



# Identity development in people with mild intellectual disability: A short-term longitudinal study

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## Abstract

The objective of the study was to diagnose changes in the identity of individuals with mild intellectual disability (ID) in late adolescence and emerging adulthood, comparing them to their non-disabled peers. The dual-cycle model of identity formation of Luyckx et al. was employed (*Developmental Psychology*, 42, 366–380, 2006). The study included 127 participants living in Poland. Three waves were performed at half-year intervals. The *Dimensions of Identity Development Scale* in its modified version for people with ID was used (*DIDS/PL-1*; Rękosiewicz *Studia Psychologiczne*, 53, 19–31, 2015). People from the four study groups (A - late adolescents with ID, B - emerging adults with ID, C - late adolescents within the intellectual norm, D - emerging adults within the intellectual norm) in the main did not differ from one another in respect of the dimensions of identity formation. Over time, there was an increase in commitment making and identification with commitment, but only among adolescents with ID. None of the groups demonstrated significant changes in exploration in breadth, in depth, nor in ruminative exploration. It was successfully demonstrated that people with mild ID are not distinct on all dimensions of identity formation when compared to their peers within the intellectual norm. Minor changes in identity may indicate a longer period of identity formation, or dynamic changes coming earlier – during early adolescence or later – in early adulthood.

**Keywords** Commitment · Emerging adulthood · Exploration · Identity · Late adolescence · Mild intellectual disability

## Background

Identity is a theoretical construct frequently explored by social scientists, both in theoretical deliberations and in empirical studies (Brubaker and Cooper 2000). Although it is understood in various ways, as a phenomenon impacting individuals or a collective, in the most general terms it can always be defined as a subjective response to the question “who am I (are we)?” Psychological studies to date have been focused mainly on the subjective conditions for the formation of identity or its subjective correlates. We know far less about the social mechanisms involved in identity formation (Schwartz 2001). One particular unknown consists of groups of individuals with unique experiences: social minorities, non-students, people not attending school, people of low socio-economic status, and people with disabilities, especially those with intellectual disability.

In the psychological sense, Erikson’s theory defines identity as a set of beliefs about oneself, the world and people, as the perception of sameness and continuity of one’s own person despite the passage of time, and also as the feeling of distinctness and integrity (Erikson 1950). This theory was then developed by Marcia, and in that form later reflected in numerous empirical studies (e.g. Marcia 1966; Marcia and Friedman 1969; Slugoski et al. 1984; Toder and Marcia 1973). Marcia understood identity as the effect of exploration and of commitment, which constituted consecutive stages. Exploration is an orientational and exploratory activity, which means it consists in actively attempting and assessing diverse alternatives before taking the decision to engage in action. Commitment is the stage which comes after exploration, consisting in taking a decision and engaging in action. Scores on these two dimensions then serve as the basis for distinguishing four statuses of identity: achievement, moratorium, foreclosure, and diffusion.

Koen Luyckx et al. performed research in which they demonstrated that the process of identity formation is more complex than the two-stage model would suggest (Luyckx et al. 2006). They uncovered the existence of three types of exploration, and two types of commitment (Luyckx et al. 2008a). Exploration in

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breadth (i.e., exploration as captured by Marcia) is the search for alternatives in respect of one's values, goals, and convictions prior to making a choice. Exploration in depth is a detailed assessment of previous choices in order to determine whether the commitments that have been made are acceptable to the individual. Ruminative exploration refers to the fears and doubts that concern commitment in spheres of relevance to the formation of identity. Commitment making (i.e., commitment as captured by Marcia) entails making choices and commitments important in the development of identity. Finally, identification with a commitment means identification with choices made and is associated with a feeling of certainty that those choices are the right one for the individual.

Exploration in breadth and commitment making are equivalents to the concepts of exploration and commitment according to Marcia, and they constitute the first cycle in the formation of identity – the cycle of commitment formation. This is the time when the individual makes an initial decision as to the best alternative for him/herself. In the second cycle – evaluation of commitment – assessment of the choice already made is performed, that is the exploration in depth and identification with the commitment. This is why the model developed by Luyckx is sometimes referred to as the dual-cycle model of identity formation (Luyckx et al. 2007). However, it is difficult to definitively demarcate normative age borders applicable to each cycle in the development of identity.

Scores on the dimensions of identity change with age – generally, a small decline in exploration and a strong increase of commitment are observed from the period of adolescence (earlier and later), through emerging adulthood and into early adulthood (Waterman 1982). Later adolescence (roughly 15–18 years old) and emerging adulthood (roughly 18–25 years old) seem, however, to be quite similar in respect of the process of identity development. The demands of the social environment in emerging adulthood as to making commitments remain relatively small, and mainly concern education. During this period a high level of exploration is maintained (Schwartz et al. 2013).

On the basis of results of studies on identity development it is difficult to definitively determine the age or developmental period in which specific changes in identity dimensions occur. Large differences among individuals seem to be prevalent in this process. For example, a study conducted with the participation of individuals in developmental phases from adolescence to emerging adulthood (from 14 to 30 years old) uncovered an increasing level of commitment making and identification with commitments as age increased (Luyckx et al. 2013). Exploration in breadth and in depth, and, to a lesser degree, rumination, increased from adolescence to emerging adulthood (reaching a peak around 22 years), after which it declined slightly, while remaining in the oldest age group (30-year-olds) at a higher level than among the youngest adolescents. In Polish studies it has been observed that among

several age groups (19–21 years, 22–25 years, 26–35 years) the last of them was characterized by the highest frequency of achieved identity, that is, with a high prevalence of “positive” explorations (not rumination), as well as making and identifying with commitments (Piotrowski et al. 2013).

The small body of longitudinal studies also does not provide us with definitive results. In one of them, no changes were observed among adolescents (five waves at 12-month intervals) in terms of commitment, and also constancy in the level of exploration in depth from early to middle adolescence, as well as its increase from middle to late adolescence (Klimstra et al. 2010) – this could attest to the beginning of a cycle of commitment evaluation at the end of adolescence. In turn, in longitudinal studies among emerging adults (four waves over two years) increase was observed in two dimensions of exploration – in breadth and in depth – but also in commitment making, along with a decline in commitment identification (Luyckx et al. 2006), which would entail intensification of the search for the best alternatives in that age (cycle of commitment making) along with the beginnings of commitment evaluation. In another study involving the same age group (three waves in three years) no significant changes were observed, although a slow increase in the level of commitment making was noticed (Luyckx et al. 2008a).

As a variable, age itself turns out to be insufficient to determine the process of identity formation. It could be assumed that internal-group differences (both in adolescence and emerging adulthood) are an effect of the dependency of identity formation on other factors than age, such as social factors (experiences of young people), or broader cultural elements (such as social norms referring to milestones and the time of entry into adulthood). Grounds for such an assumption can be supplied by longitudinal studies conducted among individuals in the same developmental phase but with different formative experiences at that age (e.g. type of education selected by adolescents – Brzezińska (2017); undertaking studies or work in emerging adulthood - Karaś et al. 2012).

Although it is suggested in the theory of identity development (see e.g. Slugoski et al. 1984) that a necessary condition of its formation is the prior development of formal operations as described by Piaget (see Piaget 1972), study results in this area present us with a muddy picture. Among some participants who were subjected to a diagnosis of identity status according to the Marcia model, it was observed that achievement (high level of exploration and commitment) and moratorium (high level of exploration and low level of commitment) – the two most mature statuses, each involving a high level of exploration, are associated with high results in tasks measuring the capacity to conduct formal operations (e.g. Rowe and Marcia 1980; Slugoski et al. 1984). There are, however, studies in which this relationship was not confirmed, such as Berzonsky et al. 1975; Cauble 1976; Leiper 1981. Today it is held that

when analysing cognitive development in the form of successive stages, children and youngsters with intellectual disability (ID) develop according to the same sequence as their non-disabled counterparts (Zigler 2001). Among both groups the same phases of cognitive development take place, with the difference that children and youngsters with ID proceed from one phase to the next more slowly than their non-disabled peers. If identity is dependent on cognitive development, then individuals with ID should be characterized by identity different from their non-disabled peers but similar to younger individuals within the intellectual norm.

Hypothetically speaking, a low level of intelligence could directly impact the formation of identity by impeding understanding of the consequences of one's own actions, planning, imagination of self in various roles, insight into own motivations, and also indirectly by liberating certain social processes – for instance when the ID of a child leads that child's parents to hamper him/her in initiating independent exploration, or they incur and impose commitments in the child's name without consultation. Studies on identity previously conducted among individuals with ID primarily address social and gender identity, feelings of stigmatization, and feelings of being different and disabled (e.g. Beart et al. 2005; Craig et al. 2002). Disability identity is a topic increasingly often addressed by researchers (Forber-Pratt et al. 2017). It is defined in various ways, but in the most general terms it is an answer to the following questions: “Do I perceive myself as a person with a disability?” and “How do I understand my disability?” Models of disability identity development describe its successive stages (e.g., Gibson 2006; Gill 1997) or statuses (Forber-Pratt and Zape 2017). Disability identity is reflected in the individual's perception of themselves (with their disability) and in the perception of their own defective organism as well as their possibilities of interacting with the environment – both social and physical. Personal identity discussed in the present paper is understood more broadly, as a way of perceiving oneself not only through the lens of one's disability but also in terms of one's resources and weaknesses unrelated to the disability. At the same time, functional limitations seem to be an important, if not crucial, element in personal identity formation and in making future plans, particularly if the disability is severe. Individuals with mild intellectual disability are a special group here. On the one hand, limitations in intellectual functioning may impair in-depth reflection necessary for building one's disability identity. For individuals with ID, “disability identity” may develop on the level of feelings or perceptions rather than on the intellectual level. Standard methods of testing disability identity would therefore have to be replaced with different ones, adjusted to the capabilities of individuals with ID – such as observation or qualitative methods. On the other hand, compared to people with other degrees of ID, individuals with mild ID exhibit cognitive

functioning efficient enough to realize their disability and seem to be aware of its impact on the development of their personal identity (though probably in a specific domain - e.g., career plans). This problem, however, should be treated as an area for further research to explore.

There is a lack of studies focused in the strict sense of the term on the formation of individual identity. Perhaps one of the reasons for this is the lack of appropriate diagnostic instruments that would facilitate research among this social group. The current study had two primary objectives. The first was to diagnose the dimensions of personal identity formation of individuals in late-adolescence and emerging adulthood with mild ID, comparing them to their intellectually non-disabled peers. The second was to diagnose the development of their personal identity over time. It was expected that individuals with ID would be characterized by a lower prevalence of exploration in breadth and in depth, of commitment making and identification, and a higher level of ruminative exploration than their intellectually non-disabled counterparts. This difference may result directly or indirectly from ID. A hypothesis was also formulated as to increase of commitment making and identification over time; these changes, however, are likely to be greater among individuals in the phase of emerging adulthood rather than those in late adolescence (as an effect of a greater „coming closer” to adulthood). This should also be more likely among non-disabled individuals compared to those with ID (as an effect of the reduced tempo of cognitive development potentially associated with the formation of personal identity).

## Method

### Participants

Study participants belonged to one of two age groups: (1) late adolescence (16–17 years old at Wave 1), and (2) emerging adulthood (20–21 years old at Wave 1); they were also divided into two groups distinguished by level of intellectual functioning: (1) with mild ID, and (2) within intellectual norm. Thus four groups distinguished by developmental stage and level of intellectual functioning were created (groups A, B, C, D, Table 1). The sample was selected purposefully, with attention paid to the assumed criteria. Participants lived in Poland, and all of them continued their education in schools. They attended one of four types of school: general upper-secondary schools or vocational schools – preparing students for a trade (Group C), special vocational schools – preparing students with disabilities for a trade (Groups A and B – all subjects with ID), and higher education institutions (Group D). ID diagnosis was not made in the study. Subjects with ID were selected from vocational special schools (from classes only for students with mild ID). All of them had been qualified

**Table 1** Sample characteristics

Variable	Group A Adolescence, ID <i>n</i> = 36	Group B Emerging adulthood, ID <i>n</i> = 31	Group C Adolescence, ND <i>n</i> = 30	Group D Emerging adulthood, ND <i>n</i> = 30
Age	<i>M</i> = 16.36 ( <i>sd</i> = 0.49)	<i>M</i> = 20.42 ( <i>sd</i> = 0.50)	<i>M</i> = 16.23 ( <i>sd</i> = 0.43)	<i>M</i> = 20.43 ( <i>sd</i> = 0.50)
Female	<i>n</i> = 15 (41.7%)	<i>n</i> = 12 (38.7%)	<i>n</i> = 19 (63.3%)	<i>n</i> = 21 (70.0%)

ID intellectual disability, ND non disabled

for special education by psychological and educational counselling centres based on mild ID diagnosis, in accordance with ICD-10 guidelines and Polish education law. All subjects with ID lived with their families in villages and small towns, and during school time (from Monday to Friday) they lived in boarding school dormitories.

At Wave 1 143 people participated, at Wave 2 132, and at Wave 3 127. Thirteen people resigned from further participation in the study, whereas 3 left the school they had previously attended and then refused further meetings at the site of their new school. The final analysis took a total of 127 participants into consideration as having taken part in all three waves.

## Measure

### Dimensions of Identity Development Scale DIDS – Modified Version (DIDS/PL-1)

The scale is based on the dual-cycle theory of identity formation by Luyckx et al. (2006), and it examines the five dimensions of identity. The original *DIDS* was adapted in Poland by Brzezińska and Piotrowski – *DIDS/PL* (Brzezińska and Piotrowski 2010), and its modified version *DIDS/PL-1* is a simplified (both linguistically and in terms of content) version, suitable for use among individuals with mild ID (for a detailed description of the development of the scale, see Rękosiewicz 2015). *DIDS/PL-1* is not a Polish translation of the original English version; it is a simplified form of the Polish version, *DIDS/PL*.

The modified version, similarly to the original, is composed of 25 items in the form of declarative sentences concerning plans for the future made by the participant. These items comprise five scales (with five items in each scale) that align with the five dimensions of identity (exploration in breadth, exploration in depth, ruminative exploration, commitment making, commitment identification). In the modified version (*DIDS/PL-1*) the number of answers has been reduced from six to four: 1 – *no*; 2 – *rather not*, 3 – *rather yes*, 4 – *yes* (the *DIDS/PL-1* version was tested psychometrically previously – see Rękosiewicz 2015). For each of the five *DIDS/PL-1* subscales, scores were averaged across the five constituent items. Each scale has a minimum score of 1 and a maximum score of 4 points.

In the current study, individual items in the questionnaire were read aloud by the researcher, and the participant was tasked with selecting one of four answers which best reflected the degree to which the statement reflected him/her. A piece of paper detailing the possible responses was placed in front of the participant and remained there during the entire testing session. After the participant gave a response, the researcher independently entered it on the response sheet.

Reliability as measured using Cronbach's alpha at the successive waves was: EB scale: 0.72; 0.74; 0.75; ED scale: 0.72; 0.71; 0.71; RE scale: 0.71; 0.72; 0.72; CM scale: 0.83; 0.88; 0.85; IC scale: 0.85; 0.90; 0.87.

During the study, Pearson's *r* correlations observed in other studies using *DIDS* were replicated among dimensions of identity (e.g. Luyckx et al. 2008a, b). These are: positive correlation between exploration in breadth and in depth (at a moderate level), moderate and strong positive correlation between scales of commitment, negative correlation between ruminative exploration and commitment making (although at a low level). Among these same dimensions of identity assessed at three waves there is a positive, moderate or strong correlation. Correlations among the *DIDS* subscales are represented in Table 2.

## Procedure and Data Analyses

Permission to conduct the research at the sites of schools was given by headmasters. Informed consent was obtained in writing from all participants and from the parents of minor participants. A total of 234 people who met the criteria for selection to the research group (and their parents) received information about the study along with a consent form. Of those, 143 expressed their readiness to participate in the study.

Data were collected at three waves (each lasting three weeks) with half-year intervals. At each wave, participants completed the identity measure individually in a school room with only the researcher being present. During the test session, the questionnaire items were read aloud to the participants and their answers were recorded on a response form. Each test session lasted 30 min.

I conducted a single-variable analysis of variance with group (A, B, C, D) as a factor and with dimensions of identity

**Table 2** Correlations amongst the five identity dimensions

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. EB 1	–														
2. ED 1	0.65**	–													
3. RE 1	0.68**	0.52**	–												
4. CM 1	0.03	0.10	–0.31**	–											
5. IC 1	0.12	0.18*	–0.16	0.59**	–										
6. EB 2	0.69**	0.48**	0.56**	0.00	0.18*	–									
7. ED 2	0.40**	0.49**	0.43**	–0.02	0.03	0.62*	–								
8. RE 2	0.48**	0.29**	0.54**	–0.25**	–0.12	0.45**	0.35**	–							
9. CM 2	–0.05	0.01	–0.29**	0.72**	0.58**	0.04	0.08	–0.33**	–						
10. IC 2	0.11	0.15	–0.13	0.55**	0.78**	0.27**	0.10	–0.09	0.71**	–					
11. EB 3	0.43**	0.36**	0.29**	0.11	0.06	0.46**	0.49**	0.32**	0.08	0.18*	–				
12. ED 3	0.27**	0.31**	0.21*	0.09	0.08	0.26**	0.43*	0.16	0.01	0.15	0.50**	–			
13. RE 3	0.21**	0.20*	0.35**	–0.09	–0.13	0.22*	0.15	0.33**	–0.13	0.00	0.46**	0.18*	–		
14. CM 3	0.00	–0.07	–0.18*	0.56**	0.35**	0.05	0.05	–0.13	0.51**	0.41**	0.05	0.13	–0.33**	–	
15. IC 3	0.20*	0.08	–0.06	0.43**	0.47**	0.16	0.04	–0.03	0.39**	0.52**	0.19*	0.24**	–0.20**	0.71**	–

\*  $p < 0.05$ , \*\*  $p < 0.001$

Number next to the variable means the wave number. *EB* exploration in breadth, *ED* exploration in depth, *RE* ruminative exploration, *CM* commitment making, *IC* identification with commitment

development as dependent variables, followed by post hoc Tukey test. To examine changes over time, I performed a single-factor analysis of variance with an independently repeated measurement. The level of significance was .05 in all tests. All analyses were performed with the IBM SPSS Statistics software, version 24.0.

## Results

The posited hypothesis assumed that people with ID are characterised by a lower scores on identity dimensions their intellectually non-disabled peers (excepting ruminative exploration). In order to examine this hypothesis, a single-variable analysis of variance was conducted on a group (A, B, C, D) as a factor, and with five dimensions of identity as dependent variables. A post hoc Tukey test uncovered a difference between groups only at Wave 2, and only for exploration in depth (Table 3). Individuals with ID in the phase of emerging adulthood are characterized by a greater exploration in depth than their non-disabled peers. This is in direct contradiction to the assumptions of the hypothesis.

It was expected that together with the passage of time both the group of individuals with ID and those without it would record the increase in commitment making and identification. It was also expected that this increase would be greater among individuals in emerging adulthood than among late adolescents, and also among normally functioning individuals compared to those with ID.

In order to verify this hypothesis, first a single-factor analysis of variance (ANOVA) was conducted with an independently repeated measure in each of the four studied groups. Change in the course of three waves concerning dimensions of identity took place only in two cases. First, a change in commitment making was observed in Group A, thus among disabled adolescent individuals [Pillai's Trace = 0.20;  $F(2, 34) = 4.14$ ;  $p = 0.03$ ;  $\eta^2 = 0.12$ ]. The assumption of sphericity was fulfilled (in Mauchly's  $W$  test  $p = 0.97$ ). The analysis revealed a significant main effect [ $F(2, 70) = 4.13$ ,  $p = 0.02$ ,  $\eta^2 = 0.11$ ]. A post hoc test (with correction for multiple Bonferroni comparisons) uncovered a significant difference in commitment making at Wave 2 ( $M = 2.97$ ) and Wave 3 ( $M = 3.33$ ) – together with the passage of time this group showed an increase for this dimension of identity.

Second, a change was observed for identification with commitment in the same group [Pillai's Trace = 0.18;  $F(2, 34) = 3.63$ ;  $p = 0.04$ ;  $\eta^2 = 0.18$ ]. Because the assumption of sphericity was not met (in Mauchly's  $W$  test  $p = 0.04$ ), corrections were made using the Greenhouse-Geisser test. The analysis uncovered a significant main effect [ $F(2, 70) = 4.15$ ,  $p = 0.02$ ,  $\eta^2 = 0.11$ ]. A post hoc test (with correction for multiple Bonferroni comparisons) indicated a significant difference between Wave 2 ( $M = 3.38$ ) and Wave 3 ( $M = 3.63$ ). As in the case of commitment making, the passage of time was accompanied by an increase in commitment identification (Fig. 1). For the remaining dimensions of identity there was no change in any of the four groups studied.

**Table 3** Univariate ANOVA’s and post-hoc comparisons based upon Tukey HSD tests for the four research groups at Wave 1, 2, and 3

	Group A Adolescence, ID <i>n</i> = 36	Group B Emerging adulthood, ID <i>n</i> = 31	Group C Adolescence, ND <i>n</i> = 30	Group D Emerging adulthood, ND <i>n</i> = 30	<i>F</i> ( $\eta^2$ )
EB 1	<i>M</i> = 3.38 <i>Sd</i> = 0.60	<i>M</i> = 3.20 <i>sd</i> = 0.77	<i>M</i> = 3.31 <i>sd</i> = 0.68	<i>M</i> = 3.13 <i>sd</i> = 0.64	0.87 (0.02) <i>p</i> = 0.46
EB 2	<i>M</i> = 3.26 <i>Sd</i> = 0.71	<i>M</i> = 3.28 <i>sd</i> = 0.71	<i>M</i> = 3.42 <i>sd</i> = 0.62	<i>M</i> = 3.13 <i>sd</i> = 0.62	0.97 (0.02) <i>p</i> = 0.41
EB 3	<i>M</i> = 3.37 <i>Sd</i> = 0.66	<i>M</i> = 3.43 <i>sd</i> = 0.61	<i>M</i> = 3.39 <i>sd</i> = 0.50	<i>M</i> = 3.12 <i>sd</i> = 0.68	1.56 (0.04) <i>p</i> = 0.20
ED 1	<i>M</i> = 3.19 <i>sd</i> = 0.66	<i>M</i> = 3.11 <i>sd</i> = 0.80	<i>M</i> = 3.15 <i>sd</i> = 0.63	<i>M</i> = 2.91 <i>sd</i> = 0.63	1.02 (0.02) <i>p</i> = 0.39
ED 2	<i>M</i> = 3.11 <sup>a, b</sup> <i>sd</i> = 0.69	<i>M</i> = 3.22 <sup>b</sup> <i>sd</i> = 0.61	<i>M</i> = 3.21 <sup>b</sup> <i>sd</i> = 0.64	<i>M</i> = 2.71 <sup>a</sup> <i>sd</i> = 0.70	3.92 (0.09) <i>p</i> < 0.01
ED 3	<i>M</i> = 3.17 <i>sd</i> = 0.78	<i>M</i> = 3.26 <i>sd</i> = 0.64	<i>M</i> = 3.23 <i>sd</i> = 0.53	<i>M</i> = 2.93 <i>sd</i> = 0.64	1.52 (0.04) <i>p</i> = 0.21
RE 1	<i>M</i> = 2.88 <i>sd</i> = 0.73	<i>M</i> = 2.92 <i>sd</i> = 0.82	<i>M</i> = 2.63 <i>sd</i> = 0.70	<i>M</i> = 2.59 <i>sd</i> = 0.73	1.56 (0.04) <i>p</i> = 0.20
RE 2	<i>M</i> = 2.69 <i>sd</i> = 0.78	<i>M</i> = 2.81 <i>sd</i> = 0.96	<i>M</i> = 2.40 <i>sd</i> = 0.62	<i>M</i> = 2.33 <i>sd</i> = 0.55	2.85 (0.07) <i>p</i> < 0.05
RE 3	<i>M</i> = 2.77 <i>sd</i> = 0.90	<i>M</i> = 2.70 <i>sd</i> = 0.76	<i>M</i> = 2.53 <i>sd</i> = 0.53	<i>M</i> = 2.34 <i>sd</i> = 0.64	2.17 (0.05) <i>p</i> = 0.10
CM 1	<i>M</i> = 3.02 <i>sd</i> = 0.81	<i>M</i> = 2.70 <i>sd</i> = 0.93	<i>M</i> = 3.02 <i>sd</i> = 0.79	<i>M</i> = 2.74 <i>sd</i> = 0.93	1.34 (0.03) <i>p</i> = 0.27
CM 2	<i>M</i> = 2.97 <i>sd</i> = 0.97	<i>M</i> = 2.90 <i>sd</i> = 1.09	<i>M</i> = 3.07 <i>sd</i> = 0.79	<i>M</i> = 2.91 <i>sd</i> = 0.84	0.20 (0.005) <i>p</i> = 0.90
CM 3	<i>M</i> = 3.33 <i>sd</i> = 0.73	<i>M</i> = 3.11 <i>sd</i> = 0.89	<i>M</i> = 3.10 <i>sd</i> = 0.84	<i>M</i> = 2.83 <i>sd</i> = 0.81	2.01 (0.05) <i>p</i> = 0.12
IC 1	<i>M</i> = 3.50 <i>sd</i> = 0.66	<i>M</i> = 3.32 <i>sd</i> = 0.79	<i>M</i> = 3.41 <i>sd</i> = 0.55	<i>M</i> = 2.74 <i>sd</i> = 0.93	0.57 (0.01) <i>P</i> = 0.64
IC 2	<i>M</i> = 3.38 <i>sd</i> = 0.72	<i>M</i> = 3.26 <i>sd</i> = 0.91	<i>M</i> = 3.43 <i>sd</i> = 0.52	<i>M</i> = 3.29 <i>sd</i> = 0.74	0.35 (0.01) <i>p</i> = 0.79
IC 3	<i>M</i> = 3.63 <i>sd</i> = 0.45	<i>M</i> = 3.48 <i>sd</i> = 0.66	<i>M</i> = 3.50 <i>sd</i> = 0.61	<i>M</i> = 3.33 <i>sd</i> = 0.77	1.25 (0.03) <i>p</i> = 0.30

Number next to the variable means the wave number. Different indexes next to the mean values indicate significant differences between the groups. *ID* intellectual disability, *ND* non disabled, *EB* exploration in breadth, *ED* exploration in depth, *RE* ruminative exploration, *CM* commitment making, *IC* identification with commitment

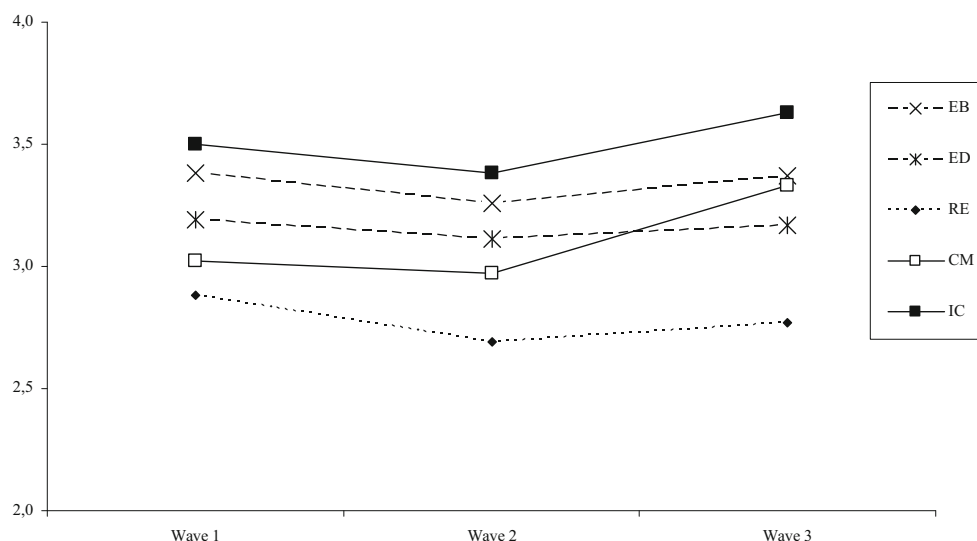
## Discussion

Formation of identity is one of the primary goals of development during the period of adolescence and emerging adulthood. Empirical studies conducted in various countries and cultural contexts, including in Poland, point to the phenomenon of delayed adulthood, meaning the increasingly later commitment to developmental tasks and social roles associated with the period of adulthood (e.g. Arnett 2000; Brzezińska et al. 2012; Macek et al. 2007; Negru 2012). This phenomenon also applies to the subjective indicator of adulthood that is development of individual identity. Studies on the development of identity, however, generally overlook minority groups in society (Schwartz 2001), including those with ID.

Prior to undertaking the research it was assumed that people with mild ID differed in respect of identity from their non-

disabled counterparts. The results of the study did not confirm this hypothesis. Individuals with mild ID take a similar approach in making (at least in their own opinion) the best choices for themselves in their adult lives, they take important decisions, they assess choices made, and they feel good with their choices in the belief that they have made the right decisions. The level of anxiety associated with these actions is also similar to that displayed by normally functioning individuals. ID itself is thus not a sufficiently strong factor to determine the level of dimensions of identity development. It should be noted, however, that the participants in the study were individuals with only mild ID, which means the findings apply only to this particular group. It seems that the higher is the level of ID, the greater differences can be observed. Hypothetically, differences would be caused both by lower capacity for reflection and for making future plans as well as by more limited social

**Fig. 1** Mean-level change in identity dimensions over time in group A (adolescence, ID). EB, exploration in breadth; ED, exploration in depth; RE, ruminative exploration; CM, commitment making; IC, identification with commitment



experience, which constitutes an important factor in the development of individuals with ID (Hodapp et al. 1995).

At the same time, it is difficult to imagine that there could be absolutely no differences between what are, after all, intellectually differently-functioning groups of the participants in the study. Perhaps they are to be found in the feeling of identity in specific areas, such as education, profession, or religion. The awareness of one's own disability and disability identity probably play a significant role here. Individuals with a disability have to analyze their own limitations and adjust their abilities to the opportunities offered by the environment, as well as choose from the opportunities available in accordance with their disability (Forber-Pratt et al. 2017). After completing their education, people with different kinds of disability experience difficulties connected with the need to take on new developmental tasks characteristic of adulthood. These problems are observed among people with learning difficulties (Carnaby et al. 2003), physical disability (Wells et al. 2003), and visual impairment (Keil and Crews 2008). In patients with diabetes, certain difficulties were observed directly in identity formation – namely, lower scores on exploration than in the case of healthy individuals (Luyckx et al. 2008c). Withdrawal from undertaking new developmental tasks increases the potential risk of further difficulties in the process of identity formation. In individuals with ID this problem seems to be bigger, since their limited use of activity opportunities in the social environment may be intensified by exclusive behaviors on the part of the social environment. The choice of the way of life is more narrow among people with mild ID than in non-disabled individuals, which, in the Polish conditions, is particularly visible in work domain – people with disabilities, including individuals with ID, seldom work in the open job market and more often find employment in workplaces established especially for them (i.e., occupational activation centres or sheltered employment facilities). What may be of

great significance in this case is stereotypes concerning the alleged aggression of people with ID or additionally diminishing their intellectual abilities and, consequently, their capacity for independent action (resulting in these people being thought of as “perennial children”).

The only difference, observed at Wave 2, concerned exploration in depth; yet the result recorded was the opposite of that predicted, as people with ID during emerging adulthood assessed that they engaged to a greater extent than their non-disabled peers in an extensive review of their own life choices, deciding whether they were appropriate and satisfactory. However, insofar as a decline in the intensity of in-depth assessments of commitments made during the transition from late adolescence into emerging adulthood has been previously observed in studies (e.g. Brzezińska et al. 2012), its lower intensity among normally functioning individuals compared to their intellectually disabled counterparts is a surprising fact in light of the hypotheses offered. It was assumed that ID could be associated with a low level of exploration in depth remaining through late adolescence and emerging adulthood – as a result of cognitive limitations, and thus manifesting itself in difficulties with assessing own choices. However, individuals with mild ID – younger ones – do not differ in this respect from non-disabled counterparts (both younger and older), whereas older ones do differ from their non-disabled counterparts, but in a direction opposite from the one assumed. Perhaps this results should be understood as a positive indicator of self-determination (cf. Nota et al. 2007). Exploration in depth is a manifestation of self-determined activity, namely: (1) volitional activity (making an intentional, conscious choice based on one's preferences); (2) instrumental activity (self-regulatory and self-directed goal-oriented activity); (3) activity with a belief in self-control. Exploration in depth plays an immensely important role particularly with regard to the last of these functions of self-determination. This is because exploration in depth

involves asking oneself questions, for example, about whether one has the capacity and possibility to achieve one's goals, or about whether there is a chance of achieving these goals and about how big this chance is. Positive answers to these questions make it possible for an individual to act with more self-awareness and self-knowledge; they also direct the individual towards the goal. Asking such questions is itself the first step to self-determination.

However, in conjunction with the fact that this phenomenon (greater exploration in depth in individuals with ID than in non-disabled individuals) was only recorded in one of three waves, it is difficult to speak of it as a rule.

Additionally, what requires reflection is whether indeed individuals with ID are capable of making fully self-directed decisions. The authors of Casual Agency Theory define self-determined people as those who “act in service to freely chosen goals” (Nota et al. 2007, pp. 258). As mentioned above, people with mild ID have limited activity opportunities in Poland (a phenomenon that is not infrequent in other countries, too), which means it can hardly be said that they can make fully independent choices. Certain choices are made for individuals with ID, who are allowed some degree of independence only with a certain limited offer of options provided. Nevertheless, a high level of exploration in depth should be treated as a positive result, though it would be useful to conduct replication studies and probe the causes of this state of affairs – e.g., personality dispositions and, particularly, social factors (e.g., cultural conditions, attitudes towards people with ID and their independence, social inclusion vs. segregation).

When analysing the results of the study, it should be taken into account that the group of non-disabled individuals in the phase of emerging adulthood was comprised entirely of students – they are typically characterized by a continually high level of exploration, and thus do not differ to a significant degree from late adolescents. Perhaps other results could be expected among non-students already professionally active during the phase of emerging adolescence. There are studies indicating that students are characterized by a greater level of exploration than their working peers (Luyckx et al. 2008a).

The analyses were conducted according to a longitudinal plan, and the most salient portion of their results concerning precisely the formation of identity, and thus its transformations over time among particular research groups. The results indicate differences in respect of the formation of identity between individuals with ID and their non-disabled peers, but these differences are far smaller and in a different direction than expected. People with mild ID take on serious life commitments to a continually increasing degree, and their impression that they have made choices which are right for them grows. This means that in spite of limitations in intellectual functioning, likely different experiences, and difficulties resulting from disability, they prepare for adulthood to a similar extent as their non-disabled peers. This is a good change,

one indicating growth, but not extensive. In both cases, as the size of the effect indicates, time explains 11% of the variance of identity dimensions, so it is a rather weak effect, at best moderate. At Wave 3 that group was not distinguished in terms of those dimensions from the remaining groups. On the one hand, it can be said that this group (alone) took a positive step towards building its own identity, but on the other hand the change is still quite minor.

Analysed in the context of other studies on identity formation (see: Klimstra et al. 2010; Luyckx et al. 2006), it can be concluded from the study at hand that it is difficult to point to the age at which changes in the sphere of identity take place. Perhaps this difficulty could be overcome by conducting multi-annual studies, but beginning of necessity in early adolescence, and concluding at the close of early adulthood. This would complement knowledge acquired during longitudinal studies concerning the difference in particular dimensions among developmental periods. These studies should be initiated at the earliest possible moment, as in accordance with the theoretical description of identity development, one does not enter the adolescence with “tabula rasa”. Identity begins to develop in childhood, and this process only intensifies during adolescence and emerging adulthood.

The current study brings new knowledge on the subject of identity development among individuals with ID. At the same time, there are significant limitations. The first of them is the small group sizes, which is a common issue in studies focused on specific groups. It does not allow for generalization of study results, and requires replication. Another weak aspect is limitations in the selection of sample selection to students of selected educational groups, which may have a significant impact on results. The specific educational context would seem to be of importance in shaping personal identity. An interesting expansion of the studies would be to perform an introductory assessment of IQ among participants, not just level of ID. The category of mild ID is quite broad – it encompasses people with an IQ of between 50 and 69 points. People with a different level of IQ but of the same level of disability can operate cognitively in ways markedly different from one another, which can translate into differences in adaptive behaviours, participation in social life, etc., and thus also for engaging in exploratory and commitment-related behaviours. This supposition, however, requires further study. It would also be interesting to empirically investigate the relationship between personal identity and disability identity in people with ID. Finally, the work addresses formal indicators of identity development – it examines the process of formation, not its content. Whereas neither the identity (nor its development) of people with mild ID turned out to differ significantly from the identity of their non-disabled peers, there may be important differences in the unexplored content of identity.

The results would seem to confirm the phenomenon observed in other studies of deferring adulthood among people



within the intellectual norm. By the same token, if the results of people with mild ID are similar to those among normally functioning individuals, this group can also be said to exhibit a certain delay in identity formation in respect of that observed in studies conducted several decades ago (e.g. Marcia and Friedman 1969). However, the question of whether among these individuals we are dealing with a delay arising out of socio-cultural changes, or rather for instance restrictions of the social environment cannot be answered. Further studies are vital to seek the social factors which may impact the development of identity among people with mild ID.

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### Compliance with Ethical Standards

**Conflict of Interest** The author declares that she has no conflict of interest.

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Informed Consent** Informed Consent was obtained from all participants included in the study as well as from the parents of minor participants.

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### References

- Amett, J. J. (2000). Emerging adulthood. A theory of development from the late teens through the twenties. *American Psychologist*, *55*, 469–480.
- Beart, S., Hardy, G., & Buchan, L. (2005). How people with intellectual disabilities view their social identity: A review of the literature. *Journal of Applied Research in Intellectual Disabilities*, *18*, 47–56.
- Berzonsky, W. M., Weiner, A. S., & Raphael, D. (1975). Interdependence of formal reasoning. *Developmental Psychology*, *11*, 258.
- Brubaker, R., & Cooper, F. (2000). Beyond “identity”. *Theory and Society*, *29*, 1–47.
- Brzezińska, A. I. (2017). *Identity before adulthood. Identity of upper-secondary school students in Poland*. Poznań: Wydawnictwo Naukowe Wydziału Nauk Społecznych UAM.
- Brzezińska, A. I., & Piotrowski, K. (2010). Polska adaptacja *Skali Wymiarów Rozwoju Tożsamości (DIDS)* [polish adaptation of *Dimensions of Identity Development Scale*]. *Polskie Forum Psychologiczne*, *15*, 66–84.
- Brzezińska, A. I., Czub, T., Czub, M., Kaczan, R., Piotrowski, K., & Rękosiewicz, M. (2012). Postponed or delayed adulthood? In E. Nowak, D. E. Schrader, & B. Zizek (Eds.), *Educating competencies for democracy* (pp. 103–125). Frankfurt am Main: Peter Lang Verlag NY.
- Carnaby, S., Lewis, P., Martin, D., Naylor, J., & Stewart, D. (2003). Participation in transition review meetings: A case study of young people with learning disabilities leaving a special school. *British Journal of Special Education*, *30*, 187–193.
- Cauble, M. (1976). Formal operations, ego identity, and principled morality: Are they related? *Developmental Psychology*, *12*, 363–364.
- Craig, J., Draig, F., Withers, P., Hatton, C., & Limb, K. (2002). Identity conflict in people with intellectual disabilities: What role do service-providers play in mediating stigma? *Journal of Applied Research in Intellectual Disabilities*, *15*, 61–72.
- Erikson, E. H. (1950). *Childhood and society*. New York: Norton.
- Forber-Pratt, A. J., & Zape, M. P. (2017). Disability identity development model: Voices from the ADA-generation. *Disability and Health Journal*, *10*, 350–355.
- Forber-Pratt, A. J., Lyew, D. A., Mueller, C., & Samples, L. B. (2017). Disability identity development: A systematic review of the literature. *Rehabilitation Psychology*, *62*, 198–207.
- Gibson, J. (2006). Disability and clinical competency: An introduction. *The California Psychologist*, *39*, 6–10.
- Gill, C. J. (1997). Four types of integration in disability identity development. *Journal of Vocational Rehabilitation*, *9*, 39–46.
- Hodapp, R. M., Burack, J. A., & Zigler, E. (1995). The developmental perspective in the field of mental retardation. In J. A. Burack, R. M. Hodapp, & E. Zigler (Eds.), *Issues in the developmental approach to mental retardation* (pp. 3–26). Cambridge: Cambridge University Press.
- Karaś, D., Klym, M., Wasilewska, Ż. M., Rusiak, D., & Ciecuch, J. (2012). Wymiary tożsamości a satysfakcja z życia u studentów i pracujących [identity dimensions and life satisfaction of students and workers]. *Studia Psychologica*, *12*, 25–45.
- Keil, S., & Crews, N. (2008). Post-16 and post-18 transitions of young people with visual impairment in Wales. *British Journal of Visual Impairment*, *26*, 190–201.
- Klimstra, T. A., Hale III, W. W., Raaijmakers, Q. A., Branje, S. J., & Meeus, W. H. (2010). Identity formation in adolescence: Change or stability? *Journal of Youth and Adolescence*, *39*, 150–162.
- Leiper, R. N. (1981). *The relationship of cognitive developmental structures to the formation of ego identity in young men* (Doctoral dissertation, Simon Fraser University. Theses (Dept. of Psychology)).
- Luyckx, K., Goossens, L., & Soenens, B. (2006). A developmental contextual perspective on identity construction in emerging adulthood: Change dynamics in commitment formation and commitment evaluation. *Developmental Psychology*, *42*, 366–380.
- Luyckx, K., Soenens, B., Vansteenkiste, M., Goossens, L., & Berzonsky, M. D. (2007). Parental psychological control and dimensions of identity formation in emerging adulthood. *Journal of Family Psychology*, *21*, 546–550.
- Luyckx, K., Schwartz, S. J., Berzonsky, M. D., Soenens, B., Vansteenkiste, M., Smits, I., & Goossens, L. (2008a). Capturing ruminative exploration: Extending the four-dimensional model of identity formation in late adolescence. *Journal of Research in Personality*, *42*, 58–82.
- Luyckx, K., Schwartz, S. J., Goossens, L., & Pollock, S. (2008b). Employment, sense of coherence and identity formation: Contextual and psychological processes on the pathway to sense of adulthood. *Journal of Adolescent Research*, *23*, 566–591.
- Luyckx, K., Seiffge-Krenke, I., Schwartz, S. J., Goossens, L., Weets, I., Hendrieckx, C., & Groven, C. (2008c). Identity development, coping, and adjustment in emerging adults with a chronic illness: The sample case of type 1 diabetes. *Journal of Adolescent Health*, *43*, 451–458.

- Luyckx, K., Klimstra, T. A., Duriez, B., Van Petegem, S., & Beyers, W. (2013). Personal identity processes from adolescence through the late 20s: Age trends, functionality, and depressive symptoms. *Social Development, 22*, 701–721.
- Macek, P., Bejček, J., & Vaničková, J. (2007). Contemporary Czech emerging adults: Generation growing up in the period of social changes. *Journal of Adolescent Research, 22*, 444–475.
- Marcia, J. E. (1966). Development and validation of ego – Identity status. *Journal of Personality and Social Psychology, 3*, 551–558.
- Marcia, J. E., & Friedman, M. L. (1969). Ego identity status in college women. *Journal of Personality, 38*, 249–263.
- Negru, O. (2012). The time of your life: Emerging adulthood characteristics in a sample of Romanian high school and university students. *Cognition, Brain, Behavior: An Interdisciplinary Journal, 16*, 357–367.
- Nota, L., Ferrari, L., Soresi, S., & Wehmeyer, M. L. (2007). Self-determination, social abilities, and the quality of life of people with intellectual disabilities. *Journal of Intellectual Disability Research, 51*, 850–865.
- Piaget, J. (1972). Intellectual evolution from adolescence to adulthood. *Human Development, 15*, 1–12.
- Piotrowski, K., Kaczan, R., & Rekosiewicz, M. (2013). Off-time higher education as a risk factor in identity formation. *Polish Psychological Bulletin, 44*, 299–309.
- Rekosiewicz, M. (2015). The construction of the modified *Dimensions of Identity Development Scale (DIDS/PL-1)* for people with intellectual disability. *Studia Psychologiczne, 53*, 19–31.
- Rowe, I., & Marcia, J. E. (1980). Ego identity status, formal operations, and moral development. *Journal of Youth and Development, 9*, 87–99.
- Schwartz, S. J. (2001). The evolution of Eriksonian and neo-Eriksonian identity theory and research: A review and integration. *Identity: An International Journal of Theory and Research, 1*, 7–58.
- Schwartz, S. J., Zamboanga, B. L., Luyckx, K., Meca, A., & Ritchie, R. A. (2013). Identity in emerging adulthood. Reviewing the field and looking forward. *Emerging Adulthood, 2*, 96–113.
- Slugoski, B. R., Marcia, J. E., & Koopman, R. F. (1984). Cognitive and social interactional characteristics of ego identity statuses in college males. *Journal of Personality and Social Psychology, 47*, 646–661.
- Toder, N. L., & Marcia, J. E. (1973). Ego identity status and response to conformity pressure in college women. *Journal of Personality and Social Psychology, 26*, 287–294.
- Waterman, A. S. (1982). Identity development from adolescence to adulthood: An extension of theory and a review of research. *Developmental Psychology, 18*, 342–358.
- Wells, T., Sandefur, G. D., & Hogan, D. P. (2003). What happens after the high school years among young persons with disabilities? *Social Forces, 82*, 803–832.
- Zigler, E. (2001). Looking back 40 years and still seeing the person with mental retardation as a whole person. In H. N. Switzky (Ed.), *Personality and motivational differences in persons with mental retardation* (pp. 3–52). Mahwah: Lawrence Erlbaum Associates, Publishers.