Identity formation in adolescence and emerging adulthood : a process-oriented and applied perspective

# Identity Formation in Adolescence and Emerging Adulthood:
# A Process-Oriented and Applied Perspective

Koen Luyckx

*Faculty of Psychology and Educational Sciences, KU Leuven, Belgium*

*KU Leuven Child and Youth Institute, Belgium*

*UNIBS, University of the Free State, Bloemfontein, South Africa*

Janne Vanderhaegen

*Faculty of Psychology and Educational Sciences, KU Leuven, Belgium*

*KU Leuven Child and Youth Institute, Belgium*

Leni Raemen

*Faculty of Psychology and Educational Sciences, KU Leuven, Belgium*

*KU Leuven Child and Youth Institute, Belgium*

Laurence Claes

*Faculty of Psychology and Educational Sciences, KU Leuven, Belgium*

*KU Leuven Child and Youth Institute, Belgium*

*Faculty of Medicine and Health Sciences (CAPRI), University of Antwerp, Belgium*

Correspondence should be sent to Koen Luyckx, KU Leuven, Faculty of Psychology and Educational Sciences, Tiensestraat 102 – box 3717, 3000 Leuven, Belgium. Tel: 32 (0)16 325978. Fax: 32 (0)16 326144. E-mail: koen.luyckx@kuleuven.be.

Data availability statement

Data sharing not applicable – no new data generated

Abstract

Identity formation constitutes the core developmental task youth face on their way to adulthood. Identity has increasingly been identified as a key construct for understanding both optimal and pathological functioning in community and clinical populations of different ages. The present article describes the five-dimensional identity model (Luyckx et al., 2008a), and subsequent research conducted at our center, and details how this research line has increasingly focused on assessing the clinical relevance of (neo-)Eriksonian identity constructs. Specific attention is paid to the role of identity formation for individuals adjusting to chronic illness. In so doing, the illness identity framework is introduced and relevant studies are reviewed. We end with suggestions for future research and emphasize the need for more integrative research crossing the boundaries of specific approaches (e.g., integrating process- and content-based approaches) if we want to move the field forward and inform clinical practice.

Keywords: identity formation; psychopathology; chronic illness.

Identity formation constitutes the core developmental task in the teens and twenties (Erikson, 1968). Youth address the question "Who am I and where am I heading in life?", essentially capturing how they define themselves and how they engage in societal roles in interaction with their surrounding context (Schwartz, Luyckx, & Vignoles, 2011). Identity formation not only comes to the fore in this life phase, but has important implications for psychosocial functioning as well (Branje et al., 2021; Verschueren et al., 2020). Further, the identity formation task remains important throughout the lifespan and impacts individuals' functioning beyond the second and third decades of life (Erikson, 1968). Hence, identity has been increasingly conceptualized from a dynamic and process-oriented perspective (Branje et al., 2021), focusing on formative and evaluative processes that shape individuals' identity trajectories. The present article (i) briefly contextualizes the process-oriented research conducted at our center within the wider identity field; and (ii) details how this research line increasingly focused on the clinical relevance of identity. Specific attention is paid to research on identity and chronic illness (for a review of our research on identity and psychopathology, see Verschueren et al., 2020).

*The Foundational Work of Erikson and Marcia*

Before we detail our process-oriented model (Luyckx et al., 2006, 2008a), we pay homage to two key identity theorists, both of whom have been indispensable for our thinking on identity. Erikson (1968) conceptualized identity as a multidimensional construct encompassing personal, social, and collective dimensions. Although the identity formation process gains momentum in the life stage of adolescence and the transition to adulthood, its foundations, according to Erikson, can be traced back to earlier life stages and the developmental tasks individuals need to address during these stages. For Erikson, identity refers to a subjective feeling of sameness and continuity over time, and can range from identity synthesis to confusion. *Identity synthesis* refers to a reworking of childhood identifications into a larger, self-determined set of identity assets, giving rise to a stable and coherent self. *Identity confusion* represents an inability to develop a coherent set of goals and commitments on which to base a stable and secure identity. Individuals experiencing identity confusion feel uncertain, engage in limited decision-making, and may experience inner emptiness if sustained over time. Erikson stressed that, due to (normative) developmental changes and person-environment transactions, one's identity is subject to continuous change. This thesis that identity formation is an ongoing task has guided the model we

developed (Luyckx et al., 2006, 2008a). Readers should note that in the latter model, the focus is mainly on personal identity (and not so much on social and collective identity) and the guiding life choices individuals explore and commit to.

Marcia (1966) developed the status paradigm which is one of the most influential neo-Eriksonian models of personal identity. To identify behavioral markers of Erikson's notions of synthesis and confusion, Marcia drew inspiration from clinical practice and forwarded two dimensions: exploration (consideration of identity alternatives) and commitment (making a choice to one or more of these alternatives). By crossing these two dimensions, Marcia forwarded four statuses to capture differences in how individuals tackle the identity quest at a certain point in time (Kroger & Marcia, 2011). Achievement is characterized by making commitments following pro-active exploration, whereas foreclosure is characterized by making commitments without prior exploration. Moratorium and diffusion are characterized by the absence of commitments. Individuals in moratorium are currently exploring life options, whereas diffused individuals engage in little systematic exploration. Abundant research has demonstrated that individual differences in identity formation are paralleled in psychosocial functioning (Kroger & Marcia, 2011), with identity and psychosocial functioning potentially reinforcing one another across time (Verschueren et al., 2020).

*A Dynamic and Process-Oriented Perspective on Identity*

Extending Marcia's (1966) paradigm, Luyckx et al. (2006, 2008a) developed a dynamic five-dimensional identity model by unpacking the processes of commitment and exploration into more refined processes, inspired by Grotevant (1987), Bosma and Kunnen (2001), and Meeus (1996) (see Luyckx et al., 2011, for a description of these models). These latter models moved beyond the formation of commitments and recast identity development as a dynamic, iterative process consisting of formative and evaluative processes. Emphasizing this continuous, lifelong character of identity formation consisting of recurrent cycles was a main goal of our process-oriented model. The development of the five-dimensional identity model (Luyckx et al., 2006, 2008a) proceeded in two phases.

In a first phase, Luyckx and colleagues (2006) empirically integrated these complementary formative and evaluative processes into a single four-dimensional model, by unpacking commitment and exploration into two dimensions each. Whereas commitment was subdivided into commitment

making and identification with commitment, exploration was subdivided in exploration in breadth and exploration in depth. Take, for instance, a student who enrolls in college (Luyckx et al., 2011; Verschueren et al., 2020). After she explored various possibilities for academic majors through, for instance, looking for online information or talking with others (exploration in breadth), she decides upon a specific major (commitment making). Both these identity dimensions can be seen as constituting commitment formation. However, the fact that she has chosen a major does not imply that the identity process ceases. She may continue to gather information to evaluate this commitment (exploration in depth), which can lead to a growing conviction that the chosen major feels right (identification with commitment strengthens), or not (identification with commitment weakens). Exploration in depth and identification with commitment can be seen as constituting commitment evaluation. If she decides that her major is not the correct one, the process may cycle back to exploration in depth, or exploration in breadth may resume, illustrating the cyclical or iterative nature of the identity process (Bosma & Kunnen, 2001; Grotevant, 1987).

In a second phase, a fifth identity dimension was added to explain certain paradoxical findings in identity literature and in research adopting the four-dimensional model (Luyckx et al., 2011). Although high levels of exploration (or being in the moratorium status) were generally seen as facilitative of commitment making, certain individuals get stuck in a prolonged exploratory state, in which self-doubt dominates (Côté & Levine, 2002; Luyckx et al., 2008a). Referring back to our example, the student may keep on hesitating about her major, without pro-actively looking into other options, which could result in feelings of uncertainty and incompetence. As a result, inspired by the distinction made by Trapnell and Campbell (1999) between self-reflection and self-rumination in their research on self-attentiveness, exploration was subdivided into reflective exploration (i.e., in breadth and in depth) and ruminative exploration. Ruminative exploration captures a process in which individuals ask themselves the same questions over and over again, up to the point that pro-active identity work is thwarted. Ruminative exploration, and not so much exploration in breadth or in depth, has been related to depressive symptoms and distress (Luyckx et al., 2008a). Relatedly, ruminative exploration was predicted by maladaptive perfectionism (Luyckx et al., 2008b) and having an overcontrolled personality (Luyckx et al., 2014). The presence of ruminative exploration also enabled us to distinguish between a

troubled and carefree form of diffusion across studies (next to other statuses similar to those forwarded in Marcia's paradigm), with ruminative exploration being elevated in the former subtype of diffusion but not in the latter (Luyckx et al., 2011). In sum, the use of five identity processes allowed for a fine-grained analysis, paying attention to pro-active, agentic pathways leading to an achieved identity (or identity synthesis), as well as to unproductive, depleted strategies leading to arrested development and identity indecisiveness (or identity confusion).

Although a detailed comparison is beyond the scope of the present paper, the three-dimensional model developed by Crocetti, Rubini, and Meeus (2008) – which has also generated a wealth of empirical research to date – shares important similarities with the five-dimensional model. Most importantly, both models unpack identity exploration into different components (exploration in breadth, exploration in depth, and ruminative exploration in the five-dimensional model; and exploration in depth and reconsideration of commitment in the three-dimensional model) and emphasize their role in two interrelated identity cycles (i.e., a formation and an evaluation or maintenance cycle) (Meeus, 2018). However, both models differ with respect to certain conceptual and measurement issues as well, as highlighted, among others, by Crocetti (2017), Meeus (2018), and Rivnyák et al. (2022). For instance, whereas the three-dimensional model has the advantage of providing a more parsimonious account of the identity development process, the five-dimensional model distinguishes between reflective and ruminative exploration dimensions (next to distinguishing commitment making from identification with commitment). Finally, the measures developed to assess both models (the DIDS for the five-dimensional model and the U-MICS for the three-dimensional model) differ in the content and number of identity domains they capture, with the U-MICS having the advantage to capture two relevant identity domains as opposed to the DIDS that focuses on the domain of future plans and goals. However, both measures are flexible and items can be reworded to tap into different identity domains (e.g., Luyckx et al., 2014).

*Identity Formation in Relation to Psychopathology*

The importance of identity formation toward individual adjustment and psychosocial functioning has been demonstrated abundantly. Although most research has been cross-sectional, longitudinal research has increased over the years (Branje et al., 2021; Potterton et al., 2022), with studies increasingly paying attention to between-person and within-person processes (e.g., Becht et al.,

2019; Bogaerts et al., 2019). Besides this methodological sophistication of identity research, studies have increasingly incorporated ideas stemming from developmental psychopathology, adopting a continuum perspective on normative and pathological functioning (Kaufman, Montgomery, & Crowell, 2014; Potterton et al., 2022). Given that process-oriented models (Crocetti et al., 2008; Luyckx et al., 2006) have been developed initially to capture normative identity functioning, research indeed needs to adopt a complementary perspective on clinical functioning as well if we want identity theorizing to reach its full potential in informing clinical practice (Klimstra & Denissen, 2017; Verschueren et al., 2020). Research has begun in closing the gap between developmental and clinical perspectives by demonstrating that an explicit focus on normative-developmental identity constructs can inform us as to how and when identity development may give rise to clinical-pathological functioning, and vice versa (for an overview of research on eating disorder symptoms and non-suicidal self-injury, see Verschueren et al., 2020).

Recent research corraborated the conclusions by Verschueren et al. (2020) and further testified to the potential transdiagnostic role identity may fulfill in explaining diverse symptoms and pathological behaviors in community and clinical populations. Two recent longitudinal studies in community youth (Raemen et al., 2022; Vankerckhoven et al., 2022) demonstrated that how individuals tackle the identity quest over time was related to depressive symptoms, eating disorder symptoms, a disturbed body image, somatic complaints, and substance use. Further, Verschueren et al. (2023) demonstrated that, in female inpatients with an eating disorder, increases in identity synthesis, adaptive exploration, and commitment processes were found throughout therapy, which were related to decreases in drive for thinness and body dissatisfaction. Further, observed decreases in identity confusion and ruminative exploration were related to decreases in eating disorder symptoms. In sum, assessing how individuals navigate the challenging identity task can aid in understanding how certain psychopathological behaviors may emerge and are maintained (or diminish) over time, both in community individuals and individuals with a psychiatric disorder.

As detailed in Verschueren et al. (2020), the *National Institute for Mental Health* (NIMH) has described “Perception and Understanding of Self” (which comprises agency, self-awareness, self-monitoring, and self-knowledge) as a transdiagnostic construct in their Research Domain Criteria

(RDoC) for understanding the development of mental health problems. This construct bears resemblance to (neo-)Eriksonian identity theorizing with its focus on agency and self-directed behavior as key to self-realization (Schwartz, Côté, & Arnett, 2005). Similarly, in the Alternative Model for Personality Disorders (AMPD) in *DSM-5* Section III (American Psychiatric Association, 2013), identity is recognized as a contributing factor in all personality disorders (and not only Borderline Personality Disorder; Bogaerts et al., 2021a, 2021b; Verschueren et al., 2020). This alternative model views impairment in identity and self-direction, among other factors, as key for understanding personality disorders. In the definition of identity and self-direction in the AMPD, references to (neo-)Eriksonian notions of identity and decision-making in terms of exploration and commitment can be found (Bogaerts et al., 2021a, 2021b; Verschueren et al., 2020). In sum, acknowledging identity as a possible transdiagnostic factor for understanding psychopathology is gaining momentum. However, more developmental research into identity-psychopathology linkages is needed to capture the many levels and nuances of the identity construct (Pasupathi, 2014), as explained further below.

*A Differentiated Perspective on Personal and Illness Identity in Chronic Illness*

Further testifying to its clinical relevance, research points to the value of examining identity formation in medical populations. More specifically, research increasingly addresses how youth with a chronic illness navigate the challenging identity quest and what the implications of identity may be toward illness adaptation and functioning. Having a chronic illness has been described as a transformational life experience (Charmaz et al., 2010). Up to 20% of Western adolescents have a chronic illness (Van der Lee et al., 2007) and many struggle with reconciling their illness with who they are as a person and how they experience their body (Charmaz et al., 2010). By building bridges between developmental, health-psychological, and medical perspectives, the potential of identity in understanding illness-related behaviors, emotions, and cognitions has been increasingly shown. Such research can notify clinicians of the importance of key normative developmental tasks for comprehending how individuals (fail to) adjust to chronic illness.

Studies in patients with chronic illness (type 1 diabetes, congenital heart disease, and adolescent and emerging adult survivors of pediatric cancer) have demonstrated that how youth develop their identity (in terms of commitment and exploration) is substantially related to generic and illness-specific

functioning (Luyckx et al., 2008c, 2011; Prikken et al., 2021; Verschueren et al., 2019). Youth with type 1 diabetes in the high-commitment statuses of achievement and foreclosure (and less so in carefree diffusion) experienced the least diabetes-related problems, the most optimal treatment adherence, and were able to cope pro-actively with their illness. Youth in statuses characterized by high ruminative exploration (moratorium and especially troubled diffusion) experienced the most depressive symptoms and emotional impact of their illness, and the least life satisfaction (Luyckx et al., 2008c; Verschueren et al., 2019). A similar picture emerged for youth with a congenital heart disease. Individuals in high-commitment statuses (and carefree diffusion) generally seemed to display the most optimal generic and illness-specific functioning, whereas individuals in moratorium and troubled diffusion displayed the poorest functioning (Luyckx et al., 2011). These findings underscore the importance of identifying and addressing identity issues in youth with chronic illness as it may help them to overcome both psychological and illness-related challenges.

Extending this research to adolescent and emerging adult survivors of pediatric cancer (Prikken et al., 2021), experiencing identity synthesis was associated with higher levels of life satisfaction, physical functioning, and benefit finding, and less depressive symptoms, fear of cancer recurrence, and posttraumatic stress symptoms. Experiencing identity confusion, in contrast, was associated with more depressive symptoms, fear of cancer recurrence, and posttraumatic stress symptoms, and less life satisfaction. As a longitudinal follow-up to this study, Vanderhaegen et al. (2022) demonstrated that identity synthesis positively predicted life satisfaction, and identity confusion negatively predicted physical functioning over time. Life satisfaction, in turn, positively predicted identity synthesis, and both life satisfaction and physical functioning negatively predicted identity confusion over time. Regarding cancer-specific functioning, mainly unidirectional effects were found. Posttraumatic stress symptoms negatively predicted identity synthesis and positively predicted identity confusion over time, whereas the reverse pattern was found for benefit finding. These longitudinal findings testify to the need to take identity issues into account when dealing with youth in clinical practice. How youth navigate their cancer survivorship and deal with illness-specific challenges may set the stage for their identity quest. When survivors experience benefit finding, they seem to be better equipped to engage in identity work. However, when posttraumatic stress symptoms due to their cancer experience seem to be

dominant, survivors become vulnerable for experiencing identity confusion, which may have far-reaching implications if sustained over time.

Importantly, these previous studies only found limited differences in the extent to which youth with a chronic illness engage in commitment and exploration, or the degree to which they experience identity synthesis or confusion as compared to healthy peers. Consistent across studies (Luyckx et al., 2008c, 2011; Prikken et al., 2021; Verschueren et al., 2019), no differences were found in the extent to which youth with or without a chronic illness were able to make (and identify with) identity commitments. Further, pediatric cancer survivors had similar scores on identity synthesis and confusion as compared to controls. On identity exploration, some differences were found (be it limited), with youth with type 1 diabetes scoring lower as compared to their agemates. Certain youth may perceive fewer opportunities to explore identity options due to perceived illness constraints, possibly as a consequence of intensive illness management or the additional stress when transitioning from pediatric to adult care (Seiffge-Krenke, 2001; Weissberg-Benchel, Wolpert, & Anderson, 2007). In addition, having a chronic illness may impact individuals' 'sense of normalcy' as compared to their peers (Commissariat et al., 2016). Despite these challenges, the general picture (relying on neo-Eriksonian identity operationalizations) suggests that youth with a chronic illness seem to be as competent as their peers in engaging in the identity quest.

Besides attending to commitment and exploration processes, research has to examine whether youth succeed in integrating different life domains or contexts in their sense of self, a process referred to as identity coherence (Van Doeselaar et al., 2018), being a hallmark of healthy identity development (Syed & Mclean, 2015). Identity coherence captures the degree to which individuals feel as if important life domains fit together, which, in turn, can serve as a guidepost for daily behaviors and choices (Syed & Mclean, 2015). More specifically, youth with a chronic illness need to integrate their illness into their developing identity and, hence, need to align their illness experience with other important life domains, a process coined as illness identity (Charmaz et al., 2010; Oris et al., 2016; Rassart et al., 2021). Oris and colleagues (2016, 2018) developed an integrative framework distinguishing four illness identity dimensions. The accompanying questionnaire, the Illness Identity Questionnaire, has been validated in chronic illnesses such as type 1 diabetes, congenital heart disease, refractory epilepsy, inflammatory

bowel diseases, systemic diseases, and neuromuscular diseases (Geuens et al., 2022; Luyckx et al., 2018; Oris et al., 2016, 2018; Rassart et al., 2022).

*Engulfment* captures the extent to which a chronic illness dominates a person's identity. Individuals experiencing high levels of engulfment completely define themselves in terms of their illness that invades all life domains, leading to a lack of identity coherence and to a sense of biographical disruption (Bury, 1982). *Rejection* refers to the degree to which the chronic illness is rejected as part of one's identity and is viewed as a threat to the self, leading to a strong compartmentalization of this life domain. Individuals try to avoid thinking about their illness and mainly resort to non-disclosure to others (Tilden et al., 2005). *Acceptance* captures the degree to which individuals accept the illness as part of their identity and succeed in aligning it with other life domains, indicative of identity coherence. Chronic illness plays a role, besides other personal, relational, and social self-assets, but does not pervade all life domains (Morea, Friend, & Bennett, 2008). Finally, *enrichment* captures positive changes in one's identity as a result of chronic illness, being a more narrow concept as compared to related concepts of post-traumatic growth and benefit finding (Helgeson, Reynolds, & Tomich, 2006).

Increasing research demonstrates the value of illness identity in understanding generic and illness-specific functioning of individuals with a chronic illness. When focusing specifically on longitudinal research, Rassart and colleagues (2021) found important bidirectional associations in youth with type 1 diabetes. Rejection negatively and enrichment positively predicted treatment adherence over time, which, in turn, positively predicted enrichment and negatively engulfment. Rejection and engulfment positively predicted diabetes-related distress over time, which, in turn, together with glycemic control values, positively predicted engulfment. Van Bulck and colleagues (2018) additionally demonstrated that engulfment predicted more health care use over time in individuals with congenital heart disease. Finally, Raymaekers and colleagues (2020) further testified to the developmental interdependence of illness identity and psychosocial functioning by demonstrating that how one experiences parent and peer relationships is intertwined with illness identity. For instance, experiencing anxious, overprotective parenting predicted engulfment over time in youth with type 1 diabetes, whereas acceptance seemed to enable individuals to engage in supportive peer relationships over time. Such bidirectional and transactional mechanisms indicate the need for clinicians to pay attention to illness

identity and identity coherence in individuals with a chronic illness. Such a focus could help to increase their understanding of how important life challenges and normative tasks develop in tandem in patients and possibly impact clinical-medical, behavioral, and psychological parameters of interest.

Importantly, research has begun to examine how identity processes of commitment and exploration are related to illness identity, or, phrased differently, how indicators of identity continuity are related to identity coherence in youth with a chronic illness (Van Doeselaar et al., 2018). Vanderhaegen et al. (under review) examined developmental trajectory classes based on commitment and exploration processes in youth with type 1 diabetes and found that individuals in achieved and foreclosed trajectory classes scored highest on acceptance (with the former scoring highest on enrichment as well) over time. Individuals in a troubled diffusion trajectory class scored highest on engulfment and especially rejection over time. These findings suggest that having strong commitments with which one identifies (i.e., the achievement and foreclosure trajectory classes) is related to the ability to align one's chronic illness with other life domains and contexts. However, when individuals mainly engage in identity rumination and remain undecided where their lives are heading (i.e., mainly the troubled diffusion trajectory class), they appear more vulnerable for experiencing illness engulfment or to reject their illness as part of their identity. Given the bidirectional associations aforementioned, it is likely that, in line with suggestions by Van Doeselaar et al. (2018), these identity processes mutually reinforce one another across development, attesting to the complexity of identity formation in individuals with a chronic illness (Vanderhaegen et al., under review).

*Future Directions and Concluding Remarks*

Before we conclude this article, we highlight some issues that warrant attention in future research. Although the aforementioned identity models have been an impetus for innovative research (theoretically and methodologically), the current state of the field is not without limitations and can benefit from thorough incremental and innovative approaches.

First, the illness identity framework, which was originally developed in chronic illness literature, may hold significant promise for our understanding of identity mechanisms at work in psychopathology as well. In literature on psychopathology and mental illness, informative theoretical models with a key role for illness identity have been forwarded as well (Waynee & Arasa, 2020; Yanos, Roe, & Lysacker,

2010). In these models, illness identity is defined as "the set of roles and attitudes that a person has developed about him or herself in relation to his or her understanding of mental illness" (Yanos et al., 2010, p. 74). Further, several concepts have been forwarded in clinical literature, which bear a clear resemblance to some of the illness identity dimensions aforementioned, such as benefit finding and post-traumatic growth (e.g., Chiba et al., 2021) or illness engulfment (e.g., Konsztowicz & Lepage, 2019). Consequently, literature may benefit from an integration of complementary approaches to illness identity. For instance, the illness identity framework by Oris et al. (2016, 2018) may help in illuminating potential individual differences in what it means to uphold a negative or positive illness identity when confronted with mental illness (Waynee & Arasa, 2020). As a first step in this direction, future research could examine if the four illness identity dimensions (by, for instance, adapting the Illness Identity Questionnaire; Hernand, Block, & Schroder, 2022) may predict the emergence, maintenance, and/or recovery (or relapse) of psychopathological symptoms and mental health problems (both at a sub-clinical and clinical level). Further, such research could also examine how these illness identity dimensions are related to variables such as meaning making, experienced (subjective) stigma, and social identity processes in patients at different stages in their illness and/or recovery trajectory. At our research center (in close collaboration with other colleagues), we hope to make important steps in this direction in the near future. Conversely, the theory-driven illness identity models forwarded by Yanos et al. (2010, 2020) and Waynee and Arasa (2020), among others, may help in contextualizing and strengthening illness identity research in chronic illness as well.

Second, extending our previous recommendation for more integrative research on illness identity in different research domains, the identity research field at large can only benefit from further integrative research and theorizing at different levels. We highlight two integrative perspectives of specific relevance to the research reviewed herein. Process-oriented approaches need to be integrated with narrative approaches to capture not only identity processes at work but identity content as well through the lived experiences of individuals (Hihara et al., 2021; Skhirtladze et al., 2022; Syed, 2020). Especially in individuals confronted with chronic illness or mental health issues, narrative identity research could substantially increase our understanding of how such experiences may have impacted and/or transformed one's identity and envisioned life goals. For instance, Peters and Brown (2022)

demonstrated the added value of a mixed-method approach in studying illness identity in patients with inflammatory bowel disease. The narrative data put flesh on the bones of the illness identity framework by highlighting what it actually meant for an individual to endorse a certain illness identity dimension. Relatedly, in integrating such process- and content-based approaches, explicit attention has to be paid to both personal and social identity mechanisms given that identity processes are inherently embedded in the social contexts and groups we perceive ourselves being part of (Crocetti et al., 2022). Again, especially in individuals confronted with chronic illness or mental health issues, such mechanisms are crucial to examine given that individuals receiving a (mental) illness diagnosis may become part of a stigmatized group. This can have a major impact on functioning because of social identification mechanisms (Cruwys & Gunaseelan, 2016; Peters & Brown, 2022).

Third, when zooming in on how the constituent dimensions of the five-dimensional process-oriented model (and, by extension, its three-dimensional counterpart by Crocetti et al., 2008) are being measured, there is still room for improvement as highlighted by Waterman (2015) and Johnson et al. (2022). We do not aim to reiterate the many valid comments raised, but want to join these authors in their conclusion that additional work concerning item revision and development is needed to increase the construct validity and predictive power of these measures (see Mannerström et al., 2021, for an empirical test of an extended version of the five-dimensional identity model based on suggestions by Waterman, 2015). Relatedly, typological or person-centered approaches in which different identity types or statuses have been identified based on process-oriented models have been widely used, both from a cross-sectional and a longitudinal perspective. Although this research line has generated a wealth of information and has extended our knowledge base of the identity statuses and their correlates, the field is faced with several challenges in this respect.

One issue we want to highlight here is consistency of research findings across studies (Syed, 2020; Waterman, 2015). In the last two decades approximately, questionnaire-based research has increasingly used person-centered analyses such as cluster analysis and mixture modeling techniques to assign individuals to identity statuses. Such techniques are considered a major improvement over previous methods of classification (Syed, 2020). However, the fact that these are data- or sample-dependent techniques can be seen as a disadvantage as well, given that the exact definition of what

constitutes a specific status can differ from one sample to the next (and, hence, from one study to the next) (Syed, 2020). Referring to the promise of the open science movement, preregistration (as we and other colleagues are already doing in recent years) can help in increasing the credibility and transparency of these studies (see Syed, 2020, for a much-needed overview of what the open science movement can mean for identity researchers setting up, conducting, and reporting on studies). Further, to increase consistency across studies identifying identity statuses, authors such as Waterman (2015) have plead for adopting theory-based identity groupings based on actual item scores instead of focusing on the relative standing of an individual within a specific sample. This suggestion may hold promise for future typological identity research. Determining specific item score cut-offs for different questionnaires (i.e., to determine a-priori what can be considered low, moderate, or high scores on commitment and exploration processes within a specific population) can only benefit from a collaborative approach among identity researchers. However, such an approach will prove challenging (especially for a lifespan developmental construct such as identity), given that, for instance, cut-off values based on samples drawn from one specific population cannot simply be applied to samples drawn from another population.

In conclusion, we hope that the present paper may inspire researchers to immerse themselves in the exciting identity field (as we did about 20 years ago) and to move it forward with innovative approaches and studies. In so doing, research should inform clinicians and practitioners of the validity and utility of the identity construct for daily practice, as (neo-Eriksonian) thinking on identity could provide them with a framework and vocabulary that could increase their understanding of some issues individuals are struggling with. As such, identity research and theorizing can be of service to those individuals who may come across substantial hindrances on their way to self-definition and self-realization, such as individuals faced with substantial psychosocial challenges or having a chronic illness.

Acknowledgements

This article was supported by a research grant from FWO Research Foundation – Flanders (G070620N) and from the Internal Funds of the Research Council KU Leuven (C14/21/052).

References

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.).*

Becht, A. I., Luyckx, K., Nelemans, S. A., Goossens, L., Branje, S. J. T., Vollebergh, W. A. M., & Meeus, W. H. J. (2019). Linking identity and depressive symptoms across adolescence: A multisample longitudinal study testing within-person effects. *Developmental Psychology, 55*, 1733–1742.

Bogaerts, A., Claes, L., Schwartz, S. J., Becht, A. I., Verschueren, M., Gandhi, A., & Luyckx, K. (2019). Identity structure and processes in adolescence: Examining the directionality of between-and within-person associations. *Journal of Youth and Adolescence, 48*, 891–907

Bogaerts, A., Claes, L., Bastiaens, T., & Luyckx, K. (2021a). Personality disorder symptomatology in Belgian emerging adults: Associations with identity processes and statuses. *European Journal of Developmental Psychology, 18*, 75-95.

Bogaerts, A., Luyckx, K.., Bastiaens, T., Kaufman, E. A., & Claes, L. (2021b). Identity impairment as a central dimension in personality pathology. *Journal of Psychopathology and Behavioral Assessment, 43*, 33-42.

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

Branje, S., de Moor, E. L., Spitzer, J., & Becht, A. I. (2021). Dynamics of identity development in adolescence: A decade in review. *Journal of Research on Adolescence, 31,* 908-927.

Bury, M. (1982). Chronic illness as biographical disruption. *Sociology of Health & Illness, 4*, 167-182.

Charmaz, K., & Rosenfeld, D. (2010). Chronic illness. In W. C. Cockerham (Ed.), *The New Blackwell Companion to Medical Sociology* (pp. 312–333). Wiley-Blackwell.

Chiba, R., Yamazaki, Y., Miyamoto, Y., & Funakoshi, A. (2021). Related changes in personal recovery, benefit finding, and sense of coherence among people with chronic mental illness: A two-wave study. *Journal of Psychology, 155,* 292-308.

Commissariat, P. V., Kenowitz, J. R., Trast, J., Heptulla, R. A., & Gonzalez, J. S. (2016). Developing a personal and social identity with type 1 diabetes during adolescence: A hypothesis generative study. *Qualitative Health Research, 26*, 672-684.

Côté, J. E., & Levine, C. G. (2002). *Identity formation, agency, and culture: A social psychological synthesis.* Erlbaum.

Crocetti, E. (2017). Identity formation in adolescence: The dynamic of forming and consolidating identity commitments. *Child Development Perspectives, 11,* 145-150.

Crocetti, E., Albarello, F., Meeus, W., & Rubini, M. (2022). Identities : A developmental social-psychological perspective. *European Review of Social Psychology,*

Crocetti, E., Rubini, M., & Meeus, W. H. J. (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.

Cruwys, T., & Gunaseelan, S. (2016). "Depression is who I am": Mental illness identity, stigma, and well-being. *Journal of Affective Disorders, 189,* 36-42.

Erikson, E. (1968). *Identity, youth and crisis.* Norton.

Geuens, S., Leyen, K., Raymaekers, K., Prikken, S., Willen, J., Goemans, N., De Waele, L., Lemiere, J., & Luyckx, K. (2022). Illness perceptions and illness identity in adolescents and emerging adults with neuromuscular disorders. *Clinical Child Psychology and Psychiatry.*

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

Helgeson, V.S., Reynolds, K.A., & Tomich, P.L. (2006). A meta-analytic review of benefit finding and growth. *Journal of Consulting and Clinical Psychology, 74*, 797-816.

Hernand, M., Block, S. R., & Schroder, H. S. (2022, May). *Applying the illness identity model to mental health.* Poster presented at the annual convention of the American Psychological Society, Chicago, IL.

Hihara, S., Umemura, T., Iwasa, Y., Saiga, S., & Sugimura, K. (2021). Identity processes and identity content valences: Examining bidirectionality. *Developmental Psychology, 57,* 2265-2280.

Johnson, S. K., de Moor, E. L., Chung, J. M., den Boer, L., & Klimstra, T. A. (2022). An item response theory analysis of two frequently used measures of identity development. *Psychological Assessment, 34,* 1047-1061.

Kaufman, E. A., Montgomery, M., & Crowell, S. (2014). Identity-related dysfunction: Integrating clinical and developmental perspectives. *Identity, 14*, 297-311.

Klimstra, T. A., & Denissen, J. J. (2017). A theoretical framework for the associations between identity and psychopathology. *Developmental Psychology, 53*, 2052-2065.

Konsztowicz, S., & Lepage, M. (2019). The role of illness engulfment in the association between insight and depressive symptomatology in schizophrenia. *Journal of Psychiatric Research, 111,* 1-7.

Kroger, J., & Marcia, J. E. (2011). The identity statuses: Origins, meanings, and interpretations. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 31-54). Springer.

Luyckx, K., Goossens, L., Soenens, B., & Beyers, W. (2006). Unpacking commitment and exploration: Preliminary validation of an integrative model of late adolescent identity formation. *Journal of Adolescence, 29*, 361-378.

Luyckx, K., Goossens, E., Van Damme, C., & Moons, P. (2011). Identity formation in adolescents with congenital cardiac disease: A forgotten issue in the transition to adulthood. *Cardiology in the Young, 21,* 411-420.

Luyckx, K., Oris, L., Raymaekers, K., Rassart, J. , Moons, P., Verdyck, L., Mijnster, T., & Mark, R. E. (2018). Illness identity in young adults with refractory epilepsy. *Epilepsy & Behavior, 80,* 48-55.

Luyckx, K., Schwartz, S. J., Berzonsky, M. D., Soenens, B., Vansteenkiste, M., Smits, I., & Goossens, L. (2008a). Capturing ruminative exploration: Extending the four-dimensional model of identity formation in late adolescence. *Journal of Research in Personality, 42,* 58-82.

Luyckx, K., Schwartz, S. J., Goossens, L., Beyers, W., & Missotten, L. (2011). Processes of personal identity formation and evaluation. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 77-98). Springer.

Luyckx, K., Seiffge-Krenke, I., Schwartz, S. J., Crocetti, E., & Klimstra, T. A. (2014). Identty configurations across love and work in emerging adults in a romantic relationship. *Journal of Applied Developmental Psychology, 35,* 192-203.

Luyckx, K., Seiffge-Krenke, I., Schwartz, S. J., Goossens, L., Weets, I., Hendrieckx, C., & Groven, C. (2008c). Identity development, coping, and adjustment in emerging adults with a chronic illness: The sample case of type 1 diabetes. *Journal of Adolescent Health, 43*(5), 451-458.

Luyckx, K., Soenens, B., Goossens, L., Beckx, K., & Wouters S. (2008b). Identity exploration and commitment in late adolescence: Correlates of perfectionism and mediating mechanisms on the pathway to well-being. *Journal of Social and Clinical Psychology, 27,* 336-361.

Luyckx, K., Teppers, E., Klimstra, T. A., & Rassart, J. (2014). Identity processes and personality traits and types in adolescence: Directionality of effects and developmental trajectories. *Developmental Psychology, 50,* 2144-2153.

Mannerström, R., Hietajärvi, J., & Salmela-Aro, K. (2021). A two-wave longitudinal study of identity profiles based on eight dimensions: Further insight into exploration and commitment quality as well as life domains central to identity. *Identity,* 21, 159-184.

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

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. (2018). The identity status continuum revisited: A comparsion of longitudinal findings with Marcia's model and dual-cycle models. *European Psychologist, 23,* 289-299.

Morea, J.M., Friend, R., & Bennett, R.M. (2008). Conceptualizing and measuring illness self-concept: a comparison with self-esteem and optimism in predicting fibromyalgia adjustment. *Research in Nursing & Health, 31*, 563-575.

Oris, L., Luyckx, K., Rassart, J., Goubert, L., Goossens, E., Apers, S., Arat, S., Vandenberghe, J., Westhovens, R., & Moons, P. (2018). Illness Identity in Adults with a Chronic Illness. *Journal of Clinical Psychology in Medical Settings*, *25*, 429–440.

Oris, L., Rassart, J., Prikken, S., Verschueren, M., Goubert, L., Moons, P., et al. (2016). Illness identity in adolescents and emerging adults with type 1 diabetes: Introducing the Illness Identity Questionnaire. *Diabetes Care, 39*, 757-763.

Pasupathi, M. (2014). Identity: Commentary: Identity development: Dialogue between normative and pathological developmental approaches. *Journal of Personality Disorders, 28*, 113-120.

Peters, L. A., & Brown, E. M. (2022). The relationship between illness identity and self-management of inflammatory bowel disease. *British Journal of Health Psychology, 27,* 956-970.

Potterton, R., Austin, A., Robinson, L., Webb, H., Allen, K. L., & Schmidt, U. (2022). Identity development and social-emotional disorders during adolescence and emerging adulthood: A systematic review and meta-analysis. *Journal of Youth and Adolescence, 51,* 16-29.

Prikken, S., Luyckx, K., Raymaekers, K., Raemen, L., Verschueren, M., Lemiere, J., Vercruysse, T., & Uyttebroeck, A. (2021). Identity formation in adolescent and emerging adult cancer survivors: A differentiated perspective and associations with psychosocial functioning. *Psychology & Health*, 1–18.

Raemen, L., Claes, L., Palmeroni, N., Buelens, T., Vankerckhoven, L., & Luyckx, K. (2022). Identity formation and psychopathological symptoms in adolescence: Examining developmental trajectories and co-development. *Journal of Applied Developmental Psychology, 83,* 101473.

Rassart, J., Oris, L., Prikken, S., Goethals, E. R., Raymaekers, K., Weets, I., Moons, P., & Luyckx, K. (2021). Illness identity and adjusting to type 1 diabetes: A four-wave longitudinal study. *Health Psychology*, *40*(5), 326–336.

Rassart, J., Van Wanseele, C., Debrun, L., Matthijs, K., Moons, P., Van Bulck, L., Arat, S., Van Oudenhove, L., & Luyckx, K. (2022). Illness identity in inflammatory bowel disease. *International Journal of Behavioral Medicine.*

Raymaekers, K., Prikken, S., Vanhalst, J., Moons, P., Goossens, E., Oris, L., Weets, I., & Luyckx, K. (2020). The social context and illness identity in youth with type 1 diabetes: A three-wave longitudinal study. *Journal of Youth and Adolescence, 49,* 449-466.

Rivnyák, A., Járdaházi, E., Arató, N., Péley, B., & Láng, A. (2022). The assessment of dual-cycle identity models among secondary school students: The Hungarian adaptation of DIDS and U-MICS. *Frontiers in Psychiatry, 13,* article 804529.

Schwartz, S. J., Côté, J. E., & Arnett, J. J. (2005). Identity and agency in emerging adulthood: Two developmental routes in the individualization process. *Youth and Society, 37,* 201-229.

Schwartz, S. J., Luyckx, K., & Vignoles, V. L. (2011). *Handbook of identity theory and research*. Springer.

Seiffge-Krenke, I. (2001). *Diabetic adolescents and their families: stress, coping, and adaptation.* Cambridge University Press.

Skhirtladze, N., Javakhishvili, N., Syed, M., Klimstra, T., Schwartz, S. J., & Luyckx, K. (2022). Identity trajectories and narratives during the transition out of undergraduate education among Georgian emerging adults. *Developmental Psychology, XX, XX-XX*.

Syed, M. (2020). The promise of the Open Science Movement for research on identity, *Identity, 20*, 143-156.

Syed, M., & Mclean, K. C. (2015). Understanding identity integration: Theoretical, methodological, and applied issues; Understanding identity integration: Theoretical, methodological, and applied issues. *Journal of Adolescence* , *47*, 109–118.

Tilden, B., Charman, D., Sharples, J., & Fosbury, J. (2005). Identity and adherence in a diabetes patient: transformations in psychotherapy. *Qualitative Health Research, 15*, 312-324.

Trapnell, P. D., & Campbell, J. D. (1999). Private self-consciousness and the Five-Factor model of personality: Distinguishing rumination from reflection. *Journal of Personality and Social Psychology, 76,* 284-304.

Van Bulck, L., Goossens, E., Luyckx, K., Oris, L., Apers, L., & Moons, P. (2018). Illness identity: A novel predictor for health care use in adults with congenital heart disease. *Journal of the American Heart Association, 7,* e008723.

Vanderhaegen, J., Prikken, S., Van Laere, E., Lemiere, J., Claes, L., Moons, P., Uyttebroeck, A., Jacobs, S., & Luyckx, K. (2022). Identity formation and general and cancer-specific functioning in

adolescent and emerging adult survivors of childhood cancer: A longitudinal study into directionality of effects. *Annals of Behavioral Medicine.*

Vanderhaegen, J., Raymaekers, K., Prikken, S., Claes, L., Van Laere, E., Campens, S., Moons, P., & Luyckx, K. (2023). *Personal and illness identity in adolescents and emerging adults with type 1 diabetes: Developmental trajectories and associations.* Manuscript submitted for publication.

Van Der Lee, J. H., Mokkink, L. B., Grootenhuis M. A., et al (2007). Definitions and measurement of chronic health conditions in childhood: a systematic review. *Journal of the American Medical Association, 297*, 2741-2751.

Van Doeselaar, L., Becht, A. I., Klimstra, T. A., & Meeus, W. (2018). A review and integration of three key components of identity development. *European Psychologist, 23,* 278-288.

Vankerckhoven, L., Raemen, L., Claes, L., Eggermont, S., Palmeroni, N., & Luyckx, K. (2022). Identity formation, body image, and body-related symptoms: Developmental trajectories and associations throughout adolescence. *Journal of Youth and Adolescence.*

Verschueren, M., Claes, L., Gandhi, A., & Luyckx, K. (2020). Identity and psychopathology: Brdiging developmental and clinical research. *Emerging Adulthood, 8,* 319-332.

Verschueren, M., Claes, L., Palmeroni, N., Raemen, L., Moons, P., Bruckers, L., Molenberghs, G., Schoevaerts, K., & Luyckx, K. (2023). *Identity functioning in patients with an eating disorder: Developmental trajectoris throughout treatment.* Manuscript submitted for publication.

Verschueren, M., Oris, L., Claes, L., Moons, P., Weets, I., & Luyckx, K. (2019). Identity formation in adolescents and emerging adults with type 1 diabetes. *Psychology, Health & Medicine, 25*(5), 519-529.

Waterman, A. S. (2015). What does it mean to engage in identity exploration and to hold identity commitments? A methodological critique of multidimensional measures for the study of identity processes, *Identity, 15*, 309-349

Waynee, V. W., & Arasa, J. (2020). Literature review of the relationship between illness identity and recovery outcomes among adults with severe mental illness. *Modern Psychological Studies, 25,* 10.

Weissberg-Benchell, J., Wolpert, H, & Anderson, B.J. (2007).Transitioning from pediatric to adult care: a new approach to the post-adolescent young person with type 1 diabetes. *Diabetes Care, 30*, 2441-2446.

Yanos, P. T., Roe, D., & Lysaker, P. H. (2010). The impact of illness identity on recovery from severe mental illness. *American Journal of Psychiatric Rehabilitation, 13,* 73-93.

Yanos, P.T., DeLuca, J.S., Roe, D., & Lysaker, P.H. (2020). The impact of illness identity on recovery from severe mental health illness: A review of the evidence. *Psychiatry Research, 288*, 1-10.