Original Article

The Utrecht-Management of Identity Commitments Scale (U-MICS)
Italian Validation and Cross-National Comparisons

Elisabetta Crocetti[1], Seth J. Schwartz[2], Alessandra Fermani[1], and Wim Meeus[3]

[1]Department of Educational Sciences, University of Macerata, Italy
[2]Department of Epidemiology and Public Health, University of Miami, FL, USA
[3]Research Centre on Adolescent Development, University of Utrecht, The Netherlands

Abstract. The present study examined the psychometric properties of the Dutch and Italian versions of the Utrecht-Management of Identity Commitments Scale (U-MICS) in large community samples of adolescents from Italy ($N = 1,975$) and The Netherlands ($N = 1,521$). Confirmatory factor analyses indicated that the three-factor model, consisting of commitment, in-depth exploration, and reconsideration of commitment, provided a better fit to the data than alternative one- and two-factor models. The three-factor model fit equivalently across sex and across age groups (early and middle adolescents). Furthermore, we demonstrated cross-national equivalence of the factor structure of the U-MICS. Additionally, results indicated that the latent means for commitment were higher in the Dutch sample, while latent means for both in-depth exploration and reconsideration of commitment were substantially higher in the Italian sample. The three identity processes were found to be meaningfully related to measures of self-concept, psychosocial problems, and parent-adolescent relations in both countries. These findings suggest that the U-MICS is a reliable tool for assessing identity processes in Italian and Dutch adolescents.

Keywords: adolescents, identity, U-MICS, validation, cross-national comparisons, Italy, The Netherlands

Introduction

Erikson (1950), in his classic developmental theory, outlined the lifespan as a sequence of tasks with which individuals are confronted. Identity formation is important throughout the lifespan, but it comes to ascendancy during adolescence and the transition to adulthood. The onset of formal operational thought, along with social and cultural directives to develop an autonomous sense of self, sets into motion the process of exploring and committing to potential identity alternatives (see Bosma & Kunnen, 2001; Schwartz, 2001, for reviews).

A number of empirical models have been extracted from Erikson's work (Schwartz, 2001). Among the first and most influential of these was Marcia's (1966) identity status model. Marcia derived from Erikson's writing the dimensions of *exploration* and *commitment*, where the former refers to consideration of a broad array of goals, values, and beliefs, and the latter to adopting one or more of these (see Grotevant, 1987; Waterman, 1999, for reviews). Marcia (1966) bifurcated each of these dimensions and crossed them to derive four identity statuses. *Achievement* is characterized by a period of active exploration leading to a firm set of identity commitments. *Foreclosure* is characterized

by strong commitments enacted without much exploration of other possible alternatives. *Moratorium* refers to active exploration of different alternatives, largely in the absence of commitments. *Diffusion* refers to adolescents who do not actively explore different identity alternatives and who lack strong identity commitments.

Identity status research has focused more on classifying individuals into statuses than on studying the process of identity development (Bosma, 1985; Côté & Levine, 1988; Kroger & Marcia, in press). That is, the identity status literature has been largely characterological rather than developmental. However, several authors (e.g., Grotevant, 1987; Stephen, Fraser, & Marcia, 1992) have acknowledged the importance of also studying identity formation as a developmental process. Therefore, various scholars have taken up this challenge by proposing and evaluating process models of identity formation (Bosma, 1985; Kerpelman, Pittman, & Lamke, 1997; Luyckx, Goossens, & Soenens, 2006; Meeus, 1996). Process models may expand the study of identity in at least two ways: (1) They are better able to capture changes in identity formation (Meeus, 1996); and (2) they may be used flexibly in variable-centered approaches (that focus on the links between identity processes and relevant correlates) and in person-centered

approaches (that focus on differences among individuals classified into various identity statuses). Thus, in a cross-sectional study, a process model of identity focuses on the meaning of identity processes and on the specific associations between identity processes and correlates, whereas a status model focuses on the differences between individuals assigned to the different identity statuses. Furthermore, it is possible to derive identity statuses from a process model of identity (see, for instance, Luyckx et al., 2008) by means of empirical classification methods (e.g., cluster analysis, latent class analysis). Such methods may be able both to confirm existing statuses and to identify new statuses that have not yet been conceptualized in the literature. For these reasons, process models of identity have received increasing attention in recent years, including the introduction of several new processes and statuses (e.g., Crocetti, Rubini, Luyckx, & Meeus, 2008; Luyckx et al., 2008; Schwartz, Zamboanga, Weisskirch, & Rodriguez, 2009). In particular, many newer models consider commitment to be a process, rather than an event – as Marcia originally conceptualized it (e.g., Luyckx, Goossens, Soenens, & Beyers, 2006; Luyckx et al., 2008).

A Three-Factor Process Identity Model

Although Marcia introduced exploration and commitment as singular dimensions, there is some evidence for multiple types of exploration and of commitment (e.g., Luyckx et al., 2008). Recently, Crocetti, Rubini, and Meeus (2008), building upon previous work by Meeus (Meeus, 1996; Meeus, Iedema, Helsen, & Vollebergh, 1999), proposed and advanced a three-factor identity model focused on the dynamics by which adolescents form, evaluate, and revise their identities over time. In this model, commitment, in-depth exploration, and reconsideration of commitment are included as critical identity processes. *Commitment* refers here to enacting enduring choices with regard to various developmental domains and to the self-confidence individuals derive from these choices. *In-depth exploration* represents the extent to which adolescents think actively about the commitments they have enacted, reflect on their choices, search for additional information about their commitments, and talk with others about them. *Reconsideration of commitment* refers to the comparison of present commitments with possible alternatives because the current commitments are no longer satisfactory. In this model, reconsideration of commitment combines loosening existing commitments with broad exploration of new possibilities. In essence, the three-factor model introduced by Crocetti, Rubini, and Meeus (2008) implies a two-part evaluation of present commitments. Existing commitments are secured during a process of reconsideration, and if they are retained, they are more fully developed through in-depth exploration. If, during the reconsideration process, one's present commitments are deemed to be inadequate, they are discarded in favor of new commitments, which are then reconsidered.

To assess commitment, in-depth exploration, and reconsideration of commitment, Crocetti, Rubini, and Meeus (2008) employed a new measurement tool, the Utrecht-Management of Identity Commitments Scale (U-MICS), designed by Meeus and based on the earlier Utrecht-Groningen Identity Development Scale (U-GIDS; Meeus, 1996). The U-MICS can be employed to assess identity processes in different ideological (e.g., school, occupation, values, etc.) as well as relational (e.g., interpersonal relationships with family, friends, intimate partner, etc.) domains. How to choose which domains needs to be investigated is still an open issue, but a viable strategy consists of focusing on identity domains that are important for adolescents (Marcia, 2001). School and friendships are among the most salient domains in the lives of adolescents (Heaven, Ciarrochi, & Vialle, 2007). Thus, people in their teens assign particular relevance to their school commitment, they reflect on the meaning of their school efforts, and they compare their current situation with other possible alternatives, especially when approaching school transitions. Furthermore, adolescents consider their interpersonal relationship with their best friend very important to experiment with significant roles and to share important feelings and experiences outside the family context. Thus, adolescents may be strongly committed to the interpersonal relationship they have formed with their best friend, reflect greatly on this, and, when some problems occur, consider the possibility that a new best friend might better fulfill their interpersonal needs. Recent studies confirmed this great importance assigned by adolescents to school and friendships, both in The Netherlands (e.g., Meeus, Oosterwegel, & Vollebergh, 2002) and in Italy (e.g., Crocetti, 2004).

Studies conducted in The Netherlands suggested that the U-MICS appears to be a valid and reliable tool for assessing identity processes. In their study conducted with almost 2,000 Dutch adolescents, Crocetti, Rubini, and Meeus (2008) found empirical support for a three-factor model including commitment, in-depth exploration, and reconsideration of commitment. This model fit equally for boys and girls and for early and middle adolescents. These results also suggested that the U-MICS measurement algorithm was a good fit for both ethnic majority and minority individuals living in The Netherlands.

Associations Among Identity Processes

Additionally, Crocetti, Rubini, and Meeus (2008) found that commitment, in-depth exploration, and reconsideration of commitment represent distinct but interrelated processes. Specifically, commitment was strongly and positively related to in-depth exploration, suggesting that adolescents with strong commitments also actively explored their present choices. Moreover, in-depth exploration was positively associated with reconsideration of commitment:

Individuals who explored existing commitments also gathered information about other alternative commitments. This latter finding suggests that reconsideration both reflects uncertainty about current commitments and is involved in the process of searching for new information about relevant commitments. Commitment and reconsideration of commitment were not related, suggesting that adopting and evaluating commitments represent separate processes (see Luyckx, Goossens, & Soenens, 2006; Luyckx, Schwartz, Goossens, Beyers, & Missotten, in press).

Associations Between Identity Processes and Relevant Correlates

Furthermore, in the Dutch study (Crocetti, Rubini, & Meeus, 2008), meaningful associations emerged between the U-MICS dimensions and self-concept, personality, psychosocial problems, and parent-adolescent relationships. Specifically, commitment was positively related to self-concept clarity (Campbell et al., 1996), which refers to the extent to which one's self-views are clear, internally consistent, and stable. This suggests that adolescents who have achieved strong commitments exhibit a well-structured self-concept. Commitment was also positively associated with extroversion and emotional stability in Crocetti, Rubini, and Meeus (2008), in line with Marcia's (1976) argument that being committed is associated with a strong personality structure. Further, commitment was associated with warm parent-adolescent relationships, indicating that adolescents who felt close to their parents may be more likely to have established identity commitments. Finally, commitment was negatively related to depression and anxiety. Commitment therefore appears to serve as an indicator of identity consolidation and of successful identity development (see Schwartz, 2006, 2007).

In-depth exploration was positively associated with agreeableness, conscientiousness, and openness to experience (Crocetti, Rubini, & Meeus, 2008). In other words, individuals who search for new information about their existing commitments are often characterized by intellectual curiosity and by thoroughness in dealing with identity-relevant issues (Luyckx, Soenens, & Goossens, 2006). However, in-depth exploration was also negatively related to self-concept clarity and emotional stability, and positively related to internalizing symptoms. This finding is consistent with prior research that has identified identity exploration not only with curiosity, but also with confusion and distress (Luyckx et al., 2008; Schwartz et al., 2009). In fact, in-depth exploration can become problematic in cases in which individuals become consumed with thinking about their choices (Luyckx et al., 2008).

Reconsideration of commitment is characterized by individuals' desire to look for new commitments because their current choices are no longer satisfactory. Thus, reconsideration is characterized by uncertainty about present commitments, and as a result, it was found to be negatively associated with clarity of self-concept and with agreeableness, conscientiousness, and openness to experience; and positively associated with depression, anxiety, involvement in delinquent behaviors, and poor family relationships (Crocetti, Rubini, & Meeus, 2008). Relinquishing one's commitments therefore appears to create disequilibrium and distress, as has been found in prior research on the moratorium status (see Meeus et al., 1999, for a review).

Cross-Cultural Differences in Identity

Thus far, there have been relatively few studies on cross-cultural differences on personal identity. In two studies (Jensen, Kristiansen, Sandbekk, & Kroger, 1998; Stegarud, Solheim, Karlsen, & Kroger, 1999) comparisons were made between university students raised in the mixed liberal welfare-state economic system of Norway and university students raised in the free-market economic system of the United States. In these studies, the Extended Objective Measure of Ego Identity Status II (EOMEIS-2; Bennion & Adams, 1986) was employed to measure identity. Significant differences were found between the two nations. The more moderate identity status scale scores evidenced by the Norwegian sample reflected a cultural trend toward greater moderation in the exploration and commitment process. Moreover, Low, Akande, and Hill (2005) compared the identity status distribution (examined using the EOMEIS-2) exhibited by South-African and American university students. Findings indicated that South-African participants were more strongly represented in the achievement status and less strongly represented in the other identity statuses (i.e., foreclosure, moratorium, and diffusion) than their American peers. Recently, Schwartz, Adamson, Ferrer-Wreder, Dillon, and Berman (2006) evaluated measurement equivalence and mean differences in identity statuses (measured by means of the EOMEIS-2) across three ethnic/cultural contexts: White American, Hispanic American, and Swedish. They demonstrated that the internal structure of the measure was consistent across contexts, but that some mean differences emerged. Specifically, comparisons of latent means indicated that the Swedish participants scored lower than their American counterparts on foreclosure and achievement (both interpersonal and ideological) and on interpersonal diffusion. On the other hand, Swedish participants scored higher on ideological diffusion, while no significant differences were found on moratorium.

In the present study, similarly to Schwartz et al.'s (2006) investigation, both factor structures and mean differences are examined across countries. Moreover, the present study is the first to examine the structure and mean levels of identity between southern European (Italy) and northern European (The Netherlands) countries, the first to involve community samples of adolescents (aged 11–19 years), and

among the first to compare scores reported in identity processes rather than identity statuses.

There is reason to expect that Italian adolescents might exhibit a less mature identity (relational and educational) than their Dutch peers. This hypothesis is derived from prior research on cross-national differences between Italy and The Netherlands. This research suggests that, in Italy, peer and school contexts offer limited opportunities for adolescents to develop a mature sense of personal identity. In particular, we refer to the findings of the Health Behaviour in School-Aged Children study (HBSC; Currie, Gabhainn, Godeau, Roberts, Smith, Currie et al., 2008), which documented many differences between Italian and Dutch adolescents. In particular, Dutch adolescents were found to have more close friends of the same sex than their Italian peers, suggesting that Dutch adolescents had engaged in more identity work within the friendship domain. Furthermore, Italian adolescents reported greater use of daily electronic communication (e.g., instant messaging, text messaging, e-mail) than their Dutch peers. Use of electronic rather than personal communication has been associated with poor interpersonal relationships, loneliness, and social isolation (Kraut, Patterson, Lundmark, Kiesler, Mukophadhyay, & Scherlis, 1998) – all of which reflect problems with interpersonal identity. Further, findings of the HBSC study suggest that Dutch adolescents liked school more than Italian adolescents. This large diversity can be due to perceived school performance (higher among Dutch adolescents) and feeling of being under pressure or stressed by schoolwork (much higher among Italian adolescents) (Currie et al., 2008). Such differences suggest that Italian adolescents may be less developed in some domains of identity than their Dutch peers.

The Present Study

Evidence reviewed so far suggests that the U-MICS is a valuable instrument for assessing identity processes, and that it measures the process conceptualized by Meeus et al. (Crocetti, Rubini, & Meeus, 2008; Meeus, Van de Schoot, Keijsers, Schwartz, & Branje, in press). Given the need to ascertain the usefulness of identity measures across national contexts (Schwartz et al., 2006), the main purpose of the present study was to validate the U-MICS for use in a different cultural context (Italy) than that for which it was originally developed (The Netherlands). We pursued these research objectives in four steps.

First, using confirmatory factor analysis (CFA), we examined the factorial validity of the Italian version of the U-MICS. Specifically, as in the original Dutch study (Crocetti, Rubini, & Meeus, 2008), we compared the hypothesized three-factor model to simpler one- and two-factor models, retaining the three-factor model only if it fits the data significantly better than the simpler models. Based on

previous findings with Dutch adolescents, we expected retaining the three-factor solution.

Second, also within the Italian sample, we examined invariance of the model we retained across sex and age groups. This is important given that sex (Kroger, 1997) and age (Meeus et al., 1999) differences, though moderate, have been documented in the identity literature. In particular, a review of existing studies (Kroger, 1997) suggests that, during adolescence, the movement from less mature identity statuses (i.e., foreclosure and diffusion) to more mature identity statuses (i.e., achievement and moratorium) occurs earlier for girls. Thus, we might expect females to score higher on commitment and in-depth exploration than males. Furthermore, Meeus (1996) reported a strong decrease across adolescence in the proportion of individuals in the diffused status and an increase of the proportion of individuals in the achieved status. Therefore, we might expect that middle adolescents would score higher than early adolescents on commitment and in-depth exploration.

Third, we compared the U-MICS factor structure between the Dutch and Italian samples to ensure structural invariance across countries and languages. Measurement equivalence refers to configural and metric invariance, that is, whether the hypothesized measurement structure – how many factors are considered and which items load on each factor – functions equivalently across contexts (see Vandenberg & Lance, 2000). Measurement equivalence is a necessary prerequisite for assuming that the same phenomena are being measured across contexts (Cheung & Rensvold, 2002). Following configural and metric invariance, one can proceed to test for the invariance of latent means and correlations. As a result, in order to test measurement invariance, we adopted a three-step approach: first, we tested for the invariance of factor loadings; second, we tested for the invariance of correlations among identity processes; and third, we tested for the invariance of item intercepts and latent means.

Finally, we examined associations of identity processes to self-concept, adjustment, and family relationship variables in the Italian and Dutch samples using observed scores. In this way, we were able to test convergent validity by examining whether patterns of associations between identity processes measured with the U-MICS and relevant comparison variables drawn from extant literature that highlights correlates that can be grouped into three clusters: personality factors; well-being and psychosocial problems; and quality of parent-adolescent relationships (for reviews see Kroger, 2003; Marcia, 1993).

Method

Participants

The Italian sample consisted of 1,975 adolescents (902 boys and 1,073 girls) attending various junior high and high

schools in the east-central region of Italy. Participants ranged in age from 11 to 19 years (M = 14.5; SD = 2.4). Two age groups were represented in the sample: an early adolescent group (aged 11–14 years) of 1,050 adolescents (M age = 12.5 years, SD = 1) and a middle adolescent group (aged 15–19 years) of 925 adolescents (M age = 16.8 years, SD = 1.2).

The Dutch sample consisted of 1,521 adolescents (706 boys and 815 girls) attending various junior high and high schools in the province of Utrecht in The Netherlands. Participants ranged in age from 10 to 19 years (M = 14.2; SD = 2.2). Two age groups were represented in the sample: an early adolescent group (aged 10–14 years) of 880 adolescents (M age = 12.3 years, SD = 0.6) and a middle adolescent group (aged 15–19 years) of 641 adolescents (M age = 16.7 years, SD = 0.8).

Both the Italian and Dutch samples consisted only of Caucasian adolescents. Moreover, the samples were comparable in terms of years and types of schooling, sex, and age group composition. Adolescents in both countries attended full-time day school. Approximately 85% of the Italian and Dutch participants lived in two-parent households, whereas the remainder of participants lived with only one parent (usually the mother). The per capita dispositional income (primary income after taxes) of private households in the two geographic areas investigated in the present study (i.e., Utrecht and the central-east region of Italy) was comparable and comprised between 13,000 and 16,000 purchasing power standards (PPS) per inhabitant (Eurostat, 2008b).

Procedure

Prior to initiating the study, we obtained permission from the school principals to administer the questionnaires. The parents were provided with written information about the research and asked for their consent. After we received parental permission, the students were informed about the study and asked whether they wished to participate. Approximately 99% of the students approached chose to participate. Interviewers then visited the schools and asked adolescents to fill out the questionnaire packet.

Measures

Identity

We employed the U-MICS (Crocetti, Rubini, & Meeus, 2008) to assess identity processes. The measure was translated from Dutch to Italian by a bilingual psychologist and backtranslated from Italian to Dutch by a second bilingual psychologist. The two Dutch versions were then compared, with the two translators discussing and resolving any discrepancies between the original and the backtranslated Dutch versions. The final Dutch version was then translat-

ed into Italian by both psychologists. We conducted a pilot study (Crocetti, 2004). Based on feedback from the pilot participants, slight wording adjustments were made so that all items were adequate for Italian-speaking adolescents. The U-MICS consists of 13 items with a response scale ranging from 1 (*completely untrue*) to 5 (*completely true*). In the current study, we assessed the identity dimensions in one ideological domain (education) and in one interpersonal domain (best friend; see Bosma, 1985). Each item was presented once for the ideological domain and once for the interpersonal domain, for a total of 26 items. Specifically, 10 items measure commitment, 10 items assess in-depth exploration, and 6 items tap reconsideration of commitment. Sample items include: "My education/best friend gives me certainty in life" (commitment), "I think a lot about my education/best friend" (in-depth exploration), and "I often think it would be better to try to find a different education/best friend" (reconsideration of commitment). For each of the identity dimensions, we summed responses across the two domains (Crocetti, Rubini, & Meeus, 2008). Using Cronbach's αs, the reliability of the U-MICS subscales was found to be adequate with values of .82 and .89 for commitment, .72 and .84 for in-depth exploration, and .69 and .86 for reconsideration of commitment in the Italian and Dutch samples, respectively. Using a procedure for comparing Cronbach's α coefficients (Feldt & Ankenmann, 1998), we found that the U-MICS scales were significantly more internally consistent in the Dutch sample than in the Italian sample: Commitment, $F(1975, 1521)$ = 1.64, $p < .001$; in-depth exploration, $F(1975, 1521)$ = 1.75, $p < .001$; and reconsideration of commitment, $F(1975, 1521)$ = 2.21, $p < .001$.

Self-Concept Clarity

This construct was measured using the Self-Concept Clarity Scale (SCC; Campbell et al., 1996). The SCC consists of 12 items, each scored on a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item is: "In general, I have a clear sense of who I am and what I am." Cronbach's αs were .80 and .83 in the Italian and Dutch samples, respectively. The SCC has been used in prior research with Dutch-speaking (Crocetti, Rubini, & Meeus, 2008) and Italian-speaking (Fermani, Crocetti, Pojaghi, & Meeus, 2008) samples.

Depression

The Children's Depression Inventory (CDI; Kovacs, 1985) was used to assess depressive symptoms. The CDI is a self-report questionnaire designed to measure subclinical depressive symptoms in children and adolescents. The CDI consists of 27 items, each scored on a three-point scale: 1 (*false*), 2 (*a bit true*), and 3 (*very true*). A sample item is: "I am sad all the time." Cronbach's αs were .88 and .92 in

the Italian and Dutch samples, respectively. More information on the psychometric properties of the CDI is provided by Timbremont and Braet (2002) for the Dutch version and by Kovacs (1988) for the Italian version.

Generalized Anxiety Symptoms

The Generalized Anxiety Symptoms (GAD) subscale from the Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1997) was used to assess anxiety symptoms. The GAD subscale consists of 7 items scored on a three-point scale: 1 (*almost never*), 2 (*sometimes*), and 3 (*often*). Sample items include: "I worry if others will like me." Cronbach's αs were .76 and .86 in the Italian and Dutch samples, respectively. Validation evidence was provided by Hale, Raaijmakers, Muris, and Meeus (2005) for the Dutch version of the SCARED, and by Crocetti, Hale, Fermani, Raaijmakers, and Meeus (2009) for the Italian version.

Parental Trust

Adolescents' perceived parental trust was assessed by using the trust subscale from the short version of the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987; Nada-Raja, McGee, & Stanton, 1992). The trust subscale measures the extent to which adolescents trust that their parents respect and accept their feelings and wishes. This subscale consists of 3 items for paternal trust and 3 items for maternal trust. A 6-point Likert scale, ranging from 1 (*completely untrue*) to 6 (*completely true*), was used. Sample items include: "My father/mother respects my feelings." Cronbach's αs were .77 and .86 for paternal trust, and .77 and .88 for maternal trust in the Italian and Dutch samples, respectively. The IPPA had been used in prior research with Dutch-speaking (e.g., Buist, Dekovic, Meeus, & van Aken, 2002) and Italian-speaking (Crocetti, Rubini, & Palmonari, 2008) samples.

Results

Confirmatory Factor Analyses

Validation of the Italian Version of the U-MICS

The first aim of this study was to validate the Italian version of the U-MICS. Following the procedure employed in the Dutch study (Crocetti, Rubini, & Meeus, 2008), we tested the factor structure of the U-MICS using CFA, conducted by means of AMOS 5.0 (Arbuckle, 2003). Maximum likelihood estimation was used. Three nested models were compared: a 1-factor model in which all of the items loaded on a single identity dimension; a 2-factor model consisting of commitment and global exploration (where items assessing in-depth exploration and reconsideration of commitment loaded on the same latent variable); and a 3-factor model consisting of commitment, in-depth exploration, and reconsideration of commitment. As in Crocetti, Rubini, and Meeus (2008), a parceling approach was used in the present study. Parceling is recommended in situations in which the scale has more than 5 items for each construct and the sample size is large (Bagozzi & Heatherton, 1994). Using a large number of indicators in CFAs often results in a large number of correlated residuals, which decrease both the fit of the model and the utility of the latent variable in capturing the construct of interest (Marsh, Hau, Balla, & Grayson, 1998). Thus, we used parcels of items for each construct (in a random fashion) and used these as indicators of the latent variables, resulting in 9 parcels (i.e., 3 parcels for each latent variable). Specifically, 1 parcel for commitment and 1 parcel for in-depth exploration consisted of 4 items apiece; 2 parcels for commitment and 2 parcels for in-depth exploration consisted of 3 items apiece; and all 3 parcels for reconsideration of commitment consisted of 2 items apiece. No cross-loadings or correlated measurement errors were allowed (Kline, 2005).

To evaluate the fit of these models, we relied on vari-

Table 1. Fit indices for the 1-factor model, the 2-factor model, and the 3-factor model of the Italian version of the U-MICS

				Model fit indices				
	N	χ^2	*df*	χ^2/df	GFI	CFI	TLI	RMSEA
1-factor model								
Total sample	1975	2847.05	27	105.45	.73	.58	.44	.23
2-factor model								
Total sample	1975	2066.62	26	79.48	.77	.70	.58	.20
3-factor model								
Total sample	1975	58.72	24	2.45	.99	.99	.99	.03
Boys	902	54.36	24	2.26	.99	.99	.99	.04
Girls	1073	43.69	24	1.82	.99	.99	.99	.03
Early adolescents	1050	27.23	24	1.13	.99	1	1	.01
Middle adolescents	925	47.68	24	1.99	.99	.99	.99	.03

Note. N = number of participants; χ^2 = chi-square; df = degrees of freedom; χ^2/df = chi-square/degrees of freedom; GFI = goodness of fit index; CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation.
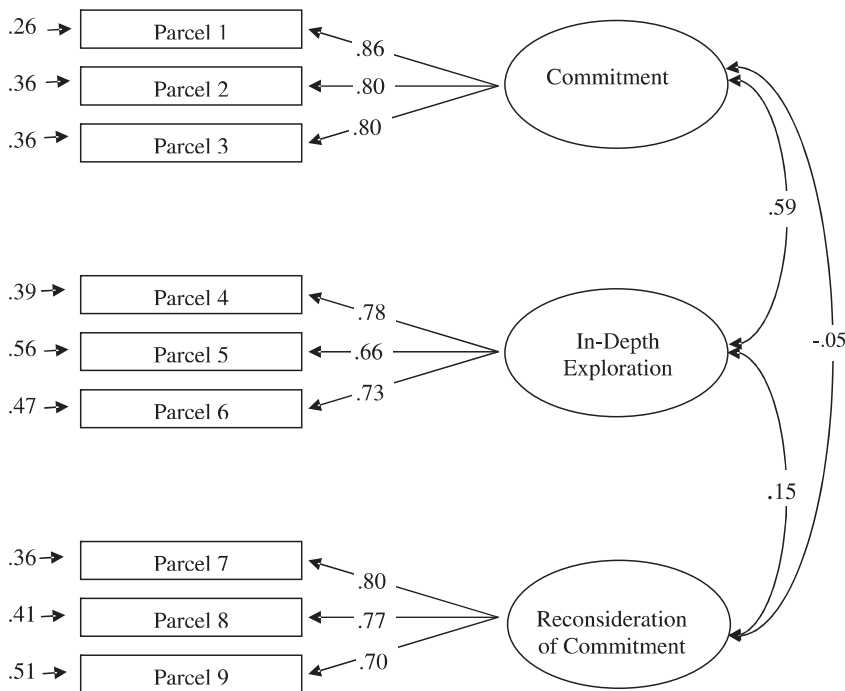
Figure 1. Standardized solution of the three-factor model of the Italian version of the U-MICS. *Note.* All factor loadings and correlations are significant at $p < .001$ (except the correlation between Commitment and Reconsideration of commitment, which was not significant).

ous fit indices: The ratio of the chi-square statistic to the degrees of freedom (χ^2/df) should be less than 3; the goodness of fit index (GFI), the comparative fit index (CFI), and the Tucker-Lewis index (TLI) should exceed .95 (Hu & Bentler, 1999); and the root mean square error of approximation (RMSEA) should be less than .05, with values less than .08 representing reasonable fit (Browne & Cudeck, 1993). As reported in Table 1, fit indices clearly revealed that the three-factor model provided the best fit to the data.

We then tested whether the 3-factor model fit the data significantly better than the 1- and the 2-factor models. In order to ascertain significant differences at least two out of these three criteria had to be satisfied: $\Delta\chi^2$ significant at $p < .05$ (Byrne, 2001); ΔCFI > .01 (Cheung & Rensvold, 2002); and ΔTLI > .02 (Vandenberg & Lance, 2000). Findings clearly indicated that the 3-factor model fit the data considerably better compared to the 1-factor model, $\Delta\chi^2(3) = 2788.33$, $p < .001$; ΔCFI = .41; ΔTLI = .55, or the 2-factor model, $\Delta\chi^2(3) = 2007.90$, $p < .001$; ΔCFI = .29; ΔTLI = .41. These findings were taken as supporting the multidimensional structure of the U-MICS.

Figure 1 displays the 3-factor standardized solution for the U-MICS in the Italian sample. Commitment was strongly and positively related to in-depth exploration, and in-depth exploration was positively related to reconsideration of commitment. Finally, commitment was not significantly related to reconsideration of commitment.

Furthermore, we examined whether this 3-factor solution fit the data equivalently across sex and across age groups. To accomplish this, for each grouping variable

(sex and age group), we estimated two multigroup structural equation models: an unconstrained model in which all factor loadings and correlations were free to vary across groups and a constrained model in which each factor loading and correlation was set equal across groups. A nonsignificant difference in fit between the constrained and unconstrained models was taken to indicate that the factor loadings and correlations did not differ significantly across groups (see Vandenberg & Lance, 2000, for a review of the invariance testing literature). Findings from these invariance analyses indicated that the 3-factor model fit the data adequately and equivalently for both boys and girls, $\Delta\chi^2(9) = 44.05$, $p < .001$; ΔCFI < .001; ΔTLI < .001, as well as for both early and middle adolescents, $\Delta\chi^2(9) = 12.65$, $p = .18$; ΔCFI < .001; ΔTLI < .001.

After having demonstrated that factors loadings and correlations were equal in the sex and age groups, we compared latent means, following Byrne's (2001) procedure. Specifically, across sex and age groups, we followed three steps: (1) We estimated means and intercepts for each level of the grouping variable; (2) we constrained all intercepts for the observed variables to be equal across the two groups; (3) we freely estimated the 3-factor means for one group, but constrained the factor means for the other group to 0. For sex, findings indicated that the latent means of commitment ($z = -4.76$; $p < .001$; Cohen's $d = .25$) and in-depth exploration ($z = -14.47$; $p < .001$; Cohen's $d = .81$) were significantly higher in girls. For age group, results revealed that the latent means for commitment ($z = 14.59$; $p < .001$; Cohen's $d = .72$) and reconsideration ($z = 3.11$; $p < .01$; Cohen's $d = .16$) were significantly higher in the early adolescent group.

Table 2. Standardized regression weights estimated in the multigroup SEM analyses

Variable	Self-concept clarity		Depression		Generalized anxiety disorder		Maternal trust		Paternal trust	
	Italian	Dutch	Italian	Dutch	Italian	Dutch	Italian	Dutch	Italian	Dutch
Commitment	.12***	.23***	−.23***	−.21***	−.13***	−.18***	.19***	.03	.14***	.09**
In-depth exploration	−.22***	−.11***	.10***	.12***	**.33***	.10**	.03	.04	.08**	.00
Reconsideration of commitment	−.26***	−.12***	.18***	.13***	.07**	.07**	**−.04**	**−.32***	−.01	−.28***

Note. *p < .05; **p < .01; ***p < .001. Significant differences are noted in **bold**.

Cross-National Invariance

We next tested for cross-national invariance. Findings suggested that the fit of the model with factor loadings and covariances set equal across groups was not significantly different from the model in which factor loadings were free to vary across groups, $\Delta\chi^2(6) = 22.73$, $p < .001$; ΔCFI = .01; ΔTLI < .01, nor from the model in which both factor loadings and covariances were free to vary in the Italian and Dutch samples, $\Delta\chi^2(9) = 123.85$, $p < .001$; ΔCFI = .01; ΔTLI < .01. Therefore, we concluded that the factor structure of the U-MICS was cross-nationally equivalent.

Finally, in order to test invariance of latent means, we again followed the Byrne's (2001) procedure described above. Findings indicated that the latent means were significantly different across national groups. Specifically, the latent mean of commitment was higher in the Dutch sample ($z = -5.97$; $p < .001$; Cohen's $d = .21$), whereas the latent means of both in-depth exploration ($z = 3.40$; $p < .001$; Cohen's $d = .12$), and reconsideration ($z = 21.26$; $p < .001$; Cohen's $d = .80$) were higher in the Italian sample, with the latter being particularly higher.

Construct Validity

Associations Between U-MICS Dimensions and Relevant Correlates in the Italian Sample

A further aim of the present study was to examine the construct validity of the U-MICS by examining whether the associations between identity processes and relevant correlates (i.e., self-concept clarity, psychosocial problems, and parent-adolescent relationships) found in the Dutch study (Crocetti, Rubini, & Meeus, 2008) would be replicated in the Italian sample. To accomplish this, we employed path analyses in AMOS with observed variables, the identity processes being allowed to predict self-concept clarity, depressive symptoms, generalized anxiety symptoms, and perceived parental trust.

Findings reported in Table 2 indicated that, in the Italian sample, commitment was positively associated with self-concept clarity, negatively related to depression and generalized anxiety, and positively associated with perceived maternal and paternal trust. In-depth exploration was negatively related to self-concept clarity, positively associated with depression and generalized anxiety, and positively linked to perceived paternal trust. Reconsideration of commitment was negatively related to self-concept clarity and positively related to both depressive and generalized anxiety symptoms.

Cross-National Comparisons of Construct Validity of the U-MICS

To test whether these associations differed significantly between the Italian and the Dutch samples, we conducted these path analyses in multigroup form. First, we tested a model in which the three identity processes (i.e., commitment, in-depth exploration, and reconsideration of commitment) were allowed to predict self-concept clarity, depression, generalized anxiety, paternal and maternal trust. In the first model, all of the paths from identity processes to dependent variables were set equal across the Dutch and Italian groups. We then compared this model with several models, in each of which only one parameter was allowed to vary across groups (e.g., in the first model only the association between commitment and self-concept clarity was free to vary across the Dutch and Italian groups; in the second model only the association between commitment and depression was free to vary across groups, and so on). If one of these models was significantly different from the model with all the parameters fixed to be equal across the two groups, this would indicate the specific association that differed significantly across national groups. Findings revealed that only 2 of the 15 pairs (13%) of associations examined were significantly different across nationalities (see Table 2). The first was the association between in-depth exploration and generalized anxiety, which was significantly stronger in the Italian sample, $\Delta\chi^2(1) = 84.81$, $p < .001$; ΔCFI = .02; ΔTLI < .01; the second was the association between reconsideration of commitment and perceived maternal trust, which was significant only in the Dutch sample, $\Delta\chi^2(1) = 94.37$, $p < .001$; ΔCFI = .02; ΔTLI = .01. The association between reconsideration of commitment and paternal trust was also significant only in the Dutch group, but this difference between the two samples was not statistically significant, $\Delta\chi^2(1) = 91.91$, $p < .001$; ΔCFI = .01; ΔTLI < .01.

Discussion

The U-MICS is an instrument designed to assess three identity processes (Crocetti, Rubini, & Meeus, 2008): commitment, in-depth exploration, and reconsideration of commitment. Whereas the U-MICS was originally developed for Dutch-speaking adolescents, the present study was designed to validate the Italian version of the U-MICS and to compare the utility of the measure across Italian and Dutch samples.

Findings from CFAs revealed that, in a large sample of Italian adolescents, the 3-factor model provided the best fit to the data and applied equally well to boys and girls as well as to early and middle adolescents. These findings support the robustness of the 3-factor structure of the U-MICS (Crocetti, Rubini, & Meeus, 2008). Consistent with prior literature, commitment was found to be positively related to in-depth exploration, suggesting that adolescents who possess strong commitments are more active in processing these commitments (Meeus, 1996). Commitment was unrelated to reconsideration of commitment. As posited previously (Crocetti, Rubini, & Meeus, 2008), this association might become significantly negative as individuals grow older and become more sure of the commitments they hold – and the tendency to reconsider commitments may decrease as a result. Finally, in-depth exploration was positively associated with reconsideration of commitment, suggesting that these two processes are part of a dynamic evaluation of one's current commitments (Crocetti, Rubini, & Meeus, 2008, Luyckx, Schwartz, Goossens, Beyers, & Missotten, in press).

Additionally, within the Italian sample, gender differences on identity factor latent means pointed out, in line with hypotheses that females scored higher on commitment and in-depth exploration than males. Thus, females appeared to be more active in finding their own identity and in verifying whether choices made in relevant life domains corresponds to their true interests and values. Also age differences were documented; these will be commented on below when considering cross-cultural differences.

A further aim of this study was to examine associations of identity processes to self-concept, psychosocial problems, and parent-adolescent relationships. Findings suggested that the associations emerging in this investigation were consistent with those reported in prior identity literature. Specifically, commitment appeared to reflect successful identity development (Crocetti, Rubini, & Meeus, 2008; Schwartz, 2006, 2007), in that it was positively related to a clear and stable self-concept (Campbell et al., 1996), to perceptions of a nurturing and trusting relationship with both parents (Meeus et al., 2002); and it is was negatively associated with depressive and anxiety symptoms (see Meeus et al., 1999, for a review of supportive prior literature).

In-depth exploration, although a necessary component of identity development, appears to be associated with an unclear self-concept, and with depression and anxiety. However, in-depth exploration was associated with perceived paternal trust, indicating that a warm relationship with one's father may support adolescents in the process of reflecting on existing commitments (Meeus et al., 2002). Additionally, Crocetti, Rubini, and Meeus (2008) found in-depth exploration to be positively associated with agreeableness, conscientiousness, and openness to experience. Thus, in-depth exploration is associated both (1) with curiosity and intellectual vivacity, as well as (2) with identity confusion and distress (Luyckx et al., 2008; Schwartz et al., 2009).

Reconsideration of commitment was negatively associated with self-concept clarity and positively linked with depression and generalized anxiety. Therefore, reconsideration appears to be accompanied by a sense of disequilibrium and distress linked with abandoning one's existing commitments and searching for a new set of goals, values, and beliefs (Crocetti, Rubini, and Meeus, 2008).

Cross-National Comparisons

We compared findings from the Italian sample against those obtained with a Dutch sample. First, we demonstrated cross-national measurement invariance of the U-MICS. Second, the correlations among identity processes were found to be consistent across countries. Taken together these findings provide support for the cross-national generalizability of the factorial structure of the U-MICS.

The primary difference between Italian and Dutch findings centered around latent mean levels of identity processes. Specifically, Italian adolescents reported lower commitment, higher in-depth exploration, and much higher reconsideration than their Dutch counterparts. This suggests that Italian adolescents may feel more uncertain about their commitments than their Dutch peers. These findings are consistent with those documented in the HBSC study (Currie et al., 2008) and might be due to the fact that school and peers offer Italian adolescents fewer opportunities to develop their identity than is offered to Dutch adolescents. Furthermore, given that the transition to adulthood in Italy is extremely protracted – and may last into one's 30s (Buzzi, 2007) – Italian adolescents may feel less compelled to identify commitments in adolescence.

These findings should be interpreted also in light of the age differences found within the Italian sample. Specifically, contrary to our hypotheses, Italian early adolescents scored higher on commitment and reconsideration of commitment than older adolescents. Although these findings are cross-sectional – and although we cannot make inferences about longitudinal trends – these patterns do suggest that older Italian adolescents are less committed than younger ones. This result is a bit surprising, given the general decreases observed in the diffusion status and corresponding increases observed in the achieved status in prior Dutch studies (Meeus, 1996; Meeus et al., 1999, in press).

These results may suggest that Italian adolescents are a striking example of a "generation on hold" (Côté & Allahar, 1994), that is, a protracted transition to adulthood where young people delay taking on adult roles and responsibilities. Indeed, in Italy, the transition to adulthood is often extended into the late twenties. Eurostat (2008a) findings indicated that, in 2006, the employment rate of young people aged 15–24 years was only 25% in Italy, whereas this rate was higher than 60% in The Netherlands. Similarly, the unemployment rate of individuals younger than age 25 was 21.6% in Italy and 6.6% in The Netherlands. Therefore, Italian youths enter in the labor market much later than their Dutch peers. Similarly, residential independence is achieved much later by Italian youths. Aassve, Billari, Mazzucco, and Ongaro (2002) reported that 68% of Italian young people aged 18–34 years were still living with their parents, compared to only 27% of their Dutch peers. As clearly indicated by national surveys conducted in Italy in the last two decades (see Buzzi, 2007, for a comprehensive review), Italian young people are increasingly postponing primary life transitions. As a result, in Italy, most identity work is undertaken in the emerging adult years rather than during adolescence. Italian adolescents may view the teenage years as a time of considering and reconsidering identity alternatives, rather than as a time of consolidating a sense of identity. Future studies are needed to investigate this further.

Finally, the associations between identity processes and relevant correlates were found to be consistent across the Italian and Dutch samples. In fact, only two of the 15 associations examined (13%) were statistically different between countries. Interestingly, findings indicated that in the Italian sample, contrary to results obtained in the Dutch one, reconsideration of commitment was not negatively associated to perceived parental trust. This is could be due to the fact that, in the Italian group, reconsideration is a normative process (due to the extremely extended psychosocial moratorium) rather than a function of a perceived lack of parental trust.

Limitations and Future Directions

The present findings should be considered in light of some important limitations. First, the cross-sectional design used does not permit us to estimate the longitudinal stability of the identity processes we have measured. Although the developmental progression of these identity processes has been examined in Dutch adolescents (Meeus et al., in press), this remains to be done in an Italian sample. Furthermore, in this study reconsideration appeared to be a process that implies a strong crisis in individuals' experiences. However, it is possible that reconsideration might exert positive long-term effects by facilitating revision of choices that do not fit with the adolescent's wishes, interests, or long-term goals. In this respect, Schwartz et al. (2009), in a cross-sectional study, found that present, but not past, exploration in breadth of various alternatives was associated with depression, anxiety, and poor well-being. Thus, it is important for future longitudinal studies to differentiate between the short- and long-term effects of reconsideration of commitment.

Second, cross-sectional data do not allow for the investigation of reciprocal relations between identity processes and relevant correlates. Thus, we cannot ascertain whether, for instance, parental trust is an antecedent or a consequence of identity processes, or whether there are bidirectional relationships between these constructs. As a result, future research should extend our understanding of the identity processes by using longitudinal approaches (Schwartz, 2005) that permit examination of antecedents and consequences of the identity dynamics.

Third, the U-MICS assesses identity in the areas of best friend and education, and the present study focused on identity development at a global level (across these domains). However, it is also important to examine identity in other domains as well (Goossens, 2001). It is possible that Dutch and Italian adolescents are more or less likely to have undertaken identity work in some domains than in others, something that should be examined using an expanded set of domains. Indeed, research in the United States (Pastorino, Dunham, Kidwell, Bacho, & Lamborn, 1997) suggests that adolescents explore and commit within different domains at different times. Furthermore, in this study we found that the internal reliabilities of the U-MICS factors, although adequate, were lower in the Italian sample. This issue needs to be further investigated in future applications of the Italian version of the U-MICS.

In conclusion, despite these limitations, the present study generated validation evidence for the Italian version of the U-MICS. Perhaps most importantly, the present results suggest that the three-process model proposed by Crocetti, Rubini, and Meeus (2008) is generalizable across two very different linguistic and cultural groups. Given the need to examine identity cross-culturally (Schwartz et al., 2006), this is an important research direction. It remains to be examined whether the U-MICS, and the theoretical model from which it is drawn, is applicable to a wider array of national contexts, including other Western European countries as well as countries in other parts of the world.

References

Aassve, A., Billari, F., Mazzucco, F., & Ongaro, F. (2002). Leaving home: A comparative analysis of ECHP data. *Journal of European Policy, 12*, 259–275.

Arbuckle, J. L. (2003). *Amos 5.0* [Computer software]. Chicago: SPSS.

Armsden, G. C., & Greenberg, M. T. (1987). The Inventory of Parent and Peer Attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence, 16,* 427–454.

Bagozzi, R. P., & Heatherton, T. F. (1994). A general approach to representing multifaceted personality constructs: Application to state self-esteem. *Structural Equation Modeling, 1,* 35–67.

Bennion, L. D., & Adams G. R. (1986). A revision of the extended version of the objective measure of ego identity status: An identity instrument for use with late adolescents. *Journal of Adolescent Research, 1,* 183–198.

Birmaher, B., Khetarpal, S., Brent, D., Cully, M., Balach, L., Kaufman, J. et al. (1997). The Screen for Child Anxiety Related Emotional Disorders (SCARED): Scale construction and psychometric characteristics. *Journal of the American Academy of Child and Adolescent Psychiatry, 36,* 545–553.

Bosma, H. A. (1985). *Identity development in adolescents: Coping with commitments.* Unpublished doctoral dissertation, University of Groningen, The Netherlands.

Bosma, H. A., & Kunnen, S. E. (2001). Determinants and mechanisms in ego identity development: A review and synthesis. *Developmental Review, 21,* 39–66.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Beverly Hills, CA: Sage.

Byrne, B. M. (2001). *Structural Equation Modeling with AMOS.* Mahwah, NJ: Erlbaum.

Buist, K. L., Dekovic, M., Meeus, W., & van Aken, M. A. G. (2002). Developmental patterns in adolescent attachment to mother, father and sibling. *Journal of Youth and Adolescence, 31,* 167–176.

Buzzi, C. (2007). La transizione all'età adulta [The transition to adulthood]. In C. Buzzi, A. Cavalli, & A. de Lillo (Eds.), *Rapporto giovani* [Youths report] (pp. 33–47). Bologna: il Mulino.

Campbell, J. D., Trapnell, P. D., Heine, S., Katz, I. M., Lavalle, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates and cultural boundaries. *Journal of Personality and Social Psychology, 70,* 141–156.

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling, 9,* 233–255.

Côté, J. E., & Allahar, A. L. (1994). *Generation on hold: Coming of age in the late twentieth.* New York, London: New York University.

Côté, J. E., & Levine, C. (1988). A critical examination of the ego identity status paradigm. *Developmental Review, 8,* 147–184.

Crocetti, E. (2004). *I processi dell'identità in adolescenti e giovani* [Identity processes in adolescents and emerging adults]. Unpublished master's thesis, University of Bologna, Italy.

Crocetti, E., Hale, III, W. W., Fermani, A., Raaijmakers, Q., & Meeus, W. (2009). Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders (SCARED) in the general Italian adolescent population: A validation and a comparison between Italy and The Netherlands. *Journal of Anxiety Disorders, 23,* 824–829.

Crocetti, E., Rubini, M., Luyckx, K., & Meeus, W. (2008). Identity formation in early and middle adolescents from various ethnic groups: From three dimensions to five statuses. *Journal of Youth and Adolescence, 37,* 983–996.

Crocetti, E., Rubini, M., & Meeus, W. (2008). Capturing the dynamics of identity formation in various ethnic groups: Development and validation of a three-dimensional model. *Journal of Adolescence, 31,* 207–222.

Crocetti, E., Rubini, M., & Palmonari, A. (2008). Attaccamento ai genitori e al gruppo dei pari e sviluppo dell'identità in adolescenti e giovani [Parental and peer attachment and identity development in adolescents and emerging adults]. *Psicologia Clinica dello Sviluppo, 2,* 329–353.

Currie, C., Gabhainn, S. N., Godeau, E., Roberts, C., Smith, R., Currie, D. et al. (2008). *Inequalities in young people's health. Health behaviour in school-aged children international report from the 2005/2006 survey.* Copenhagen: World Health Organization.

Erikson, E. (1950). *Childhood and society.* New York: Norton.

Eurostat (2008a). *Europe in figures – Eurostat yearbook 2008.* Luxemburg: Eurostat. Retrieved from http://ec.europa.eu/eurostat

Eurostat (2008b). *Eurostat regional yearbook 2008.* Luxemburg: Eurostat. Retrieved from http://ec.europa.eu/ eurostat

Felt, L. S., & Ankenmann, R. D. (1998). Appropriate sample size for comparing α reliabilities. *Applied Psychological Measurement, 22,* 170–178.

Fermani, A., Crocetti, E., Pojaghi, B., & Meeus, W. (2008). *Rapporto con la famiglia e sviluppo del concetto di sé in adolescenza* [Family relationships and self-concept development in adolescence]. Manuscript submitted for publication.

Goossens, L. (2001). Global versus domain-specific statuses in identity research: A comparison of two self-report measures. *Journal of Adolescence, 24,* 681–699.

Grotevant, H. D. (1987). Toward a process model of identity formation. *Journal of Adolescent Research, 2,* 203–222.

Hale III, W. W., Raaijmakers, Q., Muris, P., & Meeus, W. (2005). Psychometric properties of the screen for child anxiety related emotional disorders (SCARED) in the general adolescent population. *Journal of the American Academy of Child and Adolescent Psychiatry, 44,* 283–290.

Heaven, P. C. L., Ciarrochi, J., & Vialle, W. (2008). Self-nominated peer crowds, school achievement, and psychological adjustment in adolescents: Longitudinal analysis. *Personality and Individual Differences, 44,* 977–988.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1–55.

Jensen, M., Kristiansen, I., Sandbekk, M., & Kroger, J. (1998). Ego identity status in cross-cultural context: A comparison of Norwegian and United States university students. *Psychological Reports, 83,* 455–460.

Kerpelman, J. L., Pittman, J. F., & Lamke, L. K. (1997). Toward a microprocess perspective on adolescent identity development: An identity control theory approach. *Journal of Adolescent Research, 12,* 325–346.

Kline, R. B. (2005). *Principles and practices of structural equation modeling* (2nd ed). New York: Guilford.

Kovacs, M. (1985). The Children's Depression Inventory. *Psychopharmacology Bulletin, 21,* 995–998.

Kovacs, M. (1988). *Children's Depression Inventory. Questionario di autovalutazione* [Children's Depression Inventory. Self-report questionnaire] (Adattamento italiano a cura di M. Camuffo, R. Cerutti, L. Lucarelli, & R. Mayer) [Italian adaptation by M. Camuffo, R. Cerutti, L. Lucarelli, & R. Mayer]. Firenze: O. S. Organizzazioni Speciali.

Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukophadhyay, T., & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist, 53,* 1017–1031.

Kroger, J. (1997). Gender and identity: The intersection of structure, content, and context. *Sex Roles, 36,* 747–770.

Kroger, J. (2003). Identity development during adolescence. In G. R.

Adams & M. D. Berzonsky (Eds.), *Blackwell handbook of adolescence* (pp. 205–226). Malden, MA: Blackwell.

Kroger, J., & Marcia, J. E. (in press), The identity statuses: Origins, meanings, and interpretations. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research*. New York: Springer.

Low, J. M., Akande, D., & Hill, C. (2005). A cross-cultural comparison of identity development: South Africa and the United States. *Identity: An International Journal of Theory and Research, 5*, 303–314.

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., Goossens, L., Soenens, B., & Beyers, W. (2006). Unpacking commitment and exploration: Validation of an integrative model of adolescent identity formation. *Journal of Adolescence, 29,* 361–378.

Luyckx, K., Schwartz, S. J., Berzonsky, M. D., Soenens, B., Vansteenkiste, M., Smits, I. et al. (2008). 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., Beyers, W., & Missotten, L. (in press). Personal identity in the making: A process-oriented model of identity formation and evaluation. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research*. New York: Springer.

Luyckx, K., Soenens, B., & Goossens, L. (2006). The personality-identity link in emerging adult women: Convergent findings from complementary analyses. *European Journal of Personality, 20*, 195–215.

Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology, 3,* 551–558.

Marcia, J. E. (1976). *Studies in ego identity*. Unpublished research monograph, Simon Fraser University, Burnaby, British Columbia, Canada.

Marcia, J. E. (1993). The status of the statuses: Research review. In J. E. Marcia, A. S. Waterman, D. R. Matteson, S. L. Archer, & J. L. Orlofsky, *Identity: A handbook for psychosocial research* (pp. 22–41). New York: Springer.

Marcia, J. E. (2001). A commentary on Seth Schwartz's review of identity theory and research. *Identity: An International Journal of Theory and Research, 1,* 59–65.

Marsh, H. W., Hau, K. T., Balla, J. R., & Grayson, D. (1998). Is more ever too much? The number of indicators per factor in confirmatory factor analysis. *Multivariate Behavioral Research, 33*, 181–220.

Meeus, W. (1996). Studies on identity development in adolescence: An overview of research and some new data. *Journal of Youth and Adolescence, 25,* 569–598.

Meeus, W., Iedema, J., Helsen, M., & Vollebergh, W. (1999). Patterns of adolescent identity development: Review of literature and longitudinal analysis. *Developmental Review, 19,* 419–461.

Meeus, W., Oosterwegel, A., & Vollebergh, W. (2002). Parental and peer attachment and identity development in adolescence. *Journal of Adolescence, 25,* 93–106.

Meeus, W., Van de Schoot, R., Keijsers, L., Schwartz, S. J., & Branje, S. (in press). On the progression and stability of adolescent identity formation. A five-wave longitudinal study in early-to-middle and middle-to-late adolescence. *Child Development*.

Nada-Raja, S., McGee, R., & Stanton, W. R. (1992). Perceived attachment to parents and peers and psychological well-being in adolescence. *Journal of Youth and Adolescence, 21*, 471–485.

Pastorino, E., Dunham, R. M., Kidwell, J. S., Bacho, R. A., & Lamborn, S. D. (1997). Domain-specific gender comparisons in identity development among college youth: Ideology and relationships. *Adolescence, 32*, 559–577.

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. (2005). A new identity for identity research: Recommendations for expanding and refocusing the identity literature. *Journal of Adolescent Research, 20,* 293–308.

Schwartz, S. J. (2006). Predicting identity consolidation from self-construction, eudaimonistic self-discovery, and agentic personality. *Journal of Adolescence, 29*, 777–793.

Schwartz, S. J. (2007). The structure of identity consolidation: Multiple correlated constructs of one superordinate construct? *Identity: An International Journal of Theory and Research, 7,* 27–49.

Schwartz, S. J., Adamson, L., Ferrer-Wreder, L., Dillon, F. R., & Berman, S. L. (2006). Identity status measurement across contexts: Variations in measurement structure and mean levels among White American, Hispanic American, and Swedish emerging adults. *Journal of Personality Assessment, 86*, 61–76.

Schwartz, S. J., Zamboanga, B. L., Weisskirch, R. S., & Rodriguez, L. (2009). The relationships of personal and ethnic identity exploration to indices of adaptive and maladaptive psychosocial functioning. *International Journal of Behavioral Development, 33*, 131–144.

Stegarud, L., Solheim, B., Karlsen, M., & Kroger, J. (1999). Ego identity status in cross-cultural context: A replication study. *Psychological Reports, 85*, 457–461.

Stephen, J., Fraser, E., & Marcia, J. E. (1992). Moratorium-achievement (Mama) cycles in lifespan identity development: Value orientations and reasoning system correlates. *Journal of Adolescence, 15,* 283–300.

Timbremont, B., & Braet, C. (2002). *Children's Depression Inventory: Dutch language manual*. Lisse, The Netherlands: Swets & Zeitlinger.

Vandenberg, R. J., & Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods, 3*, 4–69.

Waterman, A. S. (1999). Identity, the identity statuses, and identity status development: A contemporary statement. *Developmental Review, 19*, 591–621.

Elisabetta Crocetti

Department of Educational Sciences, University of Macerata
Piazzale Luigi Bertelli (Contrada Vallebona)
62100 Macerata
Italy
Tel. +39 733 258-5942
Fax +39 733 258-5927
E-mail elisabetta.crocetti@unimc.it

Appendix

The Utrecht-Management of Identity Commitments Scale (English Version)

Educational Identity

Below are a number of questions about you and your school education. In each case, place a cross in the box that most closely matches your opinion.

Complete-ly untrue	Untrue	Sometimes true/ Sometimes not	True	Complete-ly true
1	2	3	4	5

Commitment

1. My education gives me security in life
2. My education gives me self-confidence
3. My education makes me feel sure of myself
4. My education gives me security for the future
5. My education allows me to face the future with optimism

In-depth Exploration

6. I try to find out a lot about my education
7. I often reflect on my education
8. I make a lot of effort to keep finding out new things about my education
9. I often try to find out what other people think about my education
10. I often talk with other people about my education

Reconsideration of Commitment

11. I often think it would be better to try to find a different education
12. I often think that a different education would make my life more interesting
13. In fact, I'm looking for a different education

Relational Identity/Best Friend

Below are a number of questions about you and your best friend. NB: By your "best friend" we do *not* mean a brother or sister, or someone that you're dating. In each case, place a cross in the box that most closely matches your opinion.

Commitment

1. My best friend gives me security in life
2. My best friend gives me self-confidence
3. My best friend makes me feel sure of myself
4. My best friend gives me security for the future
5. My best friend allows me to face the future with optimism

In-depth Exploration

6. I try to find out a lot about my best friend
7. I often reflect on my best friend
8. I make a lot of effort to keep finding out new things about my best friend
9. I often try to find out what other people think about my best friend
10. I often talk with other people about my best friend

Reconsideration of Commitment

11. I often think it would be better to try to find a different best friend
12. I often think that a new best friend would make my life more interesting
13. In fact, I'm looking for a new best friend

The Utrecht-Management of Identity Commitments Scale (Italian Version)

School Identity

Di seguito ci sono una serie di affermazioni su di te e sulla tua esperienza scolastica. Per ciascuna affermazione indica il tuo grado di accordo considerando la seguente scala:

Completa-mente Falso	Falso	A volte vero	A volte no Vero	Completa-mente Vero
1	2	3	4	5

Commitment

1. Quello che studio mi dà stabilità nella vita
2. Quello che studio mi dà fiducia in me stesso/a
3. Quello che studio mi fa sentire sicuro/a di me
4. Quello che studio mi dà garanzie per il futuro
5. Quello che studio mi consente di affrontare il futuro con ottimismo

In-Depth Exploration

6. Mi interessa capire a fondo il valore della mia formazione
7. Spesso rifletto su ciò che studio
8. Faccio molti sforzi per cercare di approfondire ciò che studio
9. Spesso cerco di scoprire ciò che gli altri pensano di quello che studio
10. Spesso parlo con le altre persone di ciò che studio

Reconsideration of Commitment

11. Spesso penso che sarebbe meglio studiare cose diverse
12. Spesso penso che studiare cose diverse renderebbe la mia vita più interessante
13. In realtà sto cercando di studiare cose diverse

Relational Identity/Best Friend

Di seguito ci sono una serie di affermazioni su di te e sul/sulla tuo/a migliore amico/a. Esprimi il tuo grado di accordo con ciascuna di esse. N. B. Per tuo "migliore amico/a," non intendiamo un fratello o una sorella, o qualcuno con cui hai una relazione affettiva.

Commitment

1. Il rapporto con il mio migliore amico/a mi dà stabilità nella vita
2. Il rapporto con il mio migliore amico/a mi dà fiducia in me stesso/a
3. Il rapporto con il mio migliore amico/a mi fa sentire sicuro/a di me
4. Il rapporto con il mio migliore amico/a mi dà garanzie per il futuro
5. Il rapporto con il mio migliore amico/a mi consente di affrontare il futuro con ottimismo

In-Depth Exploration

6. Mi interessa capire a fondo il valore del rapporto con il mio migliore amico/a
7. Spesso rifletto sul rapporto che ho con il mio migliore amico/a
8. Faccio molti sforzi per cercare di approfondire il rapporto con il mio migliore amico/a
9. Spesso cerco di scoprire ciò che gli altri pensano del mio migliore amico/a
10. Spesso parlo con le altre persone del rapporto che ho con il mio migliore amico/a

Reconsideration of Commitment

11. Spesso penso che sarebbe meglio trovare un nuovo migliore amico/a
12. Spesso penso che avere un'altra persona come migliore amico/a renderebbe la mia vita più interessante
13. In realtà sto cercando un nuovo migliore amico/a

The Utrecht Management of Identity Commitments Scale (Dutch Version)

School Identity

Hieronder vind je een aantal vragen over jou en de opleiding die je volgt. Maak steeds het hokje zwart dat het beste bij jouw mening hoort.

Klopt helemaal niet	Klopt niet	Klopt soms wel/soms niet	Klopt	Klopt precies
1	2	3	4	5

Commitment

1. Mijn opleiding geeft me zekerheid in het leven
2. Mijn opleiding geeft me zelfvertrouwen
3. Door mijn opleiding voel ik me zeker van mezelf
4. Mijn opleiding geeft me zekerheid voor de toekomst
5. Ik kan door mijn opleiding de toekomst optimistisch tegemoet zien

In-Depth Exploration

6. Ik probeer veel te weten te komen over mijn opleiding
7. Ik denk vaak na over mijn opleiding
8. Ik doe veel moeite om steeds nieuwe dingen te weten te komen over mijn opleiding.
9. Ik probeer er regelmatig achter te komen wat anderen vinden van mijn opleiding
10. Ik praat regelmatig met anderen over mijn opleiding

Reconsideration of Commitment

11. Ik denk er regelmatig aan een andere opleiding te gaan zoeken
12. Vaak denk ik dat een andere opleiding mijn leven interessanter zou maken
13. Eigenlijk ben ik op zoek naar een andere opleiding

Relational Identity/Best Friend

Hieronder vind je een aantal vragen over jou en je beste vriend(in). NB: Met je beste vriend bedoelen we niet een broer of zus, of iemand waar je verkering mee hebt. Zet een kruisje in het hohje dat het beste jouw mening weer geeft.

Commitment

1. Mijn beste vriend(in) geeft me zekerheid in het leven.
2. Mijn beste vriend(in) geeft me zelfvertrouwen.
3. Door mijn beste vriend(in) voel ik me zeker van mezelf.
4. Mijn beste vriend(in) geeft me zekerheid voor de toekomst.
5. Ik kan door mijn beste vriend(in) de toekomst optimistisch tegemoet zien.

In-depth Exploration

6. Ik probeer veel te weten te komen over mijn beste vriend(in).
7. Ik denk vaak na over mijn beste vriend(in).
8. Ik doe veel moeite om steeds nieuwe dingen te weten te komen over mijn beste vriend(in).
9. Ik probeer er regelmatig achter te komen wat anderen vinden van mijn beste vriend(in).
10. Ik praat regelmatig met anderen over mijn beste vriend(in).

Reconsideration of Commitment

11. Ik denk er regelmatig aan een andere beste vriend(in) te gaan zoeken
12. Vaak denk ik dat een andere beste vriend(in) mijn leven interessanter zou maken
13. Eigenlijk ben ik op zoek naar een andere beste vriend(in)