears to be an influencing factor. The data show that the strength of influence also depends on gender and age. Overall, the influence of friends is greater for men and/or at younger ages.

Method

In Hungary, the number of smokers and drinkers is very high. As the number of twins in our country is also steadily increasing (Pári, 2014), we believe that our research explores less researched relationships by examining the harmful addictions in twins. Our hypotheses connect the smoking and alcohol consumption habits of twins to demographic variables and various environmental factors. Our main hypothesis is that twins who are less satisfied with any aspect of their lives will be more likely to smoke and drink alcohol. We analysed the database used for this research based on the responses of 102 twins in the Hungarostudy data collection. The novelty of the research is that we could work with representative data, that can be analysed by zigosity.

Sample characteristics

Of the 102 twin respondents, 55 were male and 47 were female. Respondents ranged from 18 to 84 years old, with an average age of 49.38 years (standard deviation: 16.37 years). 53 were identical twins and 48 dizygotic twins. In terms of educational attainment, 20.6% (21) of the respondents finished

eight grades of elementary education, 30.4% (31) finished vocational / technician training, 19.6% (20) had a vocational training with high school diploma, 12.7% (13) had a high school diploma, and 16.7% (17) had a college or university degree.

Data processing was conducted by the IBM SPSS Statistics 25 software package. Differences were considered significant at $p < 0.05$. Alcohol consumption and smoking habits were tested against the same demographic and environmental factors. We present the results for smoking habits first, followed by those for alcohol consumption.

Hypotheses and results: smoking

In our studies, we examined the effect of environmental factors through three variables related to smoking. The first question asked whether the subjects smoked or not and, if yes, whether they used electrical devices or traditional cigarettes.

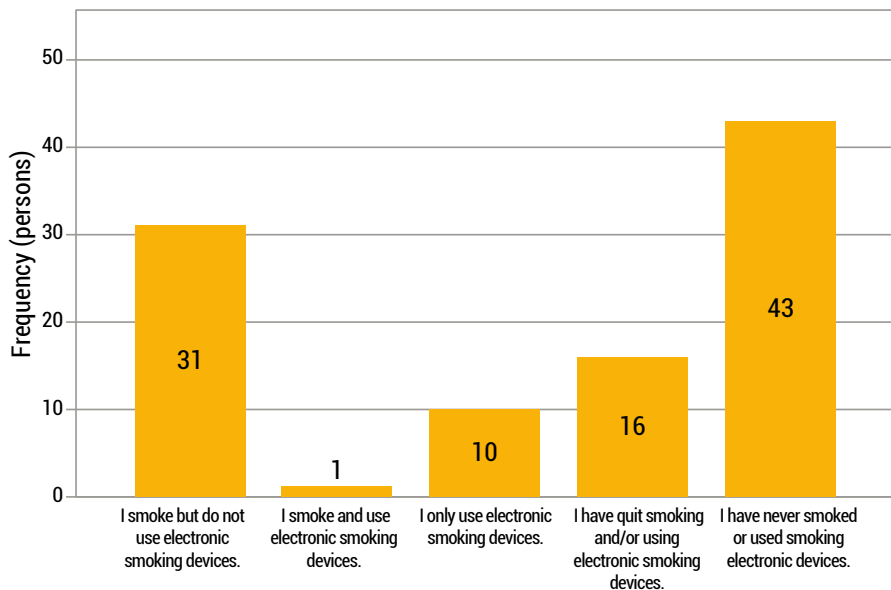


Figure 1: Which statement about smoking suits you best?
N=101 (1 person did not answer)

The answers make up a 5-point scale. The higher the number on this scale, the healthier the person's lifestyle in terms of smoking.² The first three groups (I smoke but do not use an electrical device; I smoke and use an electrical device; I use only an electrical device) and the last two groups (I have already quit smoking and/or using an electrical device; I have never smoked and never used an electrical device) can be combined to give 42 smokers (regardless of device) and 59 non-smokers at the time of the survey. 16 twins used to smoke, but gave up this harmful habit. Most often, quitting is motivated by the onset of an illness or, in the case of women, by the desire to have children. Based on age and Figure 3, we can assume that the former may be more prevalent, as according to the sample more men quit smoking than women. The second question on smoking was on the frequency of smoking (on days when you smoke or use an electrical device, how many cigarettes do you usually smoke a day?) The results showed that of the active smokers, 42 smoke daily. The third question was an open-ended question about the number of cigarettes usually smoked per day on the days when the subjects smoke or use an electrical device. Active smokers smoked a minimum of 4 and a maximum of 25 cigarettes. This means that the average number of cigarettes smoked per day is 13.57. The frequency distribution does not follow a normal distribution curve. The result of the normality test based on the Kolmogorov-Smirnov test is: $D^3(63)=0.326$ $p=0.000$. The result is significant, i.e. the distribution is not normal.

Overall, the variables measuring smoking report whether or not the twin currently smokes; if he or she smokes, what device he or she uses; if he or she does not smoke, whether he or she used to smoke; if he or she smokes, how many cigarettes he or she smokes a day. We next examined whether age, gender, marital status, type of twinship, education, occupation, life satisfaction, job satisfaction, financial satisfaction and physical pain affect smoking habits and frequency.

2 Score 1: I smoke but do not use electrical devices Score 2: I smoke and use electrical devices. Score 3: I only use an electrical device. Score 4: I have already stopped smoking and/or using electrical devices. Score 5: I never smoked and never used an electrical device.

3 D means the statistical value of the Kolmogorov-Smirnov test

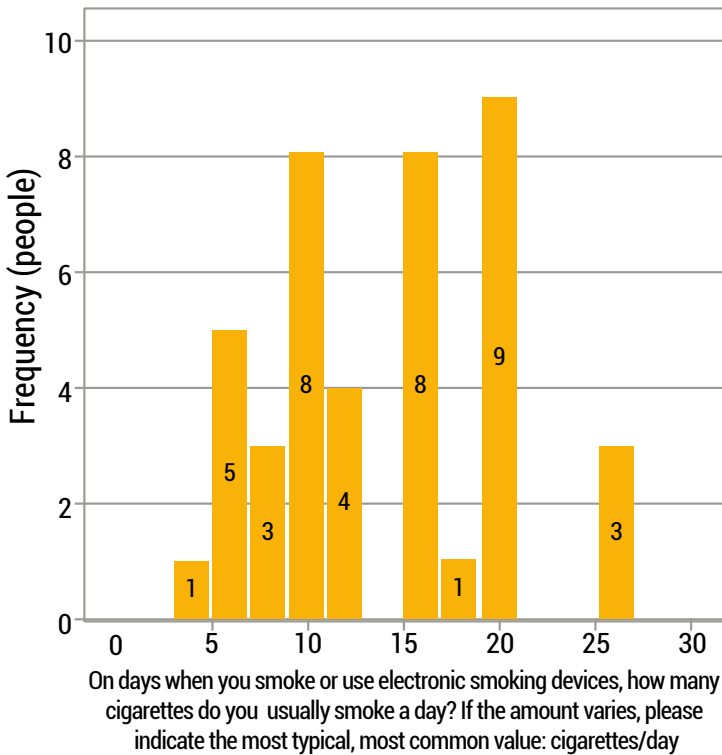


Figure 2: Quantity of cigarettes smoked per day, main N=42

Although several statistical data show that the number of daily smokers has been decreasing since 2009, the proportion of people having this harmful habit is still high in Hungary compared to other countries. According to the HCSO 2020 data, the highest number of smokers, both women and men are from the 18-34 age group. In our opinion, this may be because this age group tends to have an active social life and there is evidence that friends can influence smoking habits (Stein et al. 1996) as well as alcohol consumption (Balázs – Pikó 2013). Using an independent samples t-test, we found a trend-level difference between the age of smokers (mean=46.14) and non-smokers (mean=52.17): $t(99)=-1.865$ $p=0.065$. However, Spearman correlation revealed no significant relationship between smoking habits and age, nor between the amount of cigarettes smoked per day and age.

According to the HCSO health surveys (2009, 2014, 2019), more men smoke daily and occasionally than women (KSH, 2019). This was also shown in our sample, with 16 female and 26 male smokers, but no significant difference was found between men and women (smoking or not smoking): Pearson $\chi^2(1, N=101)=1.609$ $p=0.205$ (2-sided).

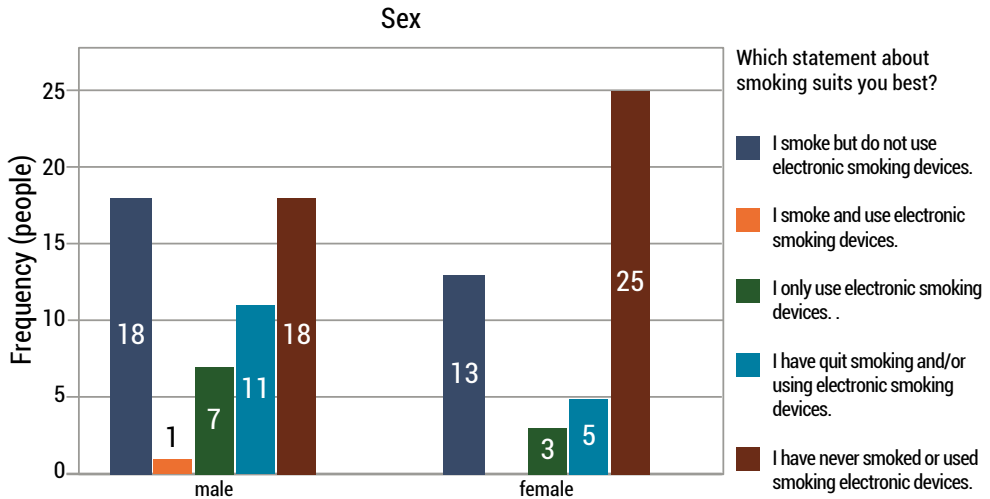


Figure 3: Smoking habits by gender, persons N=101

Furthermore, using the Mann-Whitney test, no significant difference was found between women’s (Mdn=5) and men’s (Mdn=4) smoking habits and device use: $U^4 = 1038$ $Z=-1.642$ $p=0.101$ (2-sided). This suggests that there is a broadly similar distribution between groups of men and women in terms of whether they smoke (e.g. more non-smokers in both groups) and the type of device they use (e.g.: in both groups, smokers tend to use cigarettes, fewer use e-cigarettes, few use both at the same time; and non-smokers more often never smoked, fewer quit). Among women, there are almost twice as many non-smokers than smokers (16 smokers, 30 non-smokers), while the proportion is much lower for men (26 smokers, 29 non-smokers). Nevertheless, this is not considered a significant difference. However, when analysing the frequency of

4 U = statistical value of Mann-Whitney test.

smoking (cigarette/day) using the Mann-Whitney test, a significant difference was found between the number of cigarettes/electrical cigarettes smoked per day for men (Mdn=15) and women (Mdn=10) smokers ($U=107$ $Z=-2.645$ $p=0.008$ (2-tailed) $r=0.408$). Overall, we can therefore see that there is no significant difference in smoking device use, frequency (i.e. all smokers smoke daily). However, men “lead” in the number of cigarettes smoked per day.

Regarding smoking habits, the role of family and peers has been confirmed by several studies. According to the results of the Hungarostudy 2002, 2006, quality of marriage is related to smoking and alcohol consumption (Hungarostudy, 2002, 2006, cited in Dinnyés, Pusztafalvi, Tarkó, 2019). For example, happily married people smoke less than those divorced or living in unhappy marriages. The subjects were also examined from this aspect (Table 1)

Relationship status	Frequency (persons)	Percentage (%)
single, no partner	19	18.6
not married, living with a partner	10	9.8
married, living with a spouse	48	47.1
married, living with a partner	3	2.9
divorced, no partner	7	6.9
divorced, living with a partner	7	6.9
widowed, no partner	5	4.9
widowed, living with a partner	2	2.0

Table 1: Distribution of respondents by family composition persons, percent N=101 (1 person did not respond)

For the purposes of analysis, we categorised the responses into four groups: Married; In a relationship but not married; Single; Divorced/widowed. (We will form categories by marital status in our further analysis as well.) The largest number of respondents (48) were married, and the smallest number (12) were in the divorced/widowed category. However, marital status has no effect in our results, as we found no significant relationship between marital status and smoking (smoking or non-smoking). Furthermore, using the Kruskal-Wallis test, we found no significant differences between either the smoking habits or the average daily cigarette consumption of the four studied marital status categories. As we did

not find any kind of correlation between smoking habits and marital status, we applied a different kind of grouping. Instead of four groups, two groups were created according to whether or not the subjects were in a relationship. Based on the responses, out of 101 respondents (1 non-respondent), 70 twins have partners, and 31 do not. The results showed no significant difference between those in a relationship and those not in a relationship in terms of smoking (smoking or not smoking): Pearson's χ^2 (1, N=100)=0.500 p=0.479 (2-tailed), and no significant difference was found in the number of cigarettes/electric cigarettes smoked per day by those in a relationship (Mdn=15) and those not (Mdn=10) using the Mann-Whitney test: U=118 Z=-1.519 p=0.129 (2-tailed). Thus, regardless of categorisation, there is no relationship between the subjects' smoking habits and marital status.

We next examined whether there are differences in smoking habits and frequency according to twin type. According to a Hungarian study, monozygotic twins start smoking 1.8 years earlier than dizygotic twins, and more monozygotic than dizygotic twins smoke (Tárnoki et al., 2012). In our sample, fewer monozygotic than dizygotic twins smoke, but no significant difference was found between the smoking frequency (smoking or non-smoking) of monozygotic and dizygotic twins: Pearson χ^2 (1, N=100)=0.891 p=0.345 (2-sided). Furthermore, there is no significant difference between the smoking habits (device use) of monozygotic (Mdn=4.5) and dizygotic (Mdn=4) individuals (U=1074 Z=-1.274 p=0.203) or the number of cigarettes smoked per day between the two groups: U=197 Z=-0.317 p=0.751 (2-sided).

Overall, we found no significant difference in smoking habits, based on twin type (zygosity).

According to the HCSO health surveys, based on educational attainment, those with less than a high school diploma smoke the most, and those with college or university degrees smoke the least (KSH, 2019). In our research, our hypothesis was that those with lower educational attainment smoke more often. Figure 5 illustrates the distribution of educational attainment between the smoking and non-smoking twin groups.

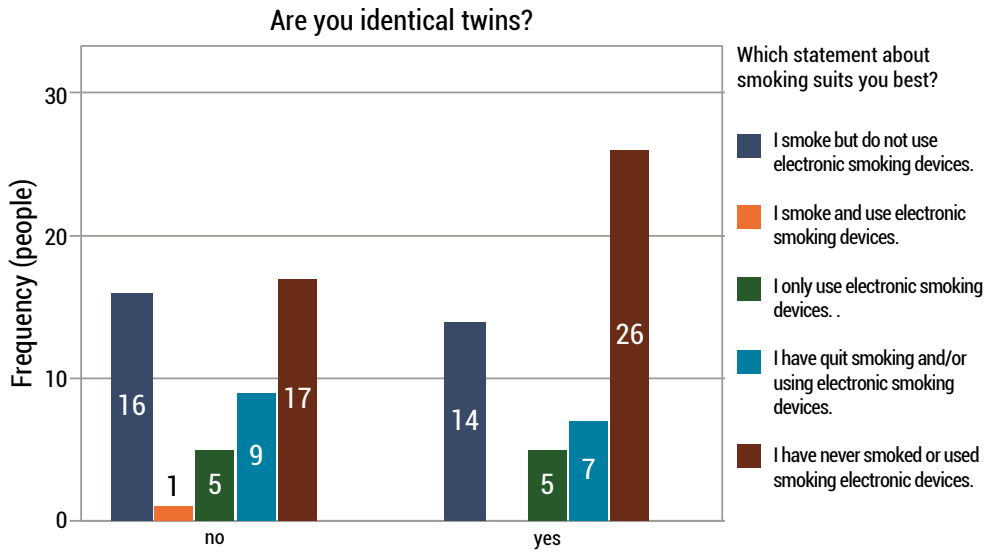


Figure 4: Smoking habits by twin type, persons N=100

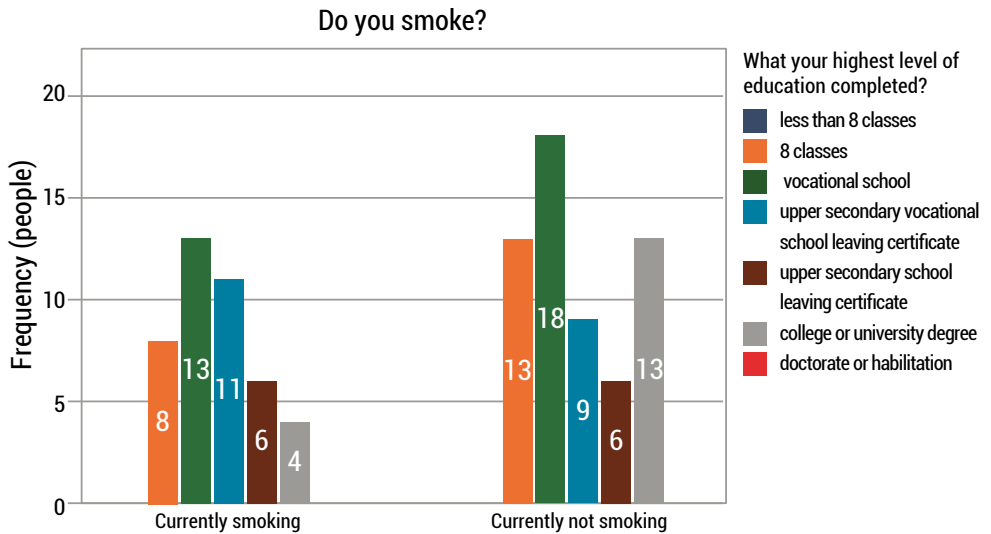


Figure 5: Smoking by educational attainment, persons N=101

The graph shows that there are more non-smokers than smokers among those with elementary education, vocational/technician training and college/university education. From those with secondary education, there are more smokers than non-smokers among those with a vocational school diploma, and an equal number of smokers and non-smokers among those with a high school diploma. A Mann-Whitney test of the hypothesis revealed that there is no significant difference between the educational attainment of smokers ($Mdn=3.5$) and non-smokers ($Mdn=3.8$): $U=1196.5$ $Z=-0.301$ $p=0.764$ (2-tailed), i.e. our hypothesis that people with lower education are more likely to smoke is not supported.

In terms of educational attainment, our next hypothesis was that the higher the educational attainment, the healthier the smoking habits. However, we did not find any correlation between educational attainment and smoking habits (device use). However, it is worth investigating whether there is a correlation between education level and the types of smokers and the groups of non-smokers (smokers who quit or never smoked). No significant association was found between smoking habits and educational attainment: $r_s = 0.113$ $p=0.260$ (2-tailed), and no significant association was found among non-smokers. However, with Bonferroni correction ($p=0.025$), we found a positive correlation of moderate strength between smokers' device use and educational attainment: $r_s = 0.395$ $p=0.010$ (2-tailed). Thus, the correlation suggests that a higher education level is associated with a healthier choice of device in twins. This may lead us to conclude that higher education is generally associated with a higher salary, which allows people to invest in an e-smoking device, while those with lower education levels and lower salaries may not be able to afford purchasing a device. Overall, educational attainment is associated with device choice only among smokers (higher education – more widespread use of electrical devices), not with the amount smoked per day, and education makes no difference in being a smoker or a non-smoker.

Looking at the occupation variable, 68 respondents said they worked, and 28 of the active workers were smokers. No significant differences were found between smoking habits (smoking or not smoking) and occupation, and between smoking habits (use of devices) of working and retired persons.

We also had hypotheses about the influence of environmental factors (life satisfaction, job satisfaction and financial situation) on smoking habits.

One of our hypotheses was that there is a connection between smoking and satisfaction with life and environmental factors (job, financial situation). However, using the Mann-Whitney test, no significant difference was found between the life satisfaction scores of smokers (Mdn=7) and non-smokers (Mdn=8): $U=1132.5$ $Z=-0.749$ $p=0.454$ (2-sided). There is no significant connection between smoking habits and life satisfaction, nor between the amount of cigarettes smoked per day and life satisfaction.

For job satisfaction, we developed a variable with three values. Using the Mann-Whitney test, no significant difference was found between the job satisfaction scores of smokers (Mdn=3) and non-smokers (Mdn=3): $U=607$ $Z=-0.303$ $p=0.762$ (2-sided). Using Spearman correlation, no significant connection was found between the amount of cigarettes smoked per day and job satisfaction. In conclusion, the job satisfaction score is not associated with the fact, method and amount of smoking, so we reject this hypothesis as well.

Finally, we looked at the relationship between financial satisfaction and smoking. Our hypothesis was that the less satisfied the subject was with his/her financial situation, the more likely he/she was to smoke. Satisfaction with financial situation was also measured using a variable with three values. In the analysis, we found no significant difference between the material situation satisfaction scores of smokers (Mdn=2) and non-smokers (Mdn=2), and no significant relationship between smoking habits and financial satisfaction. *To summarise the above, the influence of environmental factors was not evident in the smoking habits of the twins in our sample.*

We also wanted to assess if the twins in the sample had pain and if this was related to their smoking habits. Out of 101 twins, 74 (73.3%) have no physical pain and 27 (26.7%) do. Of the 27, 21 (77.8%) have had it for more than 1 year, 5 (18.5%) for more than half a year and 1 (3.7%) for less than 1 month. However, only 10 of the smokers have physical pain.

Graph 6 shows that the pattern emerging for the group of those with pain and those without is similar. Most of them do not smoke, and those who do smoke mainly smoke only traditional cigarettes. The results show no significant relationship between physical pain and smoking (smoking/non-smoking): Pearson $\chi^2(1, N=101)=1.609$ $p=0.205$ (2-sided). i.e. physical pain cannot be considered as a cause of smoking.

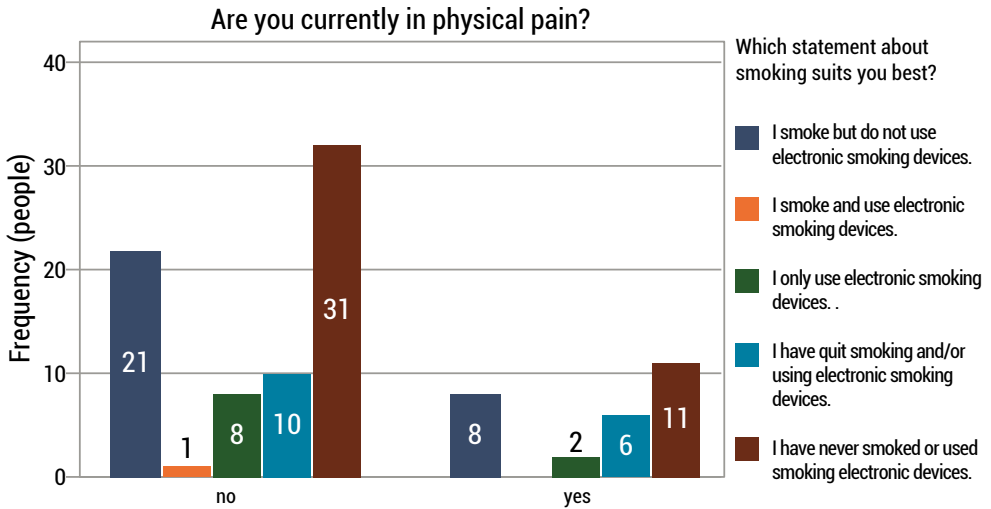


Figure 6: Prevalence of physical pain among twins N=101

Hypotheses and results: alcohol consumption

In the second part of our study, we investigated whether there is a relationship between twins’ drinking habits and environmental factors. Subjects were asked to answer three questions related to alcohol consumption. Results on the frequency of alcohol consumption are shown in Figure 8.

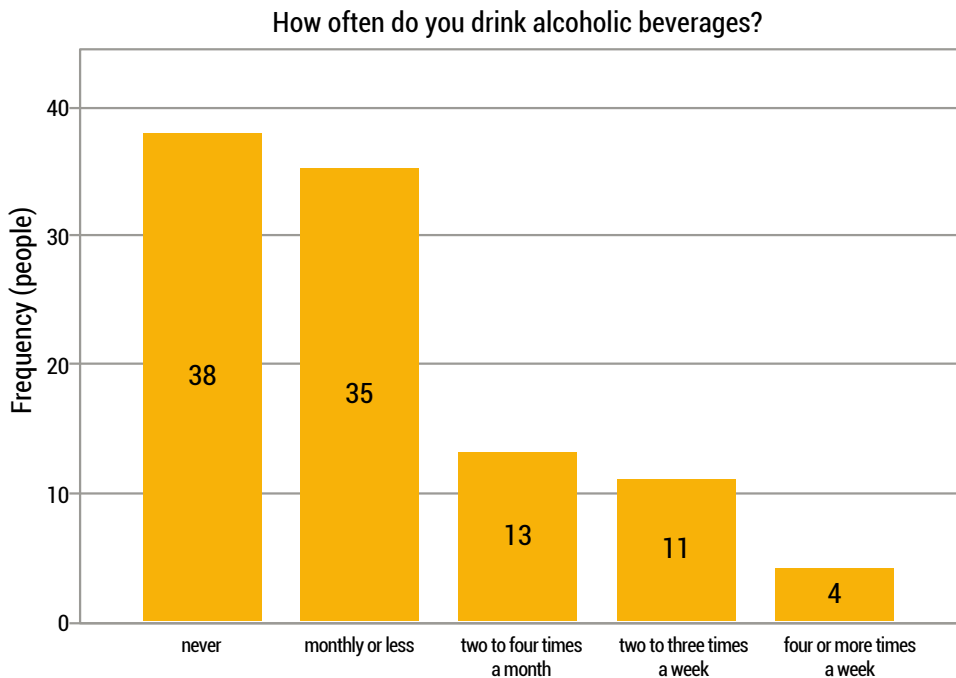
Of the 101 people, 38 never drink alcohol. Thus, the second question about the average amount of alcohol consumed, concerned 63 people (unit drink = 2cl of spirits, 1dl of wine, 1 glass of beer, 1 cocktail). The higher the score on the scale, the more alcohol consumed per occasion (Figure 9).

According to the 2014 European Health Interview Survey, 5% of the adult population declared themselves heavy drinkers, and in 2019, 5.2% (Elekes, 2018; KSH, 2019). It is difficult to define heavy drinker, as the boundary between heavy and moderate drinker varies in different countries. We applied the HCSO-definition of heavy drinker⁵, i.e. those who consume more than 28 units of

⁵ The HCSO considers those consuming more than 14 units of alcohol heavy drinkers. According to the KSH, one drink/unit of alcohol is equivalent to 1 pint of beer, 2 dl of wine or 5 cl of short drinks.

alcohol⁶ when drinking. According to this, no twins were heavy drinkers, while 22 were considered moderate drinkers and 41 infrequent drinkers. The third question concerned the frequency of drinking 6 or more units of alcohol at a time. 35 never drink more than 6 units of alcohol at once, 21 less than once a month, 4 more than once a month, and 3 drink more than 6 units of alcohol every week. There is a positive relationship of medium strength between the three variables measuring drinking behaviour: frequency of alcohol consumption versus average consumption, frequency of alcohol consumption versus heavy consumption, and frequency of average consumption versus heavy consumption.

From demographic variables, the connection between age and alcohol consumption was not significant. In our opinion, this cannot be considered general, as even despite the small sample size, there is a large variation according to age.



**Figure 7: Frequency of alcohol consumption, persons
N=101 (1 person did not answer)**

⁶ Those who consume between 3 and 9 units of alcohol can be described as moderate drinkers, and those who consume between 1 and 2 units as infrequent drinkers.

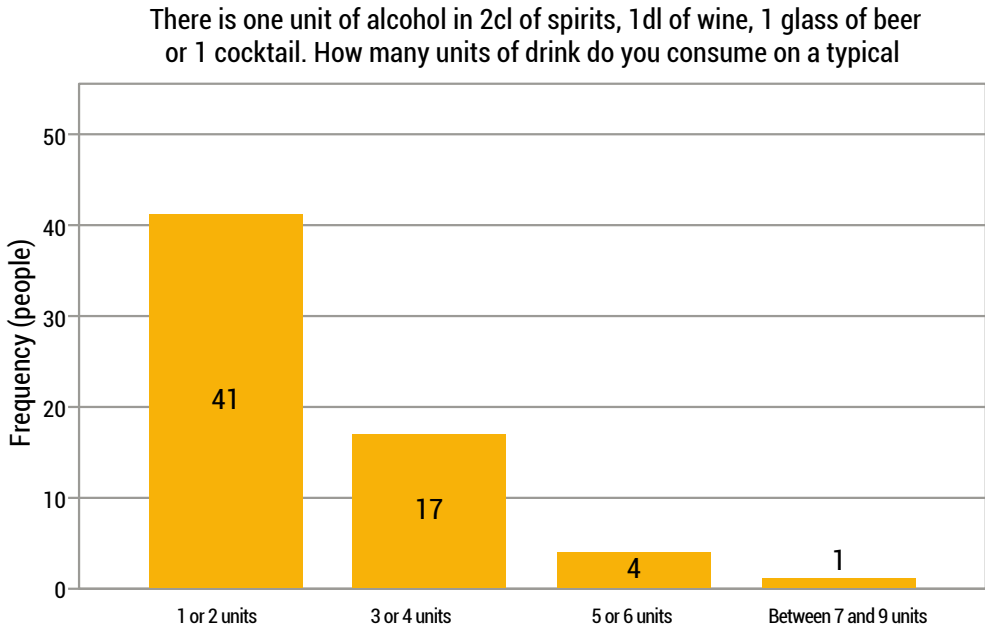


Figure 8: Amount of alcohol consumed per occasion, persons N=63

In our study, we found a significant difference between the frequency of alcohol consumption by gender, women (Mdn=1) and men (Mdn=2): $U=650$ $Z=-4.438$ $p=0.000$ (2-sided). In our sample, men drink alcohol significantly more often than women. Using the Mann-Whitney test, we found a significant difference between the average amount of alcohol consumed by women (Mdn=1) and men (Mdn=1), and a trend difference between the frequency of alcohol consumption by women (Mdn=1) and men (Mdn=2). *Overall, male twins drink more often and more heavily on average than females, and there is also a tendency for males to drink more often and in greater quantities.*

No significant differences in alcohol consumption habits were found according to marital status, using the Kruskal-Wallis test, regarding either the frequency or the amount of alcohol consumption. As we found no differences in the drinking habits of the twins in the sample according to their marital status, we reduced the number of categories to two – in

a relationship (70), no relationship (31) –, similarly to the analysis smoking habits. However, using the Mann-Whitney test, we did not find any significant difference in frequency of alcohol consumption between those in a relationship (Mdn=2) and those not in a relationship (Mdn=2): $U=1067$ $Z=-0.140$ $p=0.889$ (2-tailed), nor between the average amount of alcohol consumed by those in a relationship (Mdn=1) and those not in a relationship (Mdn=1): $U=408.5$ $Z=-0.565$ $p=0.572$ (2-tailed). Finally, there is no correlation between the amount of alcohol consumed and the two marital statuses. Shortly, there is no connection between alcohol consumption and marital status, regardless of the arrangement.

In our further analyses, we explored whether twin type has an effect on alcohol consumption patterns. Some twin studies suggest that identical twins are twice as likely to be alcoholics than dizygotic twins. We believe that this is because alcohol addiction may run in the family, and if the propensity is inherited, monozygotic twins are at greater risk. However, we found no significant difference between the frequency and amount of alcohol consumption for the two types of twins.

No significant connections were found between educational attainment and frequency of alcohol consumption, average amount of alcohol consumed and frequency of heavy drinking, either.

Regarding occupation, we hypothesised that working-age people are more likely to drink alcohol than retired people. This is partly because most drinkers are of working age, and partly because younger people are more likely to have a more active social life than older people. However, we found no significant difference between the frequency of alcohol consumption between working age (Mdn=2) and retired (Mdn=2) individuals: $U=717$ $Z=-0.930$ $p=0.352$ (2-sided). However, using a Mann-Whitney test, a trend level difference was found between the average alcohol consumption of working (Mdn=1) and retired (Mdn=1) individuals: $U=220$ $Z=-1.809$ $p=0.070$ (2-tailed). *Overall, there is a tendency for active workers among twins to drink more on average than retired twins.*

We believe that the influence of environmental factors on alcohol consumption is crucial, as people tend to use certain activities and substances to cope with stress. The alcohol consumption habits (frequency and amount)

of the twins in our sample were examined in relation to their dissatisfaction with their lives, financial situation and work. We found a weak but significant negative connection between life satisfaction and frequency of alcohol consumption: $r_s = -0.263$ $p = 0.008$ (2-tailed), but no significant association between life satisfaction and amount of alcohol consumption. Our hypothesis that dissatisfaction with one's job is associated with more frequent drinking, was not confirmed, as we found no significant connection between job satisfaction and alcohol consumption. We also hypothesised that those who were less satisfied with their financial situation would drink more often. We found no significant correlation in this regard, either. However, it is important to note that the relationship does appear as a trend: $r_s = -0.215$ $p = 0.093$ (2-tailed). Lower satisfaction with one's financial situation may be associated with more frequent heavy drinking at the trend level.

The variables related to alcohol consumption were also analysed based on the physical pain variable. Our hypothesis is that unhealthy lifestyle is connected to more frequent physical pain among alcohol drinkers. Using the Mann-Whitney test, we found a significant difference between the frequency of alcohol consumption between those experiencing pain (Mdn=1) and those not experiencing physical pain (Mdn=2): $U = 707.5$ $Z = -2.109$ $p = 0.035$ (2-sided). Based on our results, twin individuals who do not experience pain are more likely to drink alcohol. We assume that those experiencing some pain may not want to further damage their health with alcohol. Using the Mann-Whitney test, no significant difference was found between the amount of alcohol consumption of those who reported physical pain and those who did not. *We hypothesised that alcohol consumption was the cause and physical pain the effect, whereas the results show the reverse.* That is, if a twin has physical pain, they are less likely to cure it with alcohol.

Summary

Our analysis focused on some harmful addictions of twins. Our results show that 42 out of 102 subjects were smokers at the time of the study (2021), and 16 out of 59 non-smokers had previously smoked but had given it up for some reason. In terms of alcohol consumption, there are fewer twins who never drink (38) than non-smokers. This confirms that alcohol consumption

is not only a harmful addiction, but also a social activity, as the responses suggest that alcohol is not consumed on a daily basis.

The results show that smoking is prevalent in younger age groups, as we found a tendency for non-smokers to be older. This is not the case for alcohol consumption, as there is no correlation between age and alcohol consumption.

Twin men smokers smoke more cigarettes on an average day than twin women smokers, and men smoke more often and drink more alcohol. Our study also shows that there is no difference according to zygosity in smoking and alcohol consumption patterns. However, literature suggests that monozygotic twins have a higher similarity in alcohol consumption patterns than dizygotic twins.

Higher education is associated with a healthier choice of smoking devices, i.e. higher status associated with higher education allows for an investment in better quality smoking imitation devices. The results also show a tendency for twins in active employment to consume more alcohol on average than those retired. One reason for this is that older people are less likely to have an active social life, associated with high alcohol consumption.

Life satisfaction is not associated with the presence, method or amount of smoking, but twins who are less satisfied with their lives are more likely to drink alcohol. Overall, the twins in the sample tend to use alcohol to relieve stress in the face of negative environmental factors, but drinking alcohol cannot be described as their general habit. This is also supported by the fact that they do not consume alcohol on a daily basis, but regarding environmental influences, there are some correlations. As smoking is a daily activity in their lives, smoking cigarettes is not necessarily a stress reliever.

The final hypothesis of our research was the presence of a connection between physical pain and harmful habits. Based on the harmful health consequences of smoking and alcohol consumption, we hypothesised that physical pain is predominantly present among those who engage in these harmful activities. Our hypothesis was not confirmed for smoking, while regarding alcohol consumption, we got an unexpected but reasonable result. Twins who do not experience pain are more likely to drink alcohol. While our hypothesis was that alcohol consumption was the cause and pain the effect,

the results show that the opposite is true. So we may assume that twins who are in pain consume less alcohol in order to preserve or restore their health.

Of course, more comprehensive studies on a larger sample of twins would be needed to draw general conclusions, but the results of our research can provide an overview of how attitudes to harmful habits are influenced by different demographic, social and environmental factors in addition to genetic factors in twins.

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