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Changes in domain specific self-perception amongst young people with intellectual disability: a longitudinal study

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ABSTRACT
This study examines the changes that occur in multidimensional self-concept of adolescents with a diagnosis of intellectual disabilities, across gender and category of intellectual disability (borderline, mild, moderate) groups. A sample of 54 young people completed the Harter Self-Perception Profile. Using a three-wave longitudinal study conducted during their first year in a segregated special second-level school, stability and change in multiple domains of self-perception were examined. Findings indicate that gender and level of cognitive function are important variables in changes in self-perception across time, highlighting the heterogeneous nature of the special school population.

Inclusion for students with special educational needs including intellectual disabilities (ID) is an increasingly common trend globally and nationally (United Nations Educational Scientific and Cultural Organisation 1994; Banks and McCoy 2011). This move to ‘mainstreaming’ is driven by a greater acceptance of the social model of disability which views disability as socially constructed and draws attention to the physical and social barriers in society (Rapley 2004). In Ireland inclusive education has been generally successful at primary level and overall numbers of students in segregated special schools are decreasing (Kelly and Devitt 2010; McConkey et al. 2016). However, the profile of students attending special schools is changing. A greater proportion of secondary school-aged students are now in special schools (McConkey et al. 2016), some studies indicate that over 60% of students in special schools are aged 12+ (Kelly and Devitt 2010). This may be in part driven by a need to access specialist resources and teaching which are often available in special schools and it may be that mainstream secondary schools are less equipped to deal with individual needs of students. McConkey et al. (2016) in a review of current education provision for students with ID notes that the proportion of girls in special schools is increasing although no explanation for this phenomenon is available. The transition experience from primary school to secondary school for typically developing (TD) young people is well documented (Smyth, McCoy, and Darmody 2004; Topping 2011) but the transition experiences for pupils with ID is less well understood (Barnes-Holmes et al. 2013) and the transition experience for young people with ID moving to a segregated special school for the first time at second level is wholly

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underresearched. Extending our understanding of the experience of young people with ID at this critical phase in their lifespan is a central aim of this study.

Transition to secondary school is a complex and challenging time for TD young people: fears about bullying, making friends and new teachers are combined with the excitement of new possibilities for responsibility and independence (Hargreaves and Galton 2002; Topping 2011). Most students settle well into their first year in secondary school (Topping 2011) but some groups are more vulnerable than others, and there is potential for the transition and the new environment to affect young people's sense of themselves (Muldoon 2000).

Eccles (2004) proposes a model called Stage Environment Fit and argues that a mismatch between the needs of the young person and their school context can explain many of the challenges of adolescence. Symonds and Galton (2014) reviewed over 100 transition studies and hypothesise that individuals are influenced by individual school environment. They point to the changes in school transport, changes in staff and peer relationships and expectations of autonomy as factors. The environmental changes that occur at transition such as larger physical space, less teacher-student interaction and shifts in social support networks influence students' perception of their self-competence and motivation (Zanobini and Usai 2002).

Transition to secondary school is a 'normative' change and the factors, which help and hinder this process, are well-documented. However, transfer to a segregated special school at second level is an atypical experience. Not every student with a diagnosis of ID transfers to a special school, as places are limited in these schools. A recent study (Rose et al. 2015) notes that special schools in Ireland tend to be located in large urban areas meaning that many pupils have long distances to travel to attend secondary school. Thus the transition experience for some young people with ID is further complicated by a profound shift in social context into a segregated education setting outside of their community. Gender would also appear to be a factor. Girls are more vulnerable to negative outcomes in the areas of self-esteem and friendship than boys during the transition and transfer period (Anderson et al. 2000). Gender differences are consistently found amongst young people in secondary school settings and often these differences are related to domain-specific competencies e.g. transition to second level appears to have a positive effect on the performance of boys in maths and science, (McGee et al. 2003). In short, transition from primary to secondary school is a critical event in adolescent development and successful transition is important for psychosocial well-being (Hughes, Banks, and Terras 2013). It is important that research clarifies and extends our understanding of how young people, both boys and girls, with ID experience this transition.

The context of a special school can be considered more nurturing and responsive to the needs of students with disabilities during their first year (Hughes, Banks, and Terras 2013), although this may be a function of high staff/student ratios rather than something unique to special schools. Kelly and Norwich (2004) and Crabtree and Rutland (2001) compared students in mainstream and special settings and found that overall students who attend special schools had a more positive perception of academic ability and that general self-perception did not differ by placement. Arguably segregated education allows students to have the opportunity to engage in social comparison with similar ability peers thereby fostering academic self-competence. This position is supported by Dijkstra et al. (2008), they found that young people with ID reported feeling more competent in special schools where
they could compare themselves with similar ability peers. Conversely being identified with a stigmatised group by virtue of type of school attended is stressful and associated with poor self-concept, (McCullough, Muldoon, and Dempster 2009). Buckley, MacDonald, and Byrne (2002) found that mainstream education had better outcomes for students with Downs Syndrome than their peers in a special school. Conley et al. (2007) report that students in special schools have lower global self-esteem than peers in mainstream settings. In this way it remains unclear as to the impact of segregated settings on self-perceptions.

The complexity of the issue is likely related to the multidimensional nature of self-concept (Harter 1999; Marsh, Green, and Martin 2007). Self-concept or how one perceives oneself overall and in specific areas is a multidimensional construct and domain-specific evaluations occur when an individual evaluates their efficacy in different domains such as physical appearance or athletic competence. Much of the research that examines transition to secondary school for TD young people has identified varied patterns in domain-specific self-competencies such as bias towards athletic competence for boys (Tubić and Đorđić 2015), bias towards literacy for girls (Pajares and Valiante 1999; Jacobs et al. 2002) and both decline (Cantin and Boivin 2004) and increase across school transition (Proctor and Choi 1994) in the domain of global self-worth has been identified.

The research is limited on the factors that may influence multidimensional self-concept young people with ID and it tends to focus on comparative studies (Begley 1999; Crabtree and Rutland 2001; Gans, Kenny, and Ghany 2003). The results are mixed. Szumski and Karwowski (2015) compared the academic self-concept of students with ID in mainstream and special settings and found that the academic self-concept of students in special schools is higher, suggesting that social comparison with similar ability peers is protective of academic self-concept. This finding echoes earlier studies (Crabtree and Rutland 2001; Kelly and Norwich 2004) that report that students attending special schools have a more positive perception of academic ability than their peers in mainstream settings. In contrast, Conley et al. (2007) found that students in special schools have lower global self worth than peers in mainstream settings and Buckley, MacDonald, and Byrne (2002) found that students with Downs syndrome in mainstream had more positive overall perceptions of education than their peers in special school. In a review of comparative studies (n = 41) between TD young people and young people with ID, Zeleke (2004) found that academic self-concept is more negative for students with ID but there is no significant difference between social self-concept and global self-concept scores for TD and ID children. Taken together the evidence appears to suggest that academic self-concept is protected in special education settings but the evidence for self-concept in the global and social domains is mixed. The lack of clarity would suggest that longitudinal research which examines self-concept trajectories, as a multidimensional construct is needed.

There is also the question of the heterogeneous nature of students who are classified as having an intellectual disability; these young people are not homogeneous. We know that the type of disability one has can impact on school experience, McCoy, Banks, and Shevlin (2012) found that students with intellectual disability are more likely to report that they like school less than their peers with physical disabilities. In addition to type of disability, the level of cognitive capacity or category of ID may also be a pertinent factor in increasing our understanding. Cunningham and Glenn (2004) have argued that self-concept is in part influenced by cognitive capacity. Huck, Kemp and Carter (2010) investigated the self-concept of children (9–11 years) with ID in mainstream classes and found that overall they had a positive
general self-concept but this decreased as age increased. They argue that cognitive capacity may be a factor suggesting that the more positive perception of their ability may be because they have not yet reached the developmental age to use their peers as a ‘frame of reference’, an effect seen in TD young people.

Gender and disability also interact to influence social experience. Coleman, Brunell, and Haugen (2015) found that women with intellectual disability were the most negatively judged group comparing gender and physical disability and intellectual disability. This is consistent with the concept of intersectionality, which examines the intersection between multiple subordinate identities such as race and gender (Purdie-Vaughns and Eibach 2008), which appears to amplify disadvantage. Björnsdóttir and Traustadóttir (2010) examined the intersection between disability, class and gender and found that disability interacts with other social factors to perpetuate the exclusion of people with intellectual disability. This would suggest that young women with ID have the potential to be a particularly vulnerable group.

This study sets out to examine the specific impact of the transition into segregated secondary school on self-perception of boys and girls with differing levels of ID. We investigate how domain-specific self-perceptions change over the course of one academic year for male and female young people with ID who attend a segregated special 2nd level school.

This study will:

- Examine the patterns of change and stability over time of domain-specific self-perceptions
- Examine the influence of gender and category of intellectual disabilities (CID) on multiple domains of self-perception and global self worth.

**Methods**

**Design**

This is a longitudinal study from the beginning of 1st year in secondary school to the end of 1st year in secondary school for young people with a diagnosis of Intellectual disability. Participants completed The Self Perception Profile for Learning Disabled students (Renick and Harter 1988) at three time intervals during the school year, September, January and June. The measured independent variables are boys and girls and the CID; moderate (IQ range 40–54, mild, IQ range 55–69, and borderline IQ range 70–79). The dependent variables are the scores across time on the various domains of self-perception.

**Participants**

The participants were 54 students (33 male, 21 female) attending three segregated special needs secondary schools located in the south of the Irish Republic. The participant ages ranged from 12 to 14 years ($M = 13.1$, $SD = .67$). The schools are classified as schools for students with a primary diagnosis of General Learning Disability, (GLD) as assessed by a suitably qualified individual. These schools cater for three categories of GLD, borderline mild general learning disability, (IQ range 70–79), mild general learning disability (IQ range 50–69) and moderate general learning disability (IQ range 35–49) (Ware et al. 2009). The school populations are made up of varying levels of cognitive capacity and classes are not streamed
by ability or gender. The majority of the participants (76%) had previously attended mainstream primary school for six or more years. This is keeping with Irish Government policy of inclusion of pupils with special needs (Banks and McCoy 2011). Inclusion in this instance refers to the students with diagnosed intellectual disabilities being educated alongside their peers in mainstream schools. Inclusion at second level is not widespread in the Irish Republic and many pupils move from mainstream primary schools to segregated special schools at the beginning of second level (Ware et al. 2009). The parents of 65 students were invited to give consent and 54 (83%) accepted and 11 declined. No data were available regarding the characteristics of the 11 children whose parents refused except that they attended a special school. Participant characteristics are illustrated in Table 1. Attrition rates across the data collection period were minimal, T1 n = 54, T2 n = 52, T3 n = 52 and were related to attendance issues (Table 2).

Table 1. Participant characteristics as a percentage of total cohort (N = 54).

<table>
<thead>
<tr>
<th>General intellectual disability</th>
<th>Male % (N)</th>
<th>Female % (N)</th>
<th>Total % (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borderline</td>
<td>40% (13)</td>
<td>14% (3)</td>
<td>30% (16)</td>
</tr>
<tr>
<td>Mild</td>
<td>42% (14)</td>
<td>48% (10)</td>
<td>44% (24)</td>
</tr>
<tr>
<td>Moderate</td>
<td>18% (6)</td>
<td>38% (8)</td>
<td>26% (14)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>54</td>
</tr>
</tbody>
</table>

Table 2. Characteristics of participants with prior segregated experience (transfer mid or late primary to special school) N = 13.

<table>
<thead>
<tr>
<th>General intellectual disability</th>
<th>Male % (N)</th>
<th>Female % (N)</th>
<th>Total % (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borderline</td>
<td>37% (3)</td>
<td>0</td>
<td>24% (3)</td>
</tr>
<tr>
<td>Mild</td>
<td>62% (5)</td>
<td>60% (3)</td>
<td>62% (8)</td>
</tr>
<tr>
<td>Moderate</td>
<td>0</td>
<td>40% (2)</td>
<td>15% (2)</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>5</td>
<td>13</td>
</tr>
</tbody>
</table>

Domains of self-competence were measured using The Self Perception Profile for Learning Disabled students (Renick and Harter 1988). This is a 46-item self-report measure that assesses domain-specific and global perceived competence. This measure has been used successfully in special school settings and with adolescents with ID, (Crabtree and Rutland 2001). On this occasion self-perception was measured in nine domain-specific areas, general intellectual ability, reading competence, writing competence, spelling competence, math competence, social acceptance, athletic competence, physical appearance, behaviour and in one global area, global self-worth. The administration and scoring procedure followed that outlined by the authors (Renick and Harter 1988). For each item participants are asked to select which of two statements is most true for them. For example, one item states: ‘Some kids are sure they are pretty smart in school BUT other kids are not so sure they are all that smart in school’. The participant then decides by ticking a box whether the selected item is ‘really true’ or ‘sort of true’ for them. The response to each item was scored from 1 to 4.

**Measure**

Domains of self-competence were measured using The Self Perception Profile for Learning Disabled students (Renick and Harter 1988). This is a 46-item self-report measure that assesses domain-specific and global perceived competence. This measure has been used successfully in special school settings and with adolescents with ID, (Crabtree and Rutland 2001). On this occasion self-perception was measured in nine domain-specific areas, general intellectual ability, reading competence, writing competence, spelling competence, math competence, social acceptance, athletic competence, physical appearance, behaviour and in one global area, global self-worth. The administration and scoring procedure followed that outlined by the authors (Renick and Harter 1988). For each item participants are asked to select which of two statements is most true for them. For example, one item states: ‘Some kids are sure they are pretty smart in school BUT other kids are not so sure they are all that smart in school’. The participant then decides by ticking a box whether the selected item is ‘really true’ or ‘sort of true’ for them. The response to each item was scored from 1 to 4.
Reliability across the three time periods ranged from; $T_1 \alpha = .46$ (General ability) to $\alpha = .71$ (Maths competence), $T_2 \alpha = .59$ (Global Self Worth) to $\alpha = .84$ (Maths Competence) and $T_3 \alpha = .45$ (Athletic Ability) to $\alpha = .79$ (behaviour).

**Procedure**

Ethical approval was granted in accordance with University of Limerick research guidelines and ethical approval was granted by the Research Ethics Committee of the Intellectual Disability services provider involved in the management of the schools participating. Participants were recruited by way of letter of invitation to the parents of first year students in each school and parental/guardian consent was obtained on an opt-out basis, whereby parents/guardians returned forms only if they did not wish their child to take part in the study. Consent to contact the parents was obtained from the Principals and Governing bodies of each school. Participation was voluntary and verbal consent was obtained from the students at each data collection time period, the participants were not given reward or incentive to take part in the study.

The researcher liaised with the teachers and principal in each school to ascertain when data collection would cause the least disruption to school schedules. Questionnaires were completed with each child individually in an empty meeting room in each school. Each participant ($N = 54$) completed a series of pen and paper self-report measures with the support of the first author. The measures were read aloud to each student and student’s comprehension was periodically checked during the session and they were assured of confidentiality throughout. The duration of each session was between 30 and 45 min.

**Results**

**Statistical analysis**

The changes in the self-perception profile, in each domain from Time 1 to Time 3 and the influence of Gender (male, female) and CID were examined using repeated measures MANOVAs. The categories are borderline, mild and moderate. Preliminary assumption testing was conducted to check for normality, univariate and multivariate outliers, homogeneity of variance matrices and multcollinearity. Post hoc tests were performed as follow up tests on all significant interactions to determine the group means. Regression analyses were conducted to assess the influence of gender and CID on the domain of Global Self worth.

**Group differences in self-perception profiles**

A repeated measures MANOVA was conducted to assess the impact of between subjects variables, gender (male, female) and CID (borderline, mild, moderate) on within subjects variables, participants scores on 10 domains of Self-Perception across the three time points ($T_1, T_2, T_3$). Cell sizes of the within subjects factors were deemed appropriate for parametric testing. The MANOVA indicated a four way interaction (time $\times$ gender $\times$ CLD $\times$ domain score) effect, $F(3616) = 3.095, p = .009$. This finding indicates that the variables of time, gender and category of intellectual disability are influencing self perception in multiple domains. To explore this finding in more detail the effects of time, gender and CID were examined again using follow up ANOVAs for each domain of self-perception seperately.
Writing competence

The mean writing competence scores at Times 1, 2 and 3 were \((M = 10.56, SD = 2.13)\), \((M = 11.04, SD = 2.48)\) and \((M = 10.00, SD = 2.55)\), respectively. A within participants interaction was identified relating to the influence of gender on perception of writing competence, \(F(1.665, 8.24) = 7.36, \ p = .003, \eta^2_p = .17\). Post hoc analysis using simple effects found significant differences for females across time, \(F(1.4, 23.98) = 9.11, \ p = .002, \eta^2_p = .36\). Female scores from Time 2 \((M = 11.11, SD = 2.44)\) to Time 3 \((M = 9.11, SD = 2.57)\), \(p = .001\) decreased significantly and from Time 1 \((M = 11.17, SD = 2.03)\) to Time 3 \((M = 9.11, SD = 2.57)\), \(p = .01\). The results reveal that female participants show a significant decrease in perception of writing competence across time. No significant effects were observed for the males, \(F(1.9, 44.06) = 1.69, \ p = .19, \eta^2_p = .06\), see Figure 1. No other main effects were observed.

Spelling competence

The mean spelling competence scores across Times 1, 2 and 3 were \((M = 10.80, SD = 2.44)\), \((M = 11.24, SD = 2.86)\) and \((M = 10.46, SD = 3.13)\), respectively. A within participants interaction was identified relating to the influence of gender on the perception of spelling competence \(F(234) = 3.31, \ p = .04, \eta^2_p = .16\), across time. Post hoc analysis using simple effects found significant differences for females across time, \(F(215) = 4.00, \ p = 04, \eta^2_p = .34\). Females
perception of spelling competence decreased significantly from Time 2 \((M = 10.41, SD = 2.95)\) to Time 3 \((M = 8.94, SD = 2.88)\), \(p = .05\). The effect from Time 1 \((M = 10.82, SD = 2.37)\) to Time 2 \((M = 10.41, SD = 2.95)\) approaches significance, \(p = .09\). The results indicate that female participants report a decrease in perception of spelling competence across time. No significant effects were observed for males, \(F(222) = 1.91, p = .17, \eta^2_p = .14\), see Figure 2. No other main effects were observed.

**Physical appearance**

The mean physical appearance scores at times 1, 2 and 3 were \((M = 13.84, SD = 2.15)\), \((M = 15.45, SD = 2.61)\) and \((M = 15.02, SD = 2.72)\), respectively. Two main effects were observed. There was a significant within subjects main effect for time, \(F(1.45, 55.30) = 7.40, p = .004, \eta^2_p = .16\). Post hoc analysis using pairwise comparisons found a significant increase from Time 1 \((M = 13.84, SE = .32)\) to Time 2 \((M = 15.45, SE = .39)\), \(p = .001\) and from Time 1 to Time 3 \((M = 15.02, SE = .41)\), \(p = .03\). The perception of Physical appearance increased across time from September to June. There was a significant between subjects main effect for CID, \(F(238) = 12.23, p = .000, \eta^2_p = .35\). The borderline group \((M = 16.35, SE = .418)\) scored significantly higher than the mild \((M = 13.98, SE = .395)\) and the moderate \((M = 13.66, SE = .52)\) groups using Tukey HSD. Overall results indicate that perception of Physical appearance increases across time and the borderline group report the highest scores in perception of Physical appearance.

**Global self worth**

A significant main effect in relation to time was observed \(F(236) = 3.41, p = .04, \eta^2_p = .15\). in relation to global self-worth. The mean global self worth scores at times 1, 2 and 3 were \((M = 13.86, SD = 2.06)\), \((M = 15.37, SD = 2.85)\) and \((M = 14.39, SD = 2.60)\), respectively. Post hoc analysis using pairwise comparisons found a significant increase from Time 1 \((M = 13.86, SD = 2.06)\) to Time 2 \((M = 15.37)\), \(p = .003\), and a significant decrease from Time 2 \((M = 15.37, SD = 2.85)\), to Time 3 \((M = 14.39, SD = 2.60)\), \(p = .02\). Time 1 to Time 3 did not differ significantly. The results reveal that perception of Global Self-worth increased from September to January and decreased from January to June. No other main effects were observed, however there is a between subjects main effect approaching significance for CID, \(F(237) = 2.52, p = .09, \eta^2_p = .12\). The borderline group scored the highest in perception of self-worth \((M = 15.20)\), followed by the Mild \((M = 14.25)\) and then the moderate group \((M = 13.34)\).

**Social acceptance**

There was a significant between participants interaction effect observed relating to the influence of gender and CID on social acceptance scores, \(F(237) = 6.79, p = .003, \eta^2_p = .26\). Post hoc analysis of this effect revealed that the Male borderline group \((M = 15.16, SE = .38)\) scored significantly higher than the Male moderate \((M = 12.44, SE = .76)\) group, \(p = .01\). The results indicate that participants in the male borderline group report the highest scores in the domain of Social acceptance. The differences between the other groups were not significant. There was no significant difference between the female groups.

Anovas were conducted to explore the impact of Gender and CID across time on the remaining subscales; general ability, reading, maths, behaviour, athletics and spelling. The results were not significant. Non-parametric tests (Friedman and Mann Whitney) were
conducted to examine if difference between the participants prior school experience is an influencing factor. The results were not significant.

**The influence of gender and CID on global self-worth**

Regression analyses were undertaken to assess the ability of Gender and CID to predict Global Self-worth at Time 2 after controlling for scores at Time 1. Multiple regression is useful for providing information about the relative contribution of each of the predictor variables to one outcome, in this case Global Self-Worth. Global Self Worth Time 1 was entered at step 1, explaining 4% of the variance in Global Self-Worth at Time 2. After the entry of Gender and CID at step 2 the total variance explained by the model is 18%, $R^2 = .18$, $F(346) = 3.34$, $p = .02$. In the final model only one measure, CID, is statistically significant, ($\beta = .30$, $p = .04$). This finding suggests the CID influences perception of Global Self-Worth.

Regression analyses were undertaken to assess the ability of Gender and CID to predict Global Self-worth at Time 3 after controlling for scores at Time 1 and Time 2. Global Self-Worth Time 1 was entered at step 1, explaining 24% of the variance in Global Self worth at Time 3. After the entry of Gender and CID at step 2, the total variance explained by the model is 28%, $R^2 = .29$, $F(438) = 3.62$, $p = .01$. In the final model only one measure is statistically significant, Global self worth Time 2, ($\beta = .45$, $p = .006$). This suggests that the perception of Global Self-Worth at the mid point of the year influences perception of Global Self worth at the end of the year (Table 3).

**Discussion**

One of the aims of this study was to examine the influence of gender and CID on the domains of self-perception. Our analyses indicate that female perception of writing and spelling competencies decrease over time from September to June. The results show that young males in the group of borderline ID scored higher in the perception of social acceptance than their peers in the mild ID and moderate ID groups.

The findings with regard to female perceptions of writing and spelling competencies are unexpected because although gender differences favouring males are consistently found (Muldoon and Trew 2000), the domains in which the differences are found were unexpected. Writing and spelling are usually viewed as female domains. Previous research has found that literacy domains tend to favour girls (Pajares and Valiante 1999; Jacobs et al. 2002). It is

| Table 3. Regression analysis global self worth and gender and CLD. |
|-----------------|-----------------|-----------------|
|                 | Time 2          | Time 3          |
| Predictors      | $\Delta R^2$    | $R^2$           | $\beta$          | $\Delta R^2$    | $R^2$           | $\beta$          |
| **Step 1**      |                 |                 |                 |                 |                 |                 |
| Global self worth T1 | .04             | .04             |                 |                 |                 |                 |
| **Step 2**      |                 |                 |                 |                 |                 |                 |
| Gender and CLD  | .12             | .18             | .30*            |                 |                 |                 |
| **Step 1**      |                 |                 |                 |                 |                 |                 |
| Global self worth T1 |                 |                 |                 |                 |                 |                 |
| Global self worth T2 |                 |                 |                 |                 |                 |                 |
| **Step 2**      |                 |                 |                 |                 |                 |                 |
| Gender and CLD  |                 |                 |                 | .25             | .25             | .45**           |

*p = .05; **p = .01.
possible that the negative effects on self-concept of transitioning and attending a special school (Conley et al. 2007) are seen here but in specific domains. Research has found that young people with ID attribute less importance to academic domains such as writing and spelling (Harter 1999; Nader-Grosbois 2014). Crabtree and Rutland (2001) in a study comparing adolescents with and without learning disabilities found that students with learning disabilities devalued academic domains of self-perception and placed a higher importance on non-academic areas such as physical appearance and athletic competence. The negative trajectory for writing and spelling for girls in this sample could reflect a strategic devaluation of academic domains by the girls and although previous studies have not found a gendered strategic devaluation of academic domains, this may be due to an overlooking of gendered responses in research to date. Individuals with ID are viewed as people with ID first, and other identities such as gender and ethnicity are often not considered (Barron 2002; Björnsdóttir and Traustadóttir 2010).

Data indicate that category of ID effects self-concept, the young males in the group of borderline ID scored higher in the perception of social acceptance than their peers in the mild ID and moderate ID groups. The borderline group also scored higher in perception of physical appearance than the mild and moderate groups. This is an unexpected finding as previous research would suggest that the ‘weaker’ groups would be more likely to be positive about themselves in terms of social acceptance and physical appearance as they are less likely to have the capacity to engage in realistic social comparison with peers (Begley 1999; Huck, Kemp, and Carter 2010). Begley (1999) found that individuals with a delayed developmental trajectory tended be very positive about themselves. However, it is possible that this result means the borderline group and males in particular are benefitting from segregated settings as they can evaluate themselves in relation to similar ability peers (Festinger 1954) which is protective of their self-concept. The gender difference may suggest that girls are less willing or less able to evaluate themselves positively in the domain of social acceptance. Muldoon and Trew (2000) found that gendered identities have an adverse effect on girls and this is of particular concern for female students with ID. One of the ways in which transition to secondary school can be made easier is by encouraging existing peer relationships from primary school (Topping 2011), girls in particular have been found to prefer primary school identified peer groups (Hargreaves and Galton 2002; Smyth, McCoy, and Darmody 2004). This raises questions about the lack of protective factors for girls with ID who are moving from mainstream primary (with a familiar peer group) to a segregated secondary school (unfamiliar peers). The intersectionality perspective highlights the cumulative vulnerability of having a double minority status. Purdie-Vaughns and Eibach (2008) hypotheses that women with multiple subordinate identities e.g. female ethnic minority, become ‘invisible.’ This is particularly concerning in light of recent research which shows that the number of females attending special schools is increasing (McConkey et al. 2016).

A second aim of this study was to investigate stability and change in domain-specific self-perceptions in young people with a diagnosis of Intellectual disability across one academic year.

The pattern in the domain of Global self worth is one of initial increase from September to January and then decrease as the year progresses and the pattern in the domain of perception of Physical appearance indicates a steady increase but this is most pronounced from September to January. The data indicates that in the domain of Global self worth there is a significant increase from September to January and a significant decrease from January to
June. The regression analysis found that at Time 2 January, Global self worth is significantly predicted by CID although the influence of both gender and CID account for 14% of the variance in scores at Time 2. At Time 3, June Global self worth was significantly predicted by scores at Time 2, accounting for 25% of the variance in scores at Time 3.

Segregated schools create a social context which augments the evaluation of self with peers of similar ability. Ninot, Bilard, and Delignieres (2005) examined integrated and segregated physical education and found that in segregated settings adolescents with ID tended to overestimate their athletic competence. It is possible that initial increase in Global self worth is linked to social comparison with similar peers and the decrease from January to June reflects a growing awareness of low status of a special school. The significant prediction of global self-worth by the category of ID supports this.

In the domain of Physical appearance there is an increase across time from September to June and particularly from September to January. There is a slight but non-significant decrease from January to June. This is partially similar to findings by Cantin and Boivin (2004) in TD population who found that domain of social acceptance increased over time but most rapidly during the initial transition period. Muldoon and Trew (2000) found that the perception of physical appearance is a key variable in the successful adjustment from childhood to adolescence in a standard school population. Physical appearance and social acceptance were also significant predictors of global self worth for adolescents with ID (Kloomok and Cosden 1994).

Before considering the implications of these findings it is important to acknowledge the study limitations. The strengths of the current study include; longitudinal data, standardised measures and appropriate statistical analyses. The limitations include small sample size, lack of comparison group of young people with ID in mainstream and lack of data from parents and teachers. The possible influence of previous school experience is a factor that would be worth exploring with a larger sample size and it would be useful if future research gathered data on prior school experience. Additional factors may influence changes in self-perception during this time period and were not addressed in this study. Future research could examine the contributions of parent views on special education and student–teacher relationship in addition to exploring the influence of prior education experiences.

The implications of these findings are important as they highlight the heterogeneous nature of students attending special schools. Many studies examining the issues surrounding special schools and special educational needs focus only on the very broad category of special educational need (Cambra and Silvestre 2003) and the diversity within this category is not being examined closely. These findings are useful for professionals in applied settings as they are an evidence-based reminder that the cohort of young people with ID are a diverse group and that factors such as gender and cognitive capacity do influence their self-perceptions and consequently their self-concept.

It is vital that special schools are encouraged to put in place structures that would help overcome gender and level of intellectual disability differences.

Targeted support, which involves parents, teachers and peers, would be helpful. The vulnerability of girls to transition effects suggests that girls in particular may benefit from social support networks such as peer mentoring (Akos and Galassi 2004; Wang and Eccles 2012).

Special schools in Ireland are administered as primary schools and consequently not all special school staff have access to in-service training aimed at second level. The provision
of targeted in-service training aimed at supporting teachers to help students make a successful transition would be beneficial. It is important that schools recognise and understand the vulnerabilities of young people with ID prior to admission. Many mainstream schools put in place transition and transfer programmes for students transferring from mainstream primary to mainstream secondary (Anderson et al. 2000). A similar structured transition from mainstream school to special school may be beneficial.

**Note**
1. Non-parametric tests were run to examine if previous school attended was a significant variable. The results were not significant.

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**References**


