

**The Importance of Developmental Assets to the Five Cs of Positive Youth Development  
among Norwegian Youth**

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**MAPSYK330, masterprogram i psykologi,  
Studieretning: Sosial og kognitiv psykologi**

**ved**

**UNIVERSITETET I BERGEN**

**DET PSYKOLOGISKE FAKULTET**

**[VÅR] [2022]**

# Positive Youth Development: Developmental Assets and the Five Cs in Norwegian Youth

Word Count: 15 253  
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**Abstract**

Positive youth development (PYD) focuses on the positive assets of young people. The PYD framework views young people as resources to be developed. PYD research in the US has reported relationship between developmental assets and the experience of positive developmental outcomes (i.e., the five Cs), where young people who report several developmental assets also report positive developmental outcomes such as academic achievements. The present study examines the importance of developmental assets in Norwegian youth and whether there is a relationship between the experienced levels of assets and the five Cs of PYD. 220 upper secondary school students (47.7% female) aged 16-20 (mean age = 17.3) were surveyed. Findings from the correlation analysis showed that all developmental assets correlated significantly with the five Cs. Further regression analysis revealed significant associations between the five Cs and some of the developmental assets but not all of them. The environment asset category *School* did not show any association with any one of the five Cs of PYD. Based on the findings developmental assets can provide good framework for promoting positive developmental outcomes in the Norwegian youth. Further research is needed to better understand the experience of developmental assets in the Norwegian context.

*Keywords:* Positive youth development, developmental assets, 5Cs, Norwegian youth

### Sammendrag

Positiv ungdomsutvikling (PYD) fokuserer på ungdommers positive ressurser. PYD-rammeverket ser på ungdom som ressurser som må utvikles. PYD-forskning i USA har rapportert sammenheng mellom utviklingsressurser og opplevelser av positive utviklingsutfall (dvs. de fem C-ene), der unge mennesker som rapporterer flere utviklingsressurser også rapporterer positive utviklingsutfall som akademiske prestasjoner. Denne studien undersøker viktigheten av utviklingsressurser i norsk ungdommer og om det er en sammenheng mellom tilstedeværelse av utviklingsressurser og de fem C-ene i PYD. 220 videregående skoleelever (47,7 % kvinner) i alderen 16-20 år (gjennomsnittsalder = 17,3) ble undersøkt. Funn fra korrelasjonsanalysen viste at alle utviklingsressurser korrelerte signifikant med de fem C-ene. Ytterligere regresjonsanalyse avslørte signifikante assosiasjoner mellom de fem C-ene og noen av utviklingsressursene, men ikke alle. Den miljømessig utviklingsressurs *Skole* viste ingen tilknytning til noen av de fem C-ene i PYD. Basert på funnene kan utviklingsressursene gi gode rammer for å fremme positive utviklingsutfall hos norsk ungdommer. Ytterligere forskning er nødvendig for å bedre forstå opplevelsen av utviklingsressurser i den norske konteksten.

*Nøkkelord:* Positiv ungdomsutvikling, utviklingsressurser, 5Cer, Norsk ungdommer

## **Preface**

I would like to thank my supervisor Nora Wiium, who has given me advice and guidance, and support through this process. Your thorough feedbacks and advice are very well appreciated. Thank you for your supervision and for introducing me to the topic of PYD.

I would also like to thank my family and my friends who were a great support throughout this process of writing my thesis.

Bergen, 18. May 2022

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## **The Importance of Developmental Assets to the Five Cs of Positive Youth Development Among Norwegian Youth**

Adolescence is a period in life which is characterized by major physical, emotional, cognitive, and psychological changes (Lerner, 2005). Adolescents start to explore their beliefs, values, identity, and eventually their roles in the different contexts they encounter within their society. As adolescence is a period of changes on many levels, it can result in an increased experience of sensitivity to stressors (Steinberg, 2004). Support and guidance from adults are thus crucial during this time. This paper will make a reference to several words such as adolescents, youth, and young people, since there is some degree of overlap between these words. The World Health Organization (WHO) defines “young people” as people between the ages of 10-24. This term can combine “adolescents” (aged 10-19) and, “youth” (aged 15–24) (WHO, n.d.). Most adolescents are under the age of 18 and are thus also describes as “children”.

For a long time, research on the development of adolescents has mostly focused on risky or problematic behaviors and on how to avoid or prevent them. During the past three decades however, a different and more positive view of adolescents has started to emerge. This perspective is called positive youth development (PYD) and it focuses on the strength and resources of young people and on how to strengthen them so that young people can experience optimal development and well-being.

Prior to the development of the PYD perspective, the deficit-based view of human development was dominantly used, especially regarding adolescent development (Lerner, 2004). Young people were seen as ‘problems to be managed’ (Roth et al., 1998), since the assumption was that children are “broken” or in danger of becoming broken (Benson, 2003). Thus, when a young person exhibited positive development, it would be explained as the

absence of negative or undesirable behavior. For example, an adolescent who was identified as having behaviors that indicate positive development was explained as someone who ‘was not taking drugs or drinking alcohol, not engaging in unsafe sex, and not participating in crime or violence’ (Lerner et al., 2005, p. 21).

The vocabulary used to describe young people’s problematic tendencies is much more developed than the one used to describe their positive assets. Lerner (2004) points out that even though it is understandable for people to be pleased with the decreased rates of drug abuse and teenage crimes, there are relatively few indicators of desirable, healthy, and valued behavior used regarding adolescents. In the deficit reduction paradigm, researchers and practitioners are more focused on naming and reducing the occurrence of environmental risks such as family violence and poverty, and health compromising behavior like substance abuse, teenage pregnancy to name a few (Benson, 2007).

This view of well-being mimics the medical approach to health, where health (adolescent health) is understood as the absence of symptoms, diseases, or health-compromising behaviors (Benson, 2007). However, it is important to understand that prevention is not promotion, meaning that working on preventing or reducing negative behaviors/outcomes in youth and adolescents is not necessarily promoting any positive ones. The field of positive youth development is remedying this. It especially focuses on expanding the concept of health to include skills, behaviors and competencies that are necessary to succeed in employment, education, and social life (Benson, 2007). A strength-based approach where the strengths of youth and adolescents are put in focus can protect against negative outcomes (e.g., mental health problems) and at the same time enhance well-being and address the holistic development of young people (Wiiium et al., 2021).



## **The Theoretical Perspective of Positive Youth Development**

Positive youth development (PYD) is a theoretical framework that focuses on the positive assets or resources of young people. The PYD perspective emphasizes that every young person has strengths and thus, a potential for successful, healthy development (Lerner, 2002). PYD as a theory started to develop in the early 1990's and the modern PYD framework evolved in the context of developmental systems theoretical models that state that human development is promoted from dynamic and systemic relations among multiple levels of organization that constitute the human development system (Lerner, 1998). The term “*youth development*” could be found in literature on juvenile delinquency as early as 1947 (Benson et al., 2006). There was a suggestion that the cause of delinquency in children included environmental factors and that the well-established models of “fixing the child” were insufficient (Benson et al., 2006). Later in 1970, agencies dealing with delinquency prepared a delinquency prevention program with the focus of “what keeps good kids on track” (Benson et al., 2006, p. 898) opposed to why they get in trouble. The answer to the question of why some youth succeed had four components: a sense of competence, a sense of usefulness, a sense of belonging, and a sense of power (U.S. Department of Health and Human Services Administration for Children and Families, 1996, p. 4).

In the PYD framework, scholars, practitioners, and policy makers view youth as resources to be developed (Lerner, 2005). Concepts such as developmental assets, moral development, well-being, civic engagement, and thriving are emphasized regarding youth. The idea behind these concepts is that every young person has the capacity for positive development (Lerner, 2005). The PYD perspective has an interactive view of positive development and views youth as being both producers and products of their interactions with their environments or contexts (Lerner et al., 2011). This framework focuses on promoting optimal development in all youth and not just those considered to be at risk. As a result of its

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interactive nature PYD focuses on five contexts where youth can experience different resources. The five contexts are: individual (youth themselves), family, social (their interaction and relationships with people around them), school, and community.

Developmental systems theory emphasizes the importance of plasticity in human development, meaning that there is potential for systemic change throughout an individual's development. This change occurs because of the mutually influential and bidirectional relationship between the developing person and his/her biological, psychological, ecological, and historical environment (Lerner et al., 2005). The regulation of the bidirectional relationship between the developing person and their context can instantiate plasticity, and when this interaction (individual  $\longleftrightarrow$  context) is mutually beneficial one can say that there exist adaptive developmental regulations (Brandtstädter, 1998). In his action theory of development, Brandtstädter (1998), emphasizes that adolescents can make intentional contribution to their development by learning from the feedbacks they receive from their contexts. These feedbacks can help and guide them in the choices they make (e.g., selection of positive goals), and in applying goal relevant means to reach their target goals. When plasticity and adaptive developmental regulations are combined, there will be an alignment between the assets of an individual and the assets present in their ecology (Bronfenbrenner, 2005), which should result in the promotion of positive human development and thriving (Lerner et al., 2005).

During the early days of PYD, the absence of vocabulary that can be used to assess and objectively measure positive developmental outcomes in adolescents was an obstacle. However, based on research, practice, and several literature reviews of PYD, researchers were able to develop terms that can be used as indicators of PYD. The five Cs of PYD are such indicators of positive developmental outcomes in youth.

### ***The Five Cs of Positive Youth Development***

The five Cs of PYD have been described as ‘... terms that constitute latent constructs that may capture the essence of to-be-developed indicators of the numerous mental, behavioral, and social relational elements that could comprise PYD’ (Lerner et al., 2005, p 22). Little (1993) first proposed four of the five Cs of PYD, and researchers later came up with a fifth C, *Caring*. The five Cs are: *Competence* (positive view of one’s actions), *Confidence* (a sense of positive self-worth and self-efficacy), *Connection* (positive bonds with people and institutions), *Character* (respect for societal and cultural rules), and *Caring* (sense of sympathy and empathy for others) (Lerner, 2004; Roth & Brooks-Gunn, 2003b). The working definition of the five Cs can be found in table 1. These five Cs have been linked to positive outcomes in youth and have been used by practitioners of PYD in relation to both youth that participate in developmental programs and their parents (Roth & Brooks-Gunn, 2003b). Reviews from research and practice agreed on the importance of the five Cs in understanding the goals and outcomes of community-based youth programs (Lerner et al., 2005). Furthermore, Little and Lerner have suggested that when young people exhibit the five Cs then there emerges a sixth C, *Contribution*. Young people who present behaviors indicative of the five Cs are more likely to contribute positively to themselves, their family and community (Lerner, 2004).

The core hypothesis of the five Cs model is that the alignment of internal strengths of youth (e.g., having hope for the future, academic engagement), with the external resources found in their ecological contexts (e.g., adult support in family, school, or community), will produce positive development (Su et al., 2017). Together the internal strengths of individuals and the external resources in their contexts can be referred to as developmental assets.

**Table 1**

*Working Definitions of the Five Cs of Positive Youth Development*

The five Cs	Definition
Competence	Positive view of one’s actions in domain specific areas including social, academic, cognitive, and vocational. Social competence pertains to interpersonal skills (e.g., conflict resolution). Cognitive competence pertains to cognitive abilities (e.g., decision making). School grades, attendance, and test scores are part of academic competence. Vocational competence involves work habits and career choice explorations.
Confidence	An internal sense of overall positive self-worth and self-efficacy; one’s global self-regard, as opposed to domain specific beliefs.
Connection	Positive bonds with people and institutions that are reflected in bidirectional exchanges between the individual and peers, family, school, and community in which both parties contribute to the relationship.
Character	Respect for societal and cultural rules, possession of standards for correct behaviors, a sense of right and wrong (morality), and integrity.
Caring	A sense of sympathy and empathy for others.

SOURCE: Lerner (2004) and Roth & Brooks-Gunn (2003b).

***Developmental Assets***

The concept of developmental assets was first proposed by Benson (1990). Like PYD, it is grounded in a metatheory known as developmental systems theory (Ford & Lerner, 1992; Gottlieb, 1997), and positions human development in relational and contextual space as opposed to earlier developmental theories that divide development into dichotomies such as nature-nurture, biology-culture, and individual-society (Lerner, 1998; Overton, 1998). The developing person, their context, and the ever-changing interaction between the two is central to the theory of developmental assets. Positive development will likely occur when an “active,

engaged and competent person” interacts with “receptive supportive and nurturing” environments/contexts (Benson, 2007, p. 38). The merging of these internal and external assets will result in thriving and reduction of health compromising behaviors in the individual (Benson, 2007).

In 1990, Benson and the Search Institute in Minneapolis, U.S.A. came up with 40 developmental assets, 20 internal assets and 20 external assets (Benson, 1990, 2007) that were hypothesized to be what young people need to develop in a healthy way (Wiiium et al., 2021). Internal assets are the personal skills, commitments, and values young people need to make good choices, take responsibility for their own lives, and be independent and fulfilled (Benson, 2007). The internal assets have four categories, such as: (a) Commitment to learning (e.g., achievement motivation, and school engagement), (b) Positive values (e.g., integrity and responsibility), (c) Social competencies (e.g., planning and decision making, and resistance skills), and (d) Positive identity (e.g., self-esteem and sense of purpose).

External assets on the other hand are the supports, opportunities, and relationships young people need across all aspects of their lives (Benson, 2007). They consist of four categories as well: (a) Support (e.g., family support and caring school climate), (b) Empowerment (e.g., how the community values youth and the community's perception of youth as resources), (c) Boundaries and expectations (e.g., family boundaries and significant others' expectations of young people), and (d) Constructive use of time (e.g., creative activities and youth programs) (Benson, 2007).

A broader list of all the 40 developmental assets and their definition can be found in table 2 and table 3 (Benson, 2007). The eight developmental asset categories comprise of developmental assets in five different contexts: personal, social, family, school, and community. According to the PYD perspective, the mutually beneficial relations between individual strengths and contextual assets foster PYD (Lerner et al., 2015).

Developmental success is dynamically related to the presence of both internal and external assets (Benson, 2007). Eccles and Gootman (2002), stated that adolescents with more personal and social assets have a greater chance of both current well-being and future success. The assumption is that the vertical pile-up (experiencing more assets in an asset category) and horizontal stacking (experiencing more assets across categories) of assets will promote positive youth development and prevent negative development (Wiiium et al., 2021). The developmental assets framework was formulated based on youth samples living in the U.S. Nevertheless, the theoretical assumption was that the assets would be applicable universally across different communities, ethnicities, and cultures. In agreement with this assumption several researchers (Scales, 2011; Scales et al., 2016; Wiiium et al., 2018) have found their presence within non-U.S. samples.

Evidence has been found to support this assumption of vertical pile-up and horizontal stacking of assets. As assets increase in numbers, great reductions were seen in several risk behaviors such as alcohol use, tobacco use, illicit drug use, antisocial behavior, violence, school failure, sexual activity, attempted suicide, driving and alcohol use, and gambling (Benson, 2007). Furthermore, the cumulative effect of developmental assets has been found to predict thriving behaviors such as increases in academic achievement, leadership, and prosocial behavior (Adams et al., 2018; Benson, 2007; Beck & Wiiium, 2019). This alignment between the internal and external developmental assets is reflected in Bronfenbrenner's ecological model of human development. The role of environment (context) is central in the development of assets and this model explains how environment affects the development of individuals. The next section will focus on this model.

**Table 2**

*The Framework of Developmental Assets: Internal Assets*

Category	Asset and definition
<p><b>Commitment to Learning:</b></p> <p>Young people need a sense of the lasting importance of learning and a belief in their own abilities.</p>	<ul style="list-style-type: none"> <li>• <i>Achievement motivation</i> - Young person is motivated to do well in school.</li> <li>• <i>School engagement</i> - Young person is actively engaged in learning.</li> <li>• <i>Homework</i>- Young person reports doing at least one hour of homework every school day.</li> <li>• <i>Bonding to school</i> - Young person cares about their school.</li> <li>• <i>Reading for pleasure</i> - Young person reads for pleasure three or more hours per week.</li> </ul>
<p><b>Positive Values:</b></p> <p>Young people need to develop strong guiding values or principles to help them make healthy life choices.</p>	<ul style="list-style-type: none"> <li>• <i>Caring</i> - Young person places high value on helping other people.</li> <li>• <i>Equality and social justice</i> - Young person places a high value on promoting equality and reducing hunger and poverty.</li> <li>• <i>Integrity</i> - Young person acts on convictions and stands up for their beliefs.</li> <li>• <i>Honesty</i> - Young person “tells the truth even when it is not easy”.</li> <li>• <i>Responsibility</i> - Young person accepts and takes personal responsibility.</li> <li>• <i>Restraint</i> - Young person believes it is important not to be sexually active or to use alcohol or other drugs.</li> </ul>
<p><b>Social Competencies:</b></p> <p>Young people need the skills to interact effectively with others, to make difficult decisions, and to cope with new situations.</p>	<ul style="list-style-type: none"> <li>• <i>Planning and decision-making</i> - Young person knows how to plan ahead and make choices.</li> <li>• <i>Interpersonal competence</i> - Young person has empathy, sensitivity, and friendship skills.</li> <li>• <i>Cultural competence</i> - Young person has knowledge of and comfort with people of different cultural/racial/ethnic backgrounds.</li> <li>• <i>Resistance skills</i> - Young person can resist negative peer pressure and dangerous situations.</li> <li>• <i>Peaceful conflict resolution</i> - Young person seeks to resolve conflict nonviolently.</li> </ul>
<p><b>Positive Identity:</b></p> <p>Young people need to believe in their own self-worth and to feel that they have control over the things that happen to them.</p>	<ul style="list-style-type: none"> <li>• <i>Personal power</i> - Young person feels they have control over “things that happen to me”.</li> <li>• <i>Self-esteem</i> - Young person reports having a high self-esteem.</li> <li>• <i>Sense of purpose</i> - Young person reports that “my life has a purpose”.</li> <li>• <i>Positive view of personal future</i> - Young person is optimistic about their personal future.</li> </ul>

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**Table 3**

*The Framework of Developmental Assets: External Assets*

Category	Asset and definition
<p><b>Support:</b></p> <p>Young people need to be surrounded by people who love, care for, appreciate, and accept them.</p>	<ul style="list-style-type: none"> <li>• <b>Family support</b> - Family life provides high levels of love and support.</li> <li>• <b>Positive family communication</b> - Young person and their parent(s) communicate positively, and young person is willing to seek parent(s) advice and counsel.</li> <li>• <b>Other adult relationships</b> - Young person receives support from three or more non-parent adults.</li> <li>• <b>Caring neighborhood</b> - Young person experiences caring neighbors.</li> <li>• <b>Caring school climate</b> - School provides a caring, encouraging environment.</li> <li>• <b>Parent involvement in schooling</b> - Parent(s) are actively involved in helping young person succeed in school.</li> </ul>
<p><b>Empowerment:</b></p> <p>Young people need to feel valued and valuable. This happens when youth feel safe and respected.</p>	<ul style="list-style-type: none"> <li>• <b>Community values youth</b> - Young person perceives that, adults in the community value youth.</li> <li>• <b>Youth as resources</b> - Young people are given useful roles in the community.</li> <li>• <b>Service to others</b> - Young person serves in the community one hour or more per week.</li> <li>• <b>Safety</b> - Young person feels safe at home, school, and in the neighborhood.</li> </ul>
<p><b>Boundaries and Expectations:</b></p> <p>Young people need clear rules, consistent consequences for breaking rules, and encouragement to do their best.</p>	<ul style="list-style-type: none"> <li>• <b>Family boundaries</b> - Family has clear rules and consequences and monitors the young person's whereabouts.</li> <li>• <b>School boundaries</b> - School provides clear rules and consequences.</li> <li>• <b>Neighborhood boundaries</b> - Neighbors take responsibility for monitoring young people's behavior.</li> <li>• <b>Adult role models</b> - Parent(s) and other adults model positive, responsible behavior.</li> <li>• <b>Positive peer influence</b> - Young person's best friends model responsible behavior.</li> <li>• <b>High expectations</b> - Both parent(s) and teachers encourage the young person to do well.</li> </ul>
<p><b>Constructive Use of Time:</b></p> <p>Young people need opportunities - outside of school - to learn and develop new skills and interests with other youth and adults.</p>	<ul style="list-style-type: none"> <li>• <b>Creative activities</b> - Young person spends three or more hours per week in lessons or practice in music, theater, or other arts.</li> <li>• <b>Youth programs</b> - Young person spends three or more hours per week in sports, clubs, or organizations at school and/or in community organizations.</li> <li>• <b>Religious community</b> - Young person spends one or more hours per week in activities in a religious institution.</li> <li>• <b>Time at home</b> - Young person is out with friends "with nothing special to do" two or fewer nights per week.</li> </ul>

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***Bronfenbrenner's (1979) Ecological Model of Human Development***

As one of the core developmental systems theoretical models, Bronfenbrenner's (1979) ecological model of human development states that individuals are always in dynamic interactions with their environments. Bronfenbrenner's (1979) framework consists of five systems: microsystem, mesosystem, exosystem, macrosystem and chronosystem (Figure 1). These systems consist of different environments that the developing individual might encounter, directly or indirectly. The model shows how the events and changes in the individual's life can affect the individual's development and the other systems in the framework (Helsedirektoratet, 2015). The first level in the model is the 'Individual'. The individual is always in contact with his/her environment. The first system is the microsystem, and it consists of the individual's closest environments such as family, friends, school, neighbors (Bronfenbrenner & Morris, 2006). This system is the closest to the individual and it affects his/her development more than the other systems. In interaction with the microsystem the individual is socialized, learns, and develops attitudes and values that are important in the environment they live in.

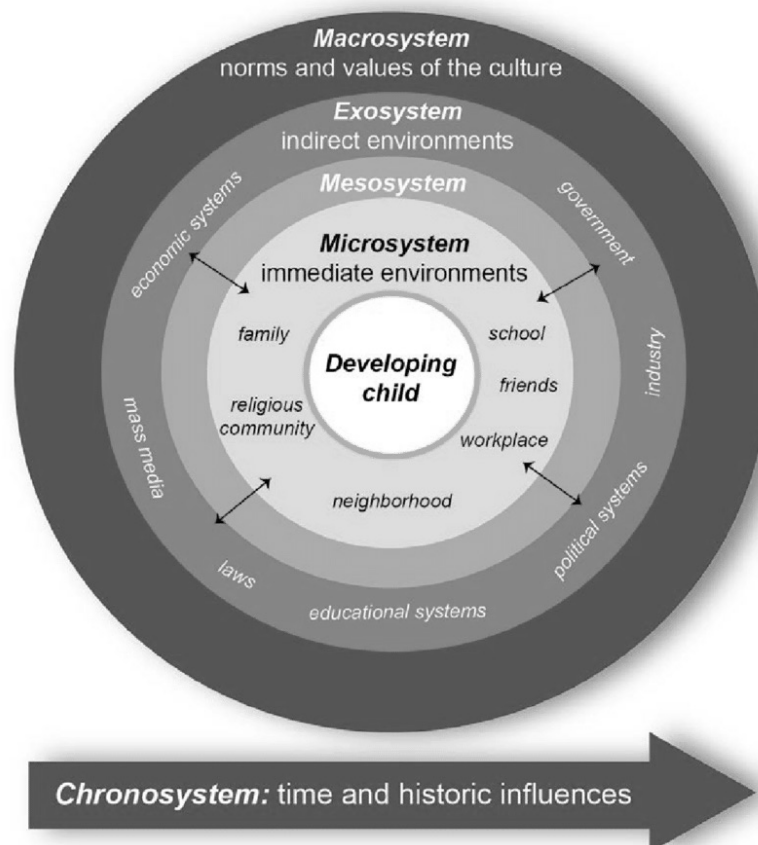
The next system is the mesosystem, and it consists of two or more microsystems that interact with each other (Bronfenbrenner & Morris, 2006). Some examples of such interactions could be the relationship between school and parents, interaction of parents with adolescent's friends and participation of adolescents in extracurricular activities. Following the mesosystem, the exosystem encompasses of processes in different settings that can affect the individual. Examples of such processes can be a parent's place of work, sibling's friends, and socio-economic status (Bronfenbrenner & Morris, 2006). The adolescent does not necessarily have to be in direct contact with these environments and situations, nevertheless they can all have an indirect effect on his/her development and access to resources.

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The system that follows the exosystem is the macrosystem. The macrosystem consists of the cultural context of the individual, such as values, customs, beliefs, and laws (Bronfenbrenner & Morris, 2006). This is the biggest system and the values and beliefs of the bigger society concerning youth and their development will play a role in the opportunities and resources that youth get access to. The final level of Bronfenbrenner's ecological systems theory is known as the chronosystem. This system consists of all the environmental changes that occur over the lifetime of the individual which influence development, including major life transitions (e.g., migration), and historical events (e.g., war, natural disaster, pandemic) (Bronfenbrenner & Morris, 2006).

### Figure 1

*Bronfenbrenner's ecological model of human development (Source: Nicholson & Dominguez-Pareto (2020))*



Bronfenbrenner's model demonstrates the interactive nature of human development. The developing individual has his/her own internal resources/assets and in interactions with the environments and contexts they encounter, these assets can either be promoted or inhibited. The availability of developmental assets in the different contexts will certainly differ and this will affect the individual's access to external assets (Benson, 2007).

Communities have a great role to play in creating an environment where youth are valued and strengthened. The way a community views its youth, and their development will reflect in its policies and in the opportunities, it provides to its youth.

This paper is based on reported developmental assets of adolescents at home, school, neighborhood, and community and will focus on the importance of developmental assets in the five Cs of PYD. Thus, the focus will be on the individual and their interactions with the micro- and mesosystems around them. Research has been carried out to examine the association between developmental assets and developmental outcomes (e.g., the five Cs) and the next sections will review some of these studies in the international context and in the Norwegian context.

### **Literature Review**

Lerner and colleagues (2005) have conducted a longitudinal research, called the 4-H Study of PYD. The study surveyed over 7000 adolescents (Grades 5-12) across 42 states in the United States of America (Lerner et al., 2013). The purpose of the study was to identify individual and ecological base for positive development among adolescents (Lerner et al., 2005). Results from the study indicate that higher levels of developmental assets in adolescents are related to higher reports in academic achievement, better physical health, resilience, and lower levels of risk behavior (Reininger et al., 2003; Scales et al., 2003). Developmental assets have also been found to be predictive of behavioral indicators of thriving, such as school success, valuing diversity, maintaining good health, helping others,

Positive Youth Development: Developmental Assets and the Five Cs in Norwegian Youth exhibiting leadership, delayed gratification, resisting danger, and overcoming adversity among American youth (Benson, 2007).

Another survey called “*Me and My World*” conducted by Search Institute investigated developmental assets in 4<sup>th</sup>-6<sup>th</sup> graders (Benson et al., 2011). This survey followed the same concept as the 4-H Study of PYD and student were asked to report their experience of the 40 developmental assets. The survey was administered in 2008 and it comprised of 6927 4<sup>th</sup>-6<sup>th</sup> graders from 10 U.S. states (Benson et al., 2011). According to the number of assets experienced, the results were grouped in four levels, poor (0–10 assets), average (11–20 assets), above-average (21–30 assets), or asset-rich (31–40 assets). The results showed that an increased number of assets was related to better developmental outcomes in the students. In general student with the two highest levels of assets do better than the students with average level of assets, and those with average level of assets do better than those with the lowest levels of assets (Benson et al., 2011). Due to the young age of the students, not many risky behaviors were reported, nevertheless, lower numbers of assets are associated to a higher likelihood of risky behaviors. The students with the highest level of assets were found to be better off than those with low levels of assets when it comes to aggression and sadness (Benson et al., 2011). The results of the “*Me and My World*” survey show consistent outcomes with developmental assets measures found among older youth (6<sup>th</sup>-12<sup>th</sup> graders), where higher number of reported assets is associated with significantly better outcomes (Benson et al., 2011).

A similar study, “The National Promises Study” investigated the presence of “the five promises” in a national sample of 2016 adolescents (age 12-17) and their parents (n = 2016). The five promises are (1) caring adults, (2) safe places and constructive use of time, (3) a healthy start and healthy development, (4) effective education for marketable skills and lifelong learning, and (5) opportunities to make a difference through helping others. They are

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assets that the “America’s Promise Alliance” advocates that youth and children should have or experience, and they are parsimonious with PYD principles and Search Institute’s developmental assets (Scales et al., 2008). A combination of the adolescents’ and their parents’ scores were used to measure the experience of the promises in the adolescents. The results of the study indicated that adolescents that had four-to-five of the five promises had better scores in different academic, emotional, psychological, and social aspects (Scales et al., 2008). Consistent with the idea of cumulative effect of developmental assets (Benson, 2007), this study showed that adolescents with four-to-five of the five promises reported better outcomes than those with two-to-three promises and those with two-to-three of the promises tended to do better than those with one or none of the five promises (Scales et al., 2008).

The developmental assets framework has been used to assess several thriving indicators and risk behaviors. Research has shown that the cumulative nature of developmental assets predicts thriving behavior (Benson, 2007). As assets increase in number, reduction in risk behaviors such as alcohol and drug use, antisocial behavior, violence, school failure, gambling and sexual activity were observed. At the same time increased number of assets predicted increase in thriving behaviors such as academic achievement, prosocial behavior, leadership, delayed gratification, and affirmation of diversity (Benson, 2007). Studies have pointed out that developmental assets are strongly related to positive outcome both at the time of the study and several years later. Developmental assets were two to four times more likely than demographic variables to predict thriving, risk behaviors and academic engagement (Roehlkepartain et al., 2003).

Further research on thriving in adolescents mentions the concept of “sparks”. “Sparks are passions for a self-identified interest, skill, or capacity that metaphorically lights a fire in an adolescent’s life” (Scales et al., 2010, p.264). Sparks provide adolescents with intrinsic motivation, direction, and purpose, and if nurtured and supported by the adolescents and their

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context then they can result in thriving, creating a secure and confident individual. In an American sample of 1817 adolescents (age 15, 49% female), Scales and colleagues (2010) investigated the presence of three developmental strengths (i.e., sparks, relational opportunities, and empowerment). This survey focused on the adolescents' experience of sparks, the opportunities they are provided to experience and develop these sparks, and their perception of being empowered.

In the United States, the age 15 is a critical transition time (Scales et al., 2010). At this age, adolescents are starting high-school and need to adapt both socially and academically. They start exploring their beliefs and values and are at the same time exposed to risky behaviors, such as alcohol and drug use, sexual activity, and violence (Scales et al., 2010). Research has shown that developmental assets tend to decrease over the middle school years (ca. 6<sup>th</sup> to 8<sup>th</sup> grade) (Roehlkepartain et al., 2003; Scales et al., 2006), thus leaving these 15 years old adolescents vulnerable. The results of this survey revealed that only 9% of the adolescents experienced high levels of all three developmental strengths, while 21% experienced two strengths. However, 28% did not experience any of the developmental strengths at a high level. The accumulation of the three developmental strengths in adolescents was found to be strongly associated with several positive outcomes such as better academic, psychological, social, and behavioral well-being (Scales et al., 2010). The three developmental strengths were able to explain these positive outcomes more strongly than the demographic factors (gender, ethnicity, and socioeconomic status) (Scales et al., 2010). Sparks can thus have protective effect during this time in an adolescent's life. Identifying and nurturing their sparks in supportive, nurturing, and empowering contexts, can help lead adolescents towards a thriving path and will result in both personal and societal well-being (Scales et al., 2010).

Outside of the US context, Wiium (2017) examined the experience of developmental assets and their relationship with thriving indicators in a cross-sectional survey of 483 Ghanaian first year university students. The age range of the participants was 16-28 (61% female). The results indicated that over 70% of the participants experienced each one of the four internal developmental assets, while less than 40% of the participants experienced all the external developmental assets. There were seven thriving indicators used in the survey, such as *succeeds in school, helps others, values diversity, maintains good health, exhibit good leadership, delays gratification, and overcomes adversity*. Five thriving indicators were reported by at least 56% of the participants, while only 1.4% of the participants reported all seven. The regression analysis revealed that, internal assets predicted 21.7% of the variance in thriving scores, meanwhile the external assets only explained 1% of the variance (Wiium, 2017). Even though the developmental assets were experienced at different rates in the participants, this survey to some degree showed that there is association between developmental assets and indicators of thriving in a sample outside of the US.

### **The Norwegian Context**

Most of the research on PYD and developmental assets is based in the U.S., nevertheless some research has been done in the Norwegian context as well. Holsen and colleagues (2017), studied the applicability of Lerner and colleagues' five Cs model of PYD in Norwegian students. They compared data between 1195 Norwegian upper secondary school students (age 16 to 19) and 839 participants (average age 16.81) who took part in the 4-H Study of PYD in the U.S. They were interested in measuring the five Cs and investigated to see how they relate to indicators of positive and negative development among Norwegian youth. They were specifically interested in three variables (Youth Empowerment, Life Satisfaction, and Anxiety/Depressive symptoms) that were linked to thriving in "The Dream School intervention" in Norway (Holsen et al., 2017). For the U.S. sample, a 34-item short

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measure of the five Cs of PYD was used to collect data. While for the Norwegian sample, items that were not previously validated in Norway were translated and checked for quality before administering.

The results of the study suggested that the PYD measures used in both the Norwegian and the American samples measured qualitatively similar constructs, except for “Character”. The residual “Character” was divided into two factors (social conscience items and personal values items) in the Norwegian sample. Thus, the study found a variance in what the five Cs measured between the Norwegian and the American participants (Holsen et al., 2017). The correlations analysis indicated that some of the five Cs (Connection, Confidence, and Competence) were negatively correlated with “Anxiety/Depression symptoms” and positively correlated with “Empowerment” and “Life Satisfaction”. One of the Cs, “Caring” showed weak but positive correlation with “Anxiety/Depression symptoms”. PYD was found to have positive correlation with only “Empowerment”. Similar results were found in earlier studies concerning the positive correlation of “Caring” with “Anxiety/Depression symptoms”. It was speculated that “Caring” may represent “emotional hypersensitivity, or an anxiety-producing over concern for (or about) others’ thoughts and feelings” (Geldhof et al., 2014, p. 944).

Another study that was carried out in Norway, investigated the importance of developmental assets in the mental health of youth (Wiiium et al., 2021). This study explored the role of developmental assets on poor mental health indicators (prolonged sadness and suicide attempt) in a survey of 591 Norwegian upper secondary school students (age 15 – 19, 55% female). Lower scores on the developmental assets were anticipated to be associated with higher probability of prolonged sadness and suicide attempts, resulting in negative association between the assets and the poor mental health indicators (Wiiium et al., 2021). The analysis reflected that apart from “Constructive use of time”, higher levels of developmental asset categories were recorded in participants who did not indicate prolonged sadness



compared to participants who did. Further logistic regression analysis revealed that only “Positive identity” and “Empowerment” remained significant predictors of prolonged sadness. However, after controlling for demographic factors, only “Positive identity” significantly predicted prolonged sadness (Wiiium et al., 2021). Logistic regression analysis of the eight developmental asset categories and suicide attempt did not result in a significant association. For the five environment asset categories, the t-test results indicated that youth who experience more of these assets were less likely to report prolonged sadness or attempt suicide. But after controlling for demographic factors, the logistic regression analysis revealed that only “Personal” asset was significantly associated to prolonged sadness. The findings of this study confirmed that the cumulative effect of assets not only results in positive outcomes in youth to some extent, but also have protective effect against problems (Wiiium et al., 2021).

### **Aims, Research Questions and Hypotheses**

Early research on the topic of developmental asset framework and PYD has mainly focused on U.S. samples. Within the U.S. sample it has been documented that “the more assets, the better” principle, functions similarly across six different subgroups of young people: African- American, Asian-American, American Indian, Latino/Latina, white, and multiracial (Benson, 2007). In recent times the asset framework has been gaining ground globally outside of the U.S. and it has proven to be sensitive to cultural differences, for example in Albania, Bangladesh, Japan, Lebanon, and the Philippines (Scales, 2011), Italy, Norway, and Turkey (Wiiium et al., 2018) and Ghana (Wiiium, 2017).

The objective of this study is to investigate the importance of the eight asset categories and the five environment asset categories in Norwegian youth and to observe how the experienced levels of assets are associated with the five Cs of PYD. The internal and external assets are reflected in the five environment asset categories and their relationship is shown by broken lines in figure 2. The eight asset categories and the five environment asset categories

are expected to result in the five Cs of PYD, and these relationships are shown by the solid lines in figure 2. The following questions will be addressed in this study:

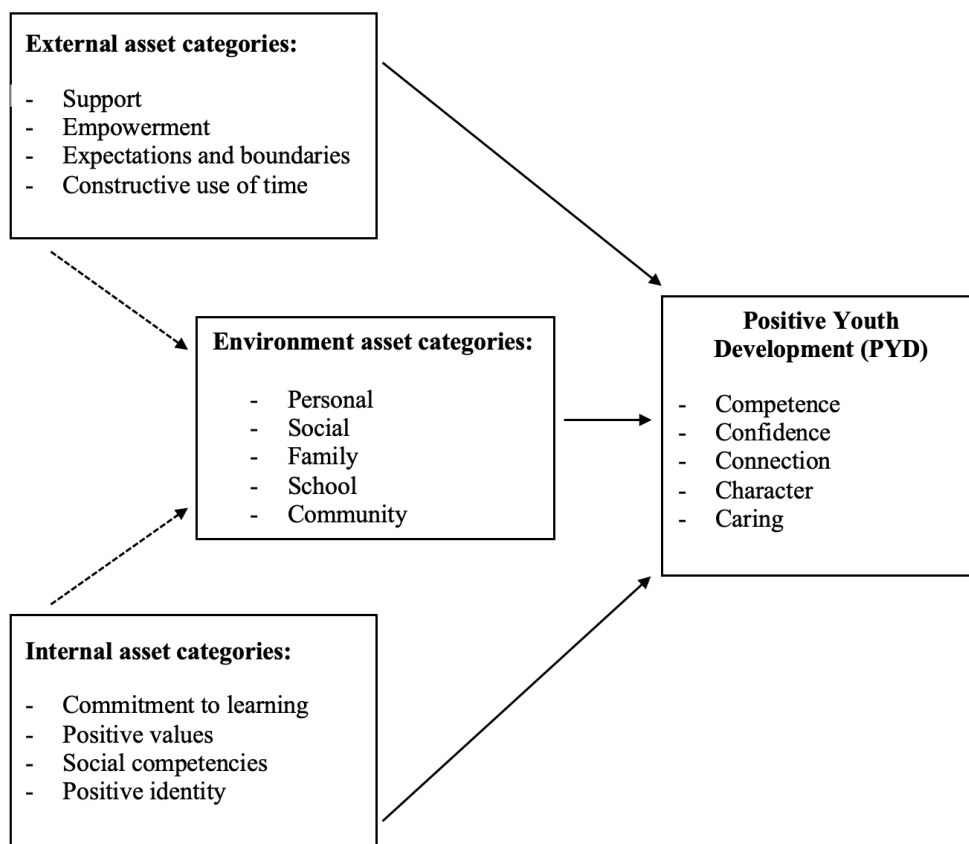
- How are the eight asset categories associated with the five Cs?
- How are the five environment asset categories associated with the five Cs?

The study hypotheses are as follows:

1. Higher levels of the eight asset categories will be associated with the five Cs of PYD and
2. Higher levels of the five environment asset categories will be associated with the five Cs of PYD. (See figure 2).

## Figure 2

*Conceptual model of the eight asset categories, the five environment asset categories and the five Cs of PYD*



## **Method**

### **Sample**

This study is based on a dataset collected in 2019 as part of a bigger international project on positive youth development (Wiium & Dimitrova, 2019). A cross-sectional sample of upper-secondary school students was collected from schools in eastern and western parts of Norway. 220 students (aged 16-20) from four different upper-secondary schools participated in the survey, of which 115 (52.3%) were male and 105 (47.7%) were female. More than half of the participants reported that their parents' highest level of education was university or college level, where 55% reported a father with university or college level education and 68.9% reported a mother with university or college level education.

### **Study Design**

An electronic questionnaire developed in SurveyXact was used. The questionnaire contained demographic questions about age, gender, and parents' highest educational level (Appendix A), a Developmental Assets Profile consisting of 58 items that reflect youth's experience of developmental assets in five contexts (Search Institute and Benson, 2007) (Appendix B), and a short version of a PYD questionnaire consisting of 34 questions that reflect the five Cs (Geldhof et al., 2014) (Appendix C). The questions were then translated from English to Norwegian by Semantix Translations Norway AS, a professional translation and interpretation company.

### **Measurements**

#### ***Demographic Data***

The demographic data that were collected were age, gender (male=1 or female=2), father's and mother's highest level of education (five levels: i.e., no education, primary school, high school, technical or vocational school, and university). These data were used as

control variables to ensure that influence of the study variables or predictors were not influenced by the demographic variables.

### ***Developmental Assets***

The “Developmental Assets Profile” (DAP) developed in collaboration between the Search Institute and Benson (2007) was used. 58 items that reflect Benson’s 40 developmental assets were used to investigate the experience of the eight developmental asset categories (i.e., four external asset categories and four internal asset categories) in five contexts (*Personal, Social, Family, School, and Community*). Examples of questions that measured the four external asset categories (*Support, Empowerment, Expectations & boundaries, and Constructive use of time*) are: “I have a family that gives me love and support”, “I feel valued and appreciated by others”, “I have lecturers/teachers who urge me to develop and achieve”, and “I am involved in creative things such as music, theater or other arts” respectively. Examples of questions that measured the four internal asset categories (*Commitment to learning, Positive values, Social competencies, and Positive identity*) are: “I enjoy reading or being read to”, “I think it is important to help other people”, “I accept people who are different from me”, and “I find good ways to deal with things that are hard in my life” respectively.

Of the 58 items in the questionnaire, 7 items measured for “Support”, 6 items measured for “Empowerment”, 9 items measured for “Expectations & boundaries”, 4 items measured for “Constructive use of time”, 7 items measured for “Commitment to learning”, 11 items measured for “Positive values”, 8 items measured for “Social competencies”, and 6 items measured for “Positive identity”. To investigate the participants’ experience of the developmental assets in different contexts the five environment asset categories (*Personal, Social, Family, School, and Community*) were measured through the same questionnaire as the eight asset categories. 13 items were used to measure “Personal” asset (e.g., “I take

Positive Youth Development: Developmental Assets and the Five Cs in Norwegian Youth responsibility for what I do.”), 13 items for “Social” asset (e.g., “I have support from adults other than my parents.”), 10 items for “Family” asset (e.g., “I have parents/guardians who are good at talking to me about things.”), 10 items for “School” asset (e.g., “I am trying to learn new things.”), and 12 items for “Community” asset (e.g., “I have good neighbors who care about me.”). The questionnaire was designed so that the participants would indicate the degree of developmental assets (resources) they experienced. The participants were presented with a four-point Likert scale: (1) Not at All or Rarely, (2) Somewhat or Sometimes, (3) Very or Often and (4) Extremely or Almost Always. Higher scores indicate higher experience of the assets.

To assess the internal consistency of the asset categories, reliability analyses were conducted. The Cronbach’s alpha for the eight asset categories were as follows: .83 for support, .84 for empowerment, .84 for expectations & boundaries, .52 for constructive use of time, .86 for commitment to learning, .82 for positive values, .82 for social competencies, and .84 for positive identity. For the five environment asset categories the Cronbach’s alpha values were .83 (Personal), .86 (Social), .89 (Family), .88 (School), and .80 (Community). The Cronbach’s alpha values found in this study reflected findings in earlier studies (e.g., Scales et al., 2000; Beck & Wium, 2019).

### ***The Five Cs of PYD***

To investigate the participants’ experience of positive development and well-being, a short version of the PYD questionnaire consisting of 34 questions was used (Geldhof et al., 2004). Examples of the questions are: “I do very well in my class work at school/university” measuring “Competence”, “I am very happy being the way I am” measuring “Confidence”, “I am a useful and important member of my family” measuring “Connection”, “Doing what I believe is right even if my friends make fun of me” measuring “Character”, and “When I see another person who is hurt or upset, I feel sorry for them” measuring “Caring”.

The responses were measured using a five-point Likert scale: (1) Strongly Disagree, (2) Disagree, (3) Neither agree nor Disagree, (4) Agree, and (5) Strongly Agree. A higher score indicated that a participant had a higher experience of the C in question. A reliability analysis of the five Cs resulted in the following Cronbach's alpha values: .88 for competence, .86 for confidence, .89 for connection, .93 for character and .85 for caring.

## **Procedure**

### ***Recruitment and Data Collection***

The principals of the selected schools were contacted via e-mail, with a request to participate in the study and an information letter about what the study entailed. After agreeing to participate, they were sent an informed consent form, developed according to NSD - Norwegian Centre for Research Data guidelines, which they were asked to sign and then send back (Appendix D). Five teachers from the four schools were then contacted via e-mail and received the same information as the principals and a link to the electronic questionnaire. The data collection was carried out in the classrooms, and it took around 30 minutes to complete. Before filling out the questionnaire the students read and signed an informed consent form developed for students (Appendix E). The data collection was conducted during May - August 2019.

### ***Statistical Analysis***

G\*Power 3 (Faul et al., 2009) was used to conduct a power analysis to determine the sample size that will allow for the assessment of meaningful associations and the detection of effect sizes (small, medium, or large). Using a two-tailed test with a max of 12 independent variables (i.e., the eight developmental asset categories and the four demographic variables [gender, age, father's education, and mother's education]), and an alpha value of 0.05, the results indicated that with a power of 0.80, sample sizes of 878, 127, and 61 were needed to detect effect sizes of 0.02 (small), 0.15 (medium), and 0.35 (large), respectively. Having a

Positive Youth Development: Developmental Assets and the Five Cs in Norwegian Youth study's sample size of 220 meant that medium to large effect sizes could be detected in the statistical analyses.

Statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS version 28). First a preliminary analysis was carried out to check for errors and missing values. All the asset categories and the environment asset categories items were checked to make sure that the response values were on a scale of 1 to 4. The same was done for the items measuring the five Cs of PYD to make sure that the response values were on a scale of 1 to 5. There were 0% missing values for gender whereas there were up to 14.5% missing values for a question on developmental assets. Missing values were handled using the pairwise function during analysis, which means that data from a participant was excluded if there were no values for the specific analysis to be performed (Pallant, 2016).

The parents' education levels were then reverse coded so that 1 = No education, 2 = Primary school, 3 = Secondary school, 4 = Technical/Vocational, and 5 = University or college and the responses that were originally registered as "Don't know" (6) and "Don't have" (7) were coded as "Missing". There were 10.5% missing values for father's education level and 9.6% missing values for mother's education level. Next a reliability analysis was conducted to check the internal validity of the items measuring the eight asset categories, the five environment asset categories and the five Cs of PYD. Afterwards variables were created for the scales that showed good internal reliability.

To look for patterns in the responses, a descriptive analysis of the demographic variables, the four external and the four internal asset categories, the five environment asset categories and the five Cs of PYD was carried out. The mean scores of the eight asset categories and the five environment asset categories provided in this analysis do not provide a clear idea of how many assets the participants reported. To find out how many assets were reported, composite variables that reflect the number of reported developmental assets were

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created and used in the analysis. To create the composite variables, the 4-point Likert scale was re-coded so that the answers (1) "Not at all or Rarely" and (2) "Somewhat or Sometimes" were re-coded as developmental asset not present = 0, and (3) "Very or Often" and (4) "Extremely or Almost always" were re-coded as developmental asset present = 1. This was done for both the eight asset categories (internal and external) and the five environment asset categories.

To investigate the direction and strength of the associations among all study variables a correlation analysis (Pearson product-moment correlation) was carried out between the eight asset categories, the five environment asset categories, the five Cs of PYD and the demographic variables. The demographic variables were included in this analysis to investigate if there were any correlations between them and the other variables in the dataset that could affect further analyses. To interpret the effect sizes Cohen's (1988) conventions were used, where a correlation coefficient of .10 is thought to represent weak or small association; a correlation coefficient of .30 is considered a moderate correlation; and a correlation coefficient of .50 or larger is thought to represent a strong or large correlation.

To assess the relationship of the independent variables (the eight asset categories and the five environment asset categories) with the dependent variable (the five Cs of PYD), regression analysis was performed, while the demographics were treated as control variables.



## Results

First the mean ( $M$ ) and standard deviation ( $SD$ ) for all the study variables were investigated. For the five Cs of PYD, the participants reported having the highest experience of “Caring” with a mean score of 4.29 and  $SD = .78$ , followed by “Character” ( $M = 3.94$ ,  $SD = .69$ ), “Connection” ( $M = 3.82$ ,  $SD = .77$ ), “Confidence” ( $M = 3.73$ ,  $SD = .97$ ) and “Competence” ( $M = 3.65$ ,  $SD = .86$ ), all on a scale of 1 to 5. For the eight asset categories “Positive values” was reported with the highest mean ( $M = 7.94$ ,  $SD = 2.44$ ), followed by “Expectations and boundaries” ( $M = 7.05$ ,  $SD = 1.90$ ), “Social competencies” ( $M = 6.45$ ,  $SD = 1.83$ ), “Empowerment” ( $M = 5.24$ ,  $SD = 1.27$ ), “Commitment to learning” ( $M = 5.10$ ,  $SD = 1.96$ ), “Support” ( $M = 4.97$ ,  $SD = 1.74$ ), “Positive identity” ( $M = 4.30$ ,  $SD = 1.83$ ), and with the lowest mean “Constructive use of time” ( $M = 1.58$ ,  $SD = 1.19$ ). For the five environment asset categories, “Social” had the highest mean ( $M = 10.40$ ,  $SD = 2.66$ ), followed by “Personal” ( $M = 9.38$ ,  $SD = 3.01$ ), “Family” ( $M = 8.17$ ,  $SD = 2.16$ ), “School” ( $M = 7.89$ ,  $SD = 2.43$ ), and “Community” ( $M = 6.80$ ,  $SD = 2.63$ ). (Table 4).

For the eight asset categories, “Empowerment” presented the highest percentage (62.3%) of all assets being present, while “Constructive use of time” presented the highest percentage (17.7%) of no assets being present. For “Support” 21.8% reported all 7 assets present and 3.6% reported no assets present. For “Empowerment” 62.3% reported all 6 assets present and 1.4% reported no assets present. For “Expectations & boundaries” 26.8% reported all 9 assets present and 0.9% reported no assets present. For “Constructive use of time” 10.9% reported all 4 assets present and 17.7% reported no assets present. For “Commitment to learning” 31.8% reported all 7 assets present and 4.5% reported no assets present. For “Positive values” 16.4% reported all 11 assets present and 0% reported no assets present. For “Social competencies” 42.7% reported all 8 assets present and .5% reported no

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assets present. For “Positive identity” 34.1% reported all 6 assets present and 5.9% reported no assets present.

In the case of the five environment asset categories, “Family” had the highest percentage of all assets being present with 35% reporting all 10 assets present and .9% reporting no assets present. For “School” 33.6% reported all 10 assets present and 1.8% reported no assets present. For “Social” 25% reported all 13 assets present and 0% reported no assets present. For “Personal” 12.7% reported all 13 assets present and .5% reported no assets present. For “Community” 5.5% reported all 12 assets present and 0% reported no assets present.

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Table 4. Descriptive data of studied variables

Variables	Questions	Interval	Mean ( <i>SD</i> )	All Assets Present (%)	Assets not present (%)
Age	How old are you?	16-20	17.30 ( <i>1.12</i> )	-	-
Gender	What is your gender? Male or Female	1-2	1.48 ( <i>.50</i> )	-	-
Father's education	What is the highest level of education of your father? University or college, technical/vocational, secondary school, primary school, no education	1-5	4.40 ( <i>.88</i> )	-	-
Mother's education	What is the highest level of education of your mother? University or college, technical/vocational, secondary school, primary school, no education	1-5	4.58 ( <i>.88</i> )	-	-
The eight asset categories					
Support (7 questions; <i>a</i> = .83)	E.g., "I have a family that gives me love and support."	0-7	4.97 ( <i>1.74</i> )	21.8%	3.6%
Empowerment (6 questions; <i>a</i> = .84)	E.g., "I feel valued and appreciated by others."	0-6	5.24 ( <i>1.27</i> )	62.3%	1.4%
Expectations & boundaries (9 questions; <i>a</i> = .84)	E.g., "I have lecturers/teachers who urge me to develop and achieve."	0-9	7.05 ( <i>1.90</i> )	26.8%	.9%
Constructive use of time (4 questions; <i>a</i> = .52)	E.g., "I am involved in creative things such as music, theater or other arts."	0-4	1.58 ( <i>1.19</i> )	10.9%	17.7%
Commitment to learning (7 questions; <i>a</i> = .86)	E.g., "I enjoy reading or being read to."	0-7	5.10 ( <i>1.96</i> )	31.8%	4.5%
Positive values (11 questions; <i>a</i> = .82)	E.g., "I think it is important to help other people."	1-11	7.94 ( <i>2.44</i> )	16.4%	0%
Social competencies (8 questions; <i>a</i> = .82)	E.g., "I accept people who are different from me."	0-8	6.45 ( <i>1.83</i> )	42.7%	.5%
Positive identity (6 questions; <i>a</i> = .84)	E.g., "I find good ways to deal with things that are hard in my life"	0-6	4.30 ( <i>1.83</i> )	34.1%	5.9%
The five environment asset categories					
Personal (13 questions; <i>a</i> = .83)	E.g., "I take responsibility for what I do."	0-13	9.38 ( <i>3.01</i> )	12.7%	.5%
Social (13 questions; <i>a</i> = .86)	E.g., "I have support from adults other than my parents."	2-13	10.40 ( <i>2.66</i> )	25%	0%
Family (10 questions; <i>a</i> = .89)	E.g., "I have parents/guardians who are good at talking to me about things."	0-10	8.17 ( <i>2.16</i> )	35%	.9%
School (10 questions; <i>a</i> = .88)	E.g., "I am trying to learn new things."	0-10	7.89 ( <i>2.43</i> )	33.6%	1.8%
Community (12 questions; <i>a</i> = .80)	E.g., "I have good neighbors who care about me."	1-12	6.80 ( <i>2.63</i> )	5.5%	0%
The five Cs in PYD					
Competence (6 questions; <i>a</i> = .88)	E.g., "I do very well in my class work at school/university."	1-5	3.65 ( <i>.86</i> )	-	-
Confidence (6 questions; <i>a</i> = .86)	E.g., "I am very happy being the way I am."	1-5	3.73 ( <i>.97</i> )	-	-
Connection (8 questions; <i>a</i> = .89)	E.g., "I am a useful and important member of my family."	1-5	3.82 ( <i>.77</i> )	-	-
Character (8 questions; <i>a</i> = .93)	E.g., "Doing what I believe is right even if my friends make fun of me."	1-5	3.94 ( <i>.69</i> )	-	-
Caring (6 questions; <i>a</i> = .85)	E.g., "When I see another person who is hurt or upset, I feel sorry for them."	1-5	4.29 ( <i>.78</i> )	-	-

Note. *a* = Cronbach's alpha, *SD* = Standard deviation

### **Correlation Analysis**

To check whether the five Cs of PYD are positively correlated with the developmental assets, a Pearson product-moment correlation was carried out. The demographic variables reported by participants were included in this analysis to examine whether there were correlations between these and the five Cs of PYD, the developmental assets and the environment assets. Results from the analysis are presented in Table 5.

#### ***Correlation Between Demographic Variables and the Eight Asset Categories***

“Gender” showed weak but significant negative correlation with “Positive identity”  $r = -.187, n = 220, p < .05$ , this indicated that the male participants experienced higher levels of this asset than the female participants. “Mother’s education” showed weak but positive correlations with “Support”  $r = .14, n = 198, p < .05$ , “Expectations and boundaries”  $r = .15, n = 198, p < .05$ , and “Positive identity”  $r = .19, n = 198, p < .01$ , indicating that as mothers’ education level increased the participants’ experience of the mentioned assets increased as well (Table 5).

#### ***Correlation Between Demographic Variables and the Five Environment Asset Categories***

“Mother’s education” showed weak but positive correlations with “Family”  $r = .21, n = 198, p < .01$ , and “Community” assets  $r = .17, n = 198, p < .05$ , indicating that high level of mothers’ education contributed to the participants’ experiencing developmental assets in the family and community settings (Table 5).

#### ***Correlation Between Demographic Variables and the Five Cs of PYD***

“Age” showed weak but significant negative correlation with “Connection”  $r = -.15, n = 188, p < .05$  which indicated lower experience of “Connection” in the older participants. “Gender” showed weak but significant negative correlation with “Competence”  $r = -.21, n = 194, p < .01$ , and “Confidence”  $r = -.18, n = 194, p < .05$ , this indicated that the male participants experienced higher levels of these developmental outcomes than the female

Positive Youth Development: Developmental Assets and the Five Cs in Norwegian Youth participants. “Gender” also showed weak but positive correlation with “Caring”  $r = .28, n = 191, p < .01$ , which indicated that the female participants showed higher experience of “Caring”. “Father’s education” showed weak positive correlations with “Competence”  $r = .20, n = 172, p < .05$ , and “Connection”  $r = .15, n = 169, p < .05$ . “Mother’s education” also showed weak but positive correlations with “Competence”  $r = .27, n = 174, p < .01$ , “Confidence”  $r = .19, n = 174, p < .05$ , and “Connection”  $r = .16, n = 171, p < .05$  (Table 5). These correlations indicated that parents’ higher level of education can result in the increased experience of several of the five Cs of PYD.

### ***Correlation Between the Eight Asset Categories***

The correlation analysis showed that the eight asset categories were all positively correlated with each other. All the correlation coefficients between the assets reflected moderate to strong ( $r = .35$  to  $r = .68, p < .01$ ) positive correlations. The lowest correlation was between “Support” and “Constructive use of time”, and the highest correlation was between “Positive values” and “Social competencies” (Table 5).

### ***Correlation Between the Environment Asset Categories***

The correlation analysis showed that the five environment assets have strong positive correlations with each other (Table 5). All the correlation coefficients lie above  $r = .50$  with  $p < .01$ . The lowest correlations were between “Personal” and “Family” and between “Family” and “Community” both  $r = .50, p < .01$ . The highest correlation was between “Personal” and “Social” ( $r = .72, p < .01$ ).

### ***Correlation Between the Five Cs of PYD***

The five Cs of PYD showed medium to strong positive correlations between each other. The correlation coefficients ranged from  $r = .33$  to  $r = .78, p < .01$ . The lowest correlation was between “Confidence” and “Caring”, while the highest correlation was between “Competence” and “Confidence” (Table 5). Correlations analysis between the Cs

reproduced similar patterns to previous research from the U.S. (Geldhof et al., 2014) and from Norway (Holsen et al., 2017). Even though all the five Cs were positively correlated with each other, some correlations were stronger than others. In line with a previous study (Holsen et al., 2017), this study found out that “Competence” and “Confidence” (the efficacious Cs), correlated strongly with each other ( $r = .78$ ), and “Character” and “Caring” (the socioemotional Cs) correlated strongly with each other ( $r = .66$ ). Both groups correlated positively with “Connection”, but there was a stronger correlation between “Connection” and the efficacious Cs (Competence,  $r = .72$ , and Confidence,  $r = .68$ ) than with “Connection” and the socioemotional Cs (Character,  $r = .65$ , and Caring,  $r = .48$ ).

### ***Correlation Between the Eight Asset Categories and the Five Cs of PYD***

The five Cs of PYD all showed positive correlations with each one of the eight asset categories. The correlation coefficients ranged from low strength to high strength, the lowest being  $r = .19$  and the highest  $r = .67$ . “Competence” showed the highest correlation with “Positive identity” ( $r = .62, p < .01$ ) and the lowest correlation with “Commitment to learning” ( $r = .34, p < .01$ ). “Confidence” was strongly correlated with “Positive identity” ( $r = .65, p < .01$ ) and showed the lowest correlation with “Commitment to learning” ( $r = .28, p < .01$ ). “Connection” showed the highest correlation with “Empowerment” ( $r = .67, p < .01$ ) and the lowest correlation with “Constructive use of time” ( $r = .47, p < .01$ ). “Character” showed the strongest correlation with “Social competencies” ( $r = .60, p < .01$ ) and the lowest correlation with “Constructive use of time” ( $r = .37, p < .01$ ). “Caring” showed the strongest correlation with “Positive values” ( $r = .47, p < .01$ ) and the lowest correlation of all the assets with “Positive identity” ( $r = .19, p < .01$ ) (Table 5).

### ***Correlation Between the Five Environment Asset Categories and the Five Cs of PYD***

The five Cs of PYD all showed positive correlations with each one of the five environment asset categories. The correlation coefficients ranged from moderate correlations

to strong correlations ( $r = .32$  to  $r = .65$ ,  $p < .01$ ), where most of them were strong correlations. The highest correlation was between “Connection” and both “Social” and “Community” ( $r = .65$ ,  $p < .01$ ) and the lowest correlations were found between “Confidence” and “School” ( $r = .32$ ,  $p < .01$ ), and between “Caring” and “Personal” ( $r = .32$ ,  $p < .01$ ) (Table 5).

### **Regression Analysis**

Hierarchical multiple regression analysis was used to examine the ability of the eight asset categories and the five environment asset categories to predict each of the five Cs of PYD after first controlling for age, gender, and parents’ educational levels. Results from the analysis are present in Table 6a and Table 6b.

#### ***The Eight Asset Categories and the Five Cs of PYD.***

**Competence.** The demographic variables, “Age”, “Gender”, “Father’s education” and “Mother’s education” were entered in step 1, and they explained 12.3% of the variance in “Competence”. In step 2, the eight asset categories were entered into the model, and the total variance explained by the model was 57.8%,  $F(12, 159) = 18.12$ ,  $p < .01$ . This means that the eight asset categories explained an added 45.4% of the variance in “Competence”, after the influence of the demographic variables were controlled for,  $R^2$  change = .454,  $F$  change (8, 159) = 21.39,  $p < .01$ . The regression results showed that of the eight asset categories, there were three variables that contributed significantly to “Competence”, and they were “Empowerment” ( $beta = .36$ ,  $p < .01$ ), “Positive identity” ( $beta = .35$ ,  $p < .01$ ), and “Constructive use of time” ( $beta = .17$ ,  $p < .01$ ). Demographic variables did not significantly predict “Competence” when all the eight asset categories were included in the model (Table 6a).

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**Table 5**

*Correlations Between Demographic Data, Eight Asset Categories, Five Environment Asset Categories, and the Five Cs of PYD*

Studied variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	1											
2. Gender	-.022	1										
3. Father's education	-.195**	-.116	1									
4. Mother's education	-.173*	-.102	.382**	1								
5. Support	-.076	.020	.050	.144*	1							
6. Empowerment	-.084	-.035	.045	.129	.654**	1						
7. Expectations & boundaries	-.129	-.042	.104	.153*	.624**	.636**	1					
8. Constructive use of time	-.060	-.112	.024	.130	.350**	.353**	.505**	1				
9. Commitment to learning	.112	.084	.012	-.033	.457**	.489**	.531**	.401**	1			
10. Positive values	-.006	.003	.111	.131	.419**	.377**	.432**	.489**	.589**	1		
11. Social competencies	.035	.016	.071	.095	.454**	.464**	.459**	.363**	.581**	.678**	1	
12. Positive identity	-.114	-.187**	.044	.194**	.436**	.425**	.453**	.354**	.373**	.524**	.543**	1
13. Personal	-.026	-.061	.058	.116	.468**	.464**	.504**	.452**	.611*	.771**	.757**	.851*
14. Social	-.023	.039	.096	.130	.659**	.638**	.627**	.436**	.622*	.737**	.826**	.610**
15. Family	-.083	-.030	.070	.209**	.795**	.770**	.764**	.459**	.466**	.420**	.459**	.461**
16. School	-.010	.030	.030	.024	.591**	.605**	.734**	.396**	.852**	.492**	.566**	.413**
17. Community	-.057	-.111	.083	.166*	.536**	.502**	.588**	.771**	.562**	.771**	.556**	.469**
18. Competence	-.140	-.209**	.195*	.274**	.463**	.582**	.484**	.448**	.335**	.461**	.463**	.618**
19. Confidence	-.115	-.183*	.145	.191*	.438**	.518**	.443**	.343**	.217**	.418**	.448**	.649**
20. Connection	-.147*	-.015	.154*	.164*	.629**	.674**	.617**	.472**	.482**	.560**	.565**	.613**
21. Character	-.060	.071	.079	.144	.457**	.508**	.499**	.356**	.447**	.597**	.601**	.506**
22. Caring	-.050	.282**	-.025	.106	.413**	.440**	.422**	.223**	.395**	.465**	.428**	.188**

Note. \* =  $p < .05$ , \*\* =  $p < .01$



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**Table 5** *Continued*

Studied variables	13	14	15	16	17	18	19	20	21	22
1. Age										
2. Gender										
3. Father's education										
4. Mother's education										
5. Support										
6. Empowerment										
7. Expectations & boundaries										
8. Constructive use of time										
9. Commitment to learning										
10. Positive values										
11. Social competencies										
12. Positive identity										
13. Personal	1									
14. Social	.717**	1								
15. Family	.498**	.615**	1							
16. School	.549**	.621**	.570**	1						
17. Community	.605**	.632**	.498**	.517**	1					
18. Competence	.564**	.527**	.520**	.429**	.560**	1				
19. Confidence	.586**	.504**	.495**	.322**	.438**	.777**	1			
20. Connection	.631**	.653**	.644**	.573**	.646**	.717**	.683**	1		
21. Character	.599**	.622**	.511**	.501**	.521**	.527**	.649**	.649**	1	
22. Caring	.323**	.500**	.467**	.427**	.379**	.346**	.329**	.479**	.656**	1

Note. \* =  $p < .05$ , \*\* =  $p < .01$

**Confidence.** The demographic variables, “Age”, “Gender”, “Father’s education” and “Mother’s education” were entered in step 1, and they explained 7.4% of the variance in “Confidence”. In step 2, the eight asset categories were entered into the model, and the total variance explained by the model was 54.9%,  $F(12, 159) = 16.14, p < .01$ . Thus, after controlling for the demographic variables, the eight asset categories explained an added 47.5% of the variance in “Confidence”,  $R^2 \text{ change} = .475, F \text{ change}(8, 159) = 20.93, p < .01$ . The final model showed that “Positive identity” ( $\beta = .46, p < .01$ ) “Empowerment” ( $\beta = .30, p < .01$ ), and “Commitment to learning” ( $\beta = -.28, p < .01$ ) had significant associations with “Confidence” (Table 6a).

**Connection.** The demographic variables, “Age”, “Gender”, “Father’s education” and “Mother’s education” were entered in step 1, and they explained 4.9% of the variance in “Connection. In step 2, the eight asset categories were entered into the model, and the total variance explained by the model was 67.3%,  $F(12, 156) = 26.79, p < .01$ . Thus, after controlling for the demographic variables, the eight asset categories explained an added 62.5% of the variance in “Connection”,  $R^2 \text{ change} = .625, F \text{ change}(8, 156) = 37.29, p < .01$ . The results of the regression analysis showed that “Empowerment” ( $\beta = .32, p < .01$ ), “Positive identity” ( $\beta = .26, p < .01$ ), “Support” ( $\beta = .16, p < .05$ ), “Constructive use of time” ( $\beta = .12, p < .05$ ), and “Father’s education” ( $\beta = .11, p < .05$ ) had statistically significant associations with “Connection” (Table 6a).

**Character.** The demographic variables, “Age”, “Gender”, “Father’s education” and “Mother’s education” were entered in step 1, and they explained 3% of the variance in “Character”. In step 2, the eight asset categories were entered into the model, and the total variance explained by the model was 51.5%,  $F(12, 159) = 14.08, p < .01$ . Thus, after controlling for the demographic variables, the eight asset categories explained an added 48.5% of the variance in “Character”,  $R^2 \text{ change} = .485, F \text{ change}(8, 159) = 19.89, p < .01$ . The results of the regression analysis showed that “Positive values” ( $\beta = .29, p < .01$ ), “Social competencies” ( $\beta = .22, p < .01$ ), and “Empowerment” ( $\beta = .20, p < .05$ ) had a significant association with “Character” (Table 6a).

**Caring.** The demographic variables, “Age”, “Gender”, “Father’s education” and “Mother’s education” were entered in step 1, and they explained 10.1% of the variance in “Caring”. In step 2, the eight asset categories were entered into the model, and the total variance explained by the model was 43.3%,  $F(12, 156) = 9.94, p < .01$ . After controlling for the demographic variables, the eight asset categories explained an added 33.3% of the variance in “Caring”,  $R^2 \text{ change} = .333, F \text{ change}(8, 156) = 11.45, p < .01$ . The results of the regression analysis showed that “Positive values” ( $\beta = .35, p < .01$ ), “Gender” ( $\beta = .24, p < .01$ ), “Empowerment” ( $\beta = .21, p < .05$ ), “Positive identity” ( $\beta = -.20, p < .05$ ), and “Expectations and boundaries” ( $\beta = .19, p < .05$ ) had a statistically significant association with “Caring” (Table 6a).

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**Table 6a**

*Hierarchical Regression Analysis of the Five Cs: The Role of the Eight Asset Categories*

Studied variables	Competence				Confidence				Connection				Character				Caring			
	Unstandardized Coefficients				Unstandardized Coefficients				Unstandardized Coefficients				Unstandardized Coefficients				Unstandardized Coefficients			
	B	SE	$\beta$	<i>p</i>	B	SE	$\beta$	<i>p</i>	B	SE	$\beta$	<i>p</i>	B	SE	$\beta$	<i>p</i>	b	SE	$\beta$	<i>p</i>
<b>Model 1</b>																				
(Constant)	4.08	1.18		<.001	4.48	1.36		.001	4.33	1.11		<.001	3.46	1.00		<.001	3.55	1.09		.001
Age	-.07	.06	-.09	.21	-.07	.07	-.08	.26	-.08	.05	-.11	.16	-.02	.05	-.03	.72	-.02	.05	-.03	.71
Gender	-.31	.13	-.18	<b>.01</b>	-.32	.15	-.16	<b>.03</b>	.01	.12	.00	.96	.12	.11	.09	.26	.45	.12	.29	<b>&lt;.001</b>
Father' education	.07	.08	.08	.35	.06	.09	.06	.49	.08	.07	.09	.28	.03	.07	.03	.71	-.05	.07	-.06	.50
Mother's education	.21	.08	.21	<b>.01</b>	.15	.09	.14	.09	.10	.07	.11	.18	.11	.07	.14	.10	.14	.07	.15	.06
<b>Model 2</b>																				
(Constant)	1.14	.89		.21	.77	1.03		.46	1.40	.71		.05	1.44	.77		.06	2.04	.94		.03
Age	-.02	.04	-.02	.68	.01	.05	.02	.76	-.03	.03	-.05	.36	-.00	.04	-.00	.98	-.02	.05	-.03	.62
Gender	-.15	.09	-.09	.11	-.09	.11	-.05	.41	.10	.08	.07	.17	.16	.08	.11	.06	.38	.10	.24	<b>&lt;.001</b>
Father' education	.11	.06	.11	.06	.11	.07	.10	.10	.09	.05	.11	<b>.036</b>	.01	.05	.01	.89	-.10	.06	-.11	.11
Mother's education	.07	.06	.07	.23	-.03	.07	-.03	.65	-.04	.05	-.04	.42	.02	.05	.02	.75	.08	.06	.09	.17
Support	.01	.04	.01	.95	.02	.04	.04	.65	.07	.03	.16	<b>.021</b>	-.00	.03	-.01	.95	.03	.04	.07	.46
Empowerment	.25	.05	.36	<b>&lt;.001</b>	.23	.06	.30	<b>&lt;.001</b>	.19	.04	.32	<b>&lt;.001</b>	.11	.05	.20	<b>.018</b>	.13	.06	.21	<b>.018</b>
Expectations & boundaries	-.01	.04	-.03	.73	.02	.04	.05	.58	.03	.03	.07	.33	.05	.03	.13	.12	.08	.04	.19	<b>.048</b>
Constructive use of time	.12	.05	.17	<b>.009</b>	.06	.05	.07	.30	.08	.04	.12	<b>.042</b>	-.01	.04	-.01	.89	-.06	.05	-.09	.23
Commitment to learning	-.04	.03	-.08	.28	-.14	.04	-.28	<b>&lt;.001</b>	-.02	.03	-.04	.56	-.03	.03	-.07	.37	-.01	.04	-.02	.84
Positive values	.02	.03	.06	.44	.03	.03	.08	.31	.04	.02	.12	.09	.08	.03	.29	<b>.001</b>	.11	.03	.35	<b>&lt;.001</b>
Social competencies	.02	.04	.05	.55	.05	.04	.09	.25	.03	.03	.07	.34	.08	.03	.22	<b>.009</b>	.05	.04	.12	.18
Positive identity	.16	.03	.35	<b>&lt;.001</b>	.24	.04	.46	<b>&lt;.001</b>	.11	.03	.26	<b>&lt;.001</b>	.05	.03	.14	.06	-.09	.04	-.20	<b>.015</b>

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**Table 6b**

*Hierarchical Regression Analysis of the Five Cs: The Role of the Five Environment Asset Categories*

Studied variables	Competence				Confidence				Connection				Character				Caring			
	Unstandardized Coefficients				Unstandardized Coefficients				Unstandardized Coefficients				Unstandardized Coefficients				Unstandardized Coefficients			
	B	SE	$\beta$	<i>p</i>	B	SE	$\beta$	<i>p</i>	B	SE	$\beta$	<i>p</i>	B	SE	$\beta$	<i>p</i>	B	SE	$\beta$	<i>p</i>
<b>Model 1</b>																				
(Constant)	4.08	1.18		<.00	4.48	1.36		.00	4.33	1.11		<.00	3.46	1.00		<.00	3.55	1.09		.00
Age	-.07	.06	-.09	.21	-.07	.07	-.08	.28	-.08	.05	-.11	.16	-.02	.05	-.03	.72	-.02	.05	-.03	.71
Gender	-.31	.13	-.18	<b>.014</b>	-.32	.15	-.16	<b>.031</b>	.01	.12	.00	.96	.12	.11	.09	.26	.45	.12	.29	<b>&lt;.001</b>
Father' education	.07	.08	.08	.35	.06	.09	.06	.49	.08	.07	.09	.28	.03	.07	.03	.71	-.05	.07	-.06	.50
Mother's education	.21	.08	.21	<b>.008</b>	.15	.09	.14	.09	.10	.07	.11	.18	.11	.07	.14	.10	.14	.07	.15	.06
<b>Model 2</b>																				
(Constant)	2.18	.93		.02	2.47	1.09		.03	2.14	.72		.00	1.83	.76		.02	2.06	.93		.03
Age	-.06	.04	-.07	.20	-.06	.05	-.07	.27	-.06	.03	-.09	.09	-.01	.04	-.02	.77	-.01	.04	-.02	.80
Gender	-.26	.10	-.15	<b>.01</b>	-.27	.12	-.14	<b>.024</b>	.05	.08	.03	.49	.14	.08	.10	.10	.44	.10	.28	<b>&lt;.001</b>
Father' education	.07	.06	.07	.26	.06	.07	.06	.39	.07	.05	.08	.12	.01	.05	.02	.81	-.06	.06	-.07	.30
Mother's education	.10	.06	.10	.10	.03	.07	.02	.71	-.02	.05	-.02	.68	.03	.05	.04	.57	.06	.06	.07	.34
Personal	.07	.02	.25	<b>.033</b>	.14	.03	.42	<b>&lt;.001</b>	.05	.02	.21	<b>.006</b>	.06	.02	.26	<b>.003</b>	-.03	.02	-.12	.21
Social	.02	.03	.05	.60	.04	.04	.10	.33	.03	.02	.09	.28	.06	.03	.21	<b>.030</b>	.08	.03	.29	<b>.008</b>
Family	.08	.03	.20	<b>.01</b>	.12	.04	.27	<b>&lt;.001</b>	.10	.02	.29	<b>&lt;.001</b>	.04	.03	.14	.08	.08	.03	.22	<b>.011</b>
School	.01	.03	.03	.67	-.06	.03	-.14	.09	.03	.02	.10	.15	.02	.02	.08	.31	.04	.03	.12	.18
Community	.07	.03	.21	<b>.007</b>	.01	.03	.03	.73	.08	.02	.27	<b>&lt;.001</b>	.03	.02	.12	.13	.04	.03	.13	.15

***Environment Asset Categories and the Five Cs of PYD.***

**Competence.** The demographic variables, “Age”, “Gender”, “Father’s education” and “Mother’s education” were entered in step 1, and they explained 12.3% of the variance in “Competence”. In step 2, the five environment asset categories were entered into the model, and the total variance explained by the model was 49.2%,  $F(9, 162) = 17.42, p < .01$ . Thus, after controlling for the demographic variables, the environment asset categories explained an added 36.9% of the variance in “Competence”,  $R^2 \text{ change} = .369, F \text{ change}(5, 162) = 23.50, p < .01$ . The regression analysis showed that “Personal” ( $\beta = .25, p < .05$ ), “Community” ( $\beta = .21, p < .01$ ), “Family” ( $\beta = .20, p < .05$ ), and “Gender” ( $\beta = -.15, p < .05$ ) had a significant association with “Competence” (Table 6b).

**Confidence.** The demographic variables, “Age”, “Gender”, “Father’s education” and “Mother’s education” were entered in step 1, and they explained 7.4% of the variance in “Confidence”. In step 2, the five environment asset categories were entered into the model, and the total variance explained by the model was 44.5%,  $F(9, 162) = 14.43, p < .01$ . After controlling for the demographic variables, the five environment asset categories explained an added 37.1% of the variance in “Confidence”,  $R^2 \text{ change} = .371, F \text{ change}(5, 162) = 21.64, p < .01$ . The regression analysis showed that “Personal” ( $\beta = .42, p < .01$ ), “Family” ( $\beta = .27, p < .01$ ), and “Gender” ( $\beta = -.14, p < .05$ ) had a significant association with “Confidence” (Table 6b).

**Connection.** The demographic variables, “Age”, “Gender”, “Father’s education” and “Mother’s education” were entered in step 1, and they explained 4.9% of the variance in “Connection”. In step 2, the five environment asset categories were entered into the model, and the total variance explained by the model was 62.5%,  $F(9, 159) = 29.42, p < .01$ . After controlling for the demographic variables, the five environment asset categories explained an added 57.6% of the variance in “Connection”,  $R^2 \text{ change} = .576, F$

change (5, 159) = 48.85,  $p < .01$ . The regression analysis showed that “Family” ( $beta = .29$ ,  $p < .01$ ), “Community” ( $beta = .27$ ,  $p < .01$ ), and “Personal” ( $beta = .21$ ,  $p < .01$ ) had a significant association with “Connection” (Table 6b).

**Character.** The demographic variables, “Age”, “Gender”, “Father’s education” and “Mother’s education” were entered in step 1, and they explained 3% of the variance in “Character”. In step 2, the five environment asset categories were entered into the model, and the total variance explained by the model was 47.7%,  $F(9, 162) = 16.41$ ,  $p < .01$ . After controlling for the demographic variables, the five environment asset categories explained an added 44.7% of the variance in “Character”,  $R^2 \text{ change} = .447$ ,  $F \text{ change}(5, 162) = 27.68$ ,  $p < .01$ . The regression analysis showed that “Personal” ( $beta = .26$ ,  $p < .01$ ), and “Social” ( $beta = .21$ ,  $p < .05$ ) had a significant association with “Character” (Table 6b).

**Caring.** The demographic variables, “Age”, “Gender”, “Father’s education” and “Mother’s education” were entered in step 1, and they explained 10.1% of the variance in “Caring”. In step 2, the five environment asset categories were entered into the model, and the total variance explained by the model was 39.3%,  $F(9, 159) = 11.42$ ,  $p < .01$ . After controlling for the demographic variables, the five environment asset categories explained an added 29.2% of the variance in “Caring”,  $R^2 \text{ change} = .292$ ,  $F \text{ change}(5, 159) = 15.28$ ,  $p < .01$ . The regression analysis showed that “Social” ( $beta = .29$ ,  $p < .01$ ), “Gender” ( $beta = .28$ ,  $p < .01$ ), and “Family” ( $beta = .22$ ,  $p < .05$ ) had a significant association with “Caring” (Table 6b).

## Discussion

### General Findings

The current study aimed to investigate the importance of the eight asset categories and the five environment asset categories in Norwegian youth and how the experience of these developmental assets contributes to the development of the five Cs of PYD. The hypotheses were that: 1) Higher levels of the eight asset categories will be associated with the five Cs of PYD, and 2) Higher levels of the five environment asset categories will be associated with the five Cs of PYD. The results of the correlation analysis confirmed these hypotheses, by reflecting positive correlations between the developmental assets and each one of the five Cs of PYD. The regression analysis, however, displayed significant associations between the five Cs and some of the developmental assets but not all of them. After controlling for demographic variables some of the developmental assets were no longer associated with the five Cs of PYD, indicating that some assets were more associated with the five Cs than others.

### *Relationship Between the Eight Asset Categories and the Five Cs*

The correlation results showed that there were positive significant correlations between the eight asset categories and each one of the five Cs of PYD. In regression analysis however, some of the assets categories lost their associations with the five Cs. Seven of the eight asset categories retained their positive associations with some of the Cs. *Empowerment* (i.e., external asset) was the one asset category that showed positive significant associations with each one of the five Cs. *Empowerment* is an asset that develops when young people feel safe and respected at home, school and in their community, which will further make them feel valued and valuable. The feeling of safety and respect is experienced because their community values them and views them as resources. Young people will in turn contribute to their community, for example through community service. In the current study the youth who



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have experienced these assets were more likely to experience the five Cs of PYD. Previous reports have also mentioned high experience of *empowerment* assets in both US and Norwegian samples (Scales, 2011; Wiium et al., 2018).

*Positive identity* (i.e., internal asset) showed positive significant associations with three of the Cs (Competence, Confidence, and Connection). *Positive identity* is developed when youth experience personal power over the things that happen in their lives, when they have high self-esteem and a sense of purpose and positive view of their future. The results in this study indicate that youth who experience *positive identity* will most likely report positive outcomes in the form of “Competence”, “Confidence”, and “Connection”. An earlier study has also found that *positive identity* was positively related to academic achievement in Norwegian youth (Beck & Wiium, 2019). *Positive identity* has also been found to be negatively associated with prolonged sadness, where the decrease in *positive identity* assets was associated with higher likelihood of being sad in Norwegian youth (Wiium et al., 2021).

*Positive values* was another internal asset category that positively associated with two Cs (Character and Caring). This asset category is reflected in the values and principles that help young people make healthy choices. Young people who are caring towards others, honest, responsible, believe in equality and social justice, and can stand up for themselves and practice self-restraint are those that experience the *positive values* assets. The experience of these assets will most likely translate into Character and Caring. Scales (2011) have found strong experience of *positive values* assets in Lebanese youth.

*Constructive use of time* (i.e., external asset) had the lowest Cronbach’s alpha out of the eight asset categories, nevertheless, it was positively associated with two of the Cs (Competence and Connection). When youth participate in creative activities (i.e., music, arts), after school youth programs (i.e., sports, organizations), religious activities and spend time with their family at home then they get opportunities to interact with other adults and youth

and to learn and develop new skills. Participation in youth programs is a key asset that is linked with positive development and thriving in American youth (Scales and colleagues, 2000). It is believed that positive development and youth contribution to self and their environment are like to occur in the context of community-based youth development programs (Lerner, 2005). Youth programs provide young people with skill building opportunities and supportive relationship with committed adults, leading to the enhancement of their health and community engagement (Lerner, 2004). Roth and Brooks-Gunn (2003a, 2003b) indicated that participation in youth programs was likely to result in “competent, confident, and caring youth, who has character and positive social connections” (Lerner, 2005, pp. 24). It is predicted that such a young person will be able to make contributions to themselves, their family, and their community (Lerner, 2004), and they will be able to experience low levels of risk behavior (Scales et al., 2000). Youth in Italy and Turkey have also previously reported high amount of *constructive use of time* assets (Wiiium et al., 2018).

*Social competencies* (i.e., internal asset) was positively associated with “Character”. Young people who experience competence in different social contexts such as personal (i.e., able to plan ahead), interpersonal (i.e., empathy, friendship skills, resists peer pressure, conflict resolution), and cultural (i.e., knowledge of and respect for ethnic/racial backgrounds) contexts will be able to cope with new situations and make difficult choices. These assets were likely to predict the developmental outcome of “Character” in the current study. High number of *social competencies* has been reported in US, Lebanese, and Norwegian samples earlier as well (Scales, 2011; Wiiium et al., 2018).

*Support* (i.e., external asset) was positively associated with “Connection”. Young people can experience *support* in different contexts such as at home (i.e., positive family communication and support, involvement in schooling), neighborhood, school (i.e., caring school climate) and with other supportive non-parent adults. When young people feel cared

for, appreciated, and accepted in these relationships then they will form strong connections. In the same way the results in the current study showed that *support* assets can positively predict “Connection”. Similar results were observed in Norwegian and Turkish samples where they reported high amounts of the *support* assets (Wiium et al., 2018). *Support* was also found to have positive significance in academic achievement in the Norwegian context (Beck & Wiium, 2019).

*Expectations and boundaries* (i.e., external asset) showed positive association with “Caring”. Youth need to experience clear rules and encouragement to do well from family, school, neighborhood, peers, and other adult role models. They also need consistent consequences for breaking rules. The positive association with “Caring” found in this study could reflect these positive relationships where youth feel cared for, and they in turn show empathy and care to others. Wiium and colleagues (2018) have reported high numbers of assets in *expectations and boundaries* in Norwegian youth.

*Commitment to learning* (i.e., internal asset) was found to have negative association with “Confidence”. *Commitment to learning* assets are experienced when young people understand the importance of learning and are thus motivated to do well in school, engage in learning and doing their homework, care about their school and read for fun. In an earlier study (Beck & Wiium, 2019) *commitment to learning* was found to be positively significant in predicting academic achievement. In the current study however, higher experience of *commitment to learning* was associated with lower value of “Confidence”. This decrease in “Confidence” could be due to the pressure young people feel because of the requirements and expectations in upper secondary school in Norway. Earlier studies (Beck & Wiium, 2019) have mentioned the mismatch between the requirements students face in school and their personal resources or assets, could be a reason for mental health issues and high dropout rate. Lillejord and colleagues (2017) have suggested that the promotion of developmental assets in

youth who experience this mismatch is important since developmental assets could have compensating effect. Earlier studies have also found negative

*Positive identity* (i.e., internal asset) as mentioned above showed positive associations with “Competence”, “Confidence”, and “Connection”. However, it also showed a negative association with “Caring”. Both *commitment to learning* and *positive identity* were positively correlated with each one of the five Cs, however in the regression analysis after controlling for the demographic variables, the direction of their associations changed. The negative associations that were observed between *commitment to learning* and “Confidence”, and between *positive identity* and “Caring” could be due to suppression effect. A suppression effect occurs when the direction of an association between two variables reverses after a third variable is introduced, in this case the demographic variables, and this could be due to a high correlation between the variables (Vatcheva et al., 2016).

The eight asset categories were associated with the five Cs in different ways, nevertheless almost all of them showed positive associations with the five Cs. The accumulation of assets has been proven to have a protective effect against risk behaviors such as violence, antisocial behavior, drug use and sexual activity (Benson, 2007). At the same time increase in the number of assets experienced predicts positive developmental outcomes such as thriving, physical and social well-being and better academic outcomes (Benson, 2007). These positive outcomes are equivalent to the five Cs of PYD. Developmental assets have also proven to have a lasting effect, where they are strongly related to positive outcomes both during the time of study and several years later (Roehlkepartain et al., 2003). The literature (Eccles and Gootman, 2002) states that young people who present both internal and external assets stand a greater chance of current well-being and future success. The sample in the current study reflected the presence of both internal and external assets, which is supposed

to lead to developmental success. The presence of the eight asset categories in the Norwegian sample is a support to the universal nature of the developmental assets.

### ***Relationship Between the Five environment Asset Categories and the Five Cs***

The correlation results reflected positive correlations between the five environment asset categories and each one of the five Cs of PYD. The regression results however displayed that not all the environment asset categories were associated with each of the five Cs. The *Personal* asset was positively associated with four of the Cs (i.e., Competence, Confidence, Connection and, Character). Similarly, the *Family* asset was positively associated with four Cs (i.e., Competence, Confidence, Connection and, Caring). The *Community* asset showed positive association with “Competence” and “Connection”. The *Social* asset was positively associated with “Character” and “Caring”. The *School* asset did not exhibit any association with any one of the five Cs of PYD. The *Personal* and *Family* contexts were associated with four of the five Cs each, indicating that they were the most important environment asset categories in promoting positive development in this Norwegian sample. The *Social* and *Community* contexts both showed positive association with two Cs each.

School as part of the microsystem of adolescents’ lives, plays an immense role in their development. Their academic performance in school can determine adolescents’ opportunities later in life (Beck & Wiium, 2019). Thus, the lack of significant association found between the environment asset category *School* and any one of the five Cs of PYD could be worrying. Previously there have been reports of high dropout rates in Norwegian upper secondary schools, where one third of students dropout (Beck & Wiium., 2019). One reason for student dropout is assumed to be stress and its associated negative effect on physical and psychological health on students caused due to the mismatch between personal resources and expectations and requirements of school (Lillejord et al., 2017). Dropouts have generally lower quality of life, higher unemployment, and more financial struggles (Union of education

(2017). Given the importance of school in adolescents' lives, the experience of developmental assets in the school setting can have compensating effect on adolescents that experience low levels of developmental assets in their other contexts (Beck & Wiium, 2019). The advancement of developmental assets in school has also been found to bridge the gap between students of different socio-economic statuses (Scales et al., 2006). Thus, it is important that schools promote developmental assets in the school context. At the same time, it is essential to further investigate adolescents' experience of developmental assets in school in the Norwegian context to develop a clearer understanding of the situation.

Another possible reason for the lack of association between the *School* asset and the five Cs could be that since the five environment asset categories are correlated with each other, then the effect of *School* might be reinforcing the other environment asset categories that kept their strength.

### ***Demographic Variables and the Five Cs***

The regression analysis showed that the demographic variable *Gender* was negatively associated with "Competence" and "Confidence" indicating that the female participants experienced lower levels of these developmental outcomes than their male counterparts. At the same time *Gender* showed a positive association with "Caring", which indicated that the female adolescents experienced higher scores of "Caring". These results were reflected by the correlation analysis as well. Conway and colleagues (2015) observed the same pattern in their research where male adolescents were observed to experience higher levels of "Confidence" and "Competence" than female adolescents, while female adolescents experienced higher scores of "Caring". It has been stated that males and females may experience "Caring" equally, but the differences favoring females might be because of the gender bias in some of the items in the five Cs model (Conway et al., 2015).

There were some age differences observed in the sample as well. Older adolescents reported lower score in “Connection”, which is in line with earlier findings, where younger adolescents (age 11-14) scored higher in “Connection”, “Character” and, “Caring” than older adolescents (age 15-19) (Conway et al., 2015).

Mother’s education showed positive correlation with *Support, Expectations and boundaries* and *Positive identity*, and the experience of assets in the *Family and Community* settings. Father’s education showed positive correlations with “Competence” and “Connection”. Mother’s education also showed positive correlations with “Competence”, “Confidence”, and “Connection”. These correlations indicated positive relationship between parents’ higher level of education and adolescents’ increased experience of developmental assets in different contexts and increased developmental outcomes (five Cs).

### **Limitations and Recommendations**

Despite the results confirming the hypotheses, the study has some limitations. Although power analysis confirmed that with a sample size of 220, medium to large effect sizes could be detected in the associations being studied, in future studies, a larger sample size may be more appropriate to study the associations. The convenient sampling used in the survey might also limit the generalizability of the results found in this study. Even though the sample were from four different schools located in two different regions in Norway, they might not be representative of the youth population. Further research with a larger, random, and more representative sample is needed to be able to generalize the results of this study to the population.

Other limitations could be that the self-report procedure that was used could lead to social desirability bias in the responses, leading the participants to answer in a way they believe is socially desirable or acceptable. The cross-national design of the current study also limits the extent to which causation can be inferred. Thus, a longitudinal study with more

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representative sample would be needed to be able to say something about the causal relationship between the findings made in this study.

The questionnaire used in this study was developed in the American context and some asset items might not be reflected in the same way in the Norwegian youth. One example is the external asset category *Constructive use of time*, with a Cronbach's alpha .52. The internal consistency of the items that measure *Constructive use of time* has been known to be low in the Norwegian context in earlier studies as well. (Beck & Wiium, 2019; Issa et al., 2020; Wiium et al., 2021). 17.7% of the participants reported not having experienced any one of the four assets that measured *Constructive use of time*, which was the highest percentage of no assets experienced. Thus, future research with items that are more suitable to measure the experience of *Constructive use of time* in the Norwegian youth would be advantageous.

### **Implications for Research**

Research on PYD, developmental assets, and developmental outcomes has been gaining foot in the Norwegian context. So far, the developmental assets and developmental outcomes have been observed in Norwegian samples to different degrees. Earlier research has pointed out that older adolescents experience lower levels of developmental assets and developmental outcomes than younger adolescents. The results of the current study confirmed these earlier findings. There were several age and gender differences in the experience of developmental outcomes (five Cs). Despite the universality of the developmental assets and outcomes, some of them might be experienced in different ways in the Norwegian youth. Therefore, it is important that further research aims to develop items or frameworks that are better suited to measure the assets in Norwegian youth.

Furthermore, this study only controlled for the effect of demographic variables, so future studies could take into consideration different factors that can play a role in the experience of assets. Such factors could be mental health, personality, upbringing style and



socioeconomic status. These factors are part of the individual's context whether at a *personal*, *family* or *community* level and can thus play a role in how developmental assets and developmental outcomes are experienced.

The result of this study contributes and helps build on research in the PYD area by giving insight into the developmental assets experienced in a sample of Norwegian youth and the contexts that contribute the most to the development of internal and external assets and eventually positive developmental outcomes.

### **Implications for Policy**

As mentioned earlier, individuals develop through the mutually beneficial interactions with their contexts. The results in this study showed that some environment contexts were more associated with the developmental outcomes than others. For example, *Personal* and *Family* contexts were associated with four of the five Cs of PYD each. Whereas the *School* context reflected no significant association with any one of the five Cs of PYD. Although further research is necessary to fully understand these results, the high rate of dropout in upper secondary school in Norway has been investigated before and the lack of assets in this context might be a possible explanation. It is important to provide adolescents and youth with as many assets as possible in the different contexts they interact with. Providing adolescents and youth with assets regardless of age, gender and economic statuses will help create an asset rich young population. It is also important to put in action early interventions that can help young people develop assets early on before their experience of developmental assets starts to decline, and as assets increase the likelihood of thriving increases and young people are less likely to participate in risky behaviors.

### **Implications for Practice**

This study confirmed that developmental assets were present in a Norwegian sample, although not all the assets were experienced at the same level. These results can have practical

implication in youths' contexts (e.g., youth programs, schools, free time activities). By using the principles of positive youth development, adults can provide young people with asset rich contexts that can propel them towards positive developmental outcomes so that they can thrive. Youth programs are one way of providing asset rich contexts to young people. They have proven to be key assets in promoting positive development in the US context (Scales et al., 2000). These programs can create opportunities to build skills and social relationships with supportive adults and peers. Thus, Norwegian municipalities and local communities could implement such programs to expose young people to developmental assets in the *social* and *community* contexts.

The lack of significant associations between the *school* context with the five Cs could also be addressed. Schools could put together initiatives that facilitate social relationship between teachers and students, so that adolescents can experience social support from caring and supportive adults in the school context. Relationships between several microsystems such as the school and parents should also be strengthened. Adolescents could benefit from this type of cooperation. Older adolescents (such as those studying in upper secondary school) experience fewer positive assets than younger adolescents. Thus, by creating strong relationship between school and parents, one can ensure that there is a continuity between the different contexts, and that assets are not just experienced in one context. Some assets were experienced at a higher level than others, and this information can be used to create contexts where the experience of the less reported assets can be increased in young people.

## Conclusion

The current study intended to investigate the experience of the eight asset categories and the five environment asset categories in Norwegian youth and how the experienced levels of these developmental assets contributed to the development of the five Cs of PYD.

Demographic data were treated as control variables. The results found in this study reflected earlier findings. Higher levels of experienced developmental assets were associated with the five Cs of PYD. The universality of the developmental assets was also observed in this study, where many of the eight asset categories were reported in the Norwegian context.

For the five environment asset categories, the findings reflected that “Competence” and “Connection” each showed positive associations with three of the five environment asset categories. Followed by “Confidence”, “Character”, and “Caring”, each showing positive association with two of the five environment asset categories. *School* was the only environment asset category that did not show any association with the five Cs of PYD in the regression analysis.

Significant associations were found between the demographic variables (age, gender, and parents education level) and some of the five Cs.

Going forward more PYD research is needed in the Norwegian context, to further the understanding of researchers, practitioners, and policy makers in creating and implementing asset rich contexts for young people.

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## Appendix

### Appendix A- Demographic questions

1. How old are you? \_\_

2. What is your gender?      M\_\_              F\_\_

3a. What is the highest level of education of your father?

- i. University or college \_\_
- ii. Technical/Vocational \_\_
- iii. Secondary school \_\_
- iv. Primary school \_\_
- v. No education \_\_
- vi. Don't know \_\_
- vii. Don't have \_\_

3b. What is the highest level of education of your mother?

- i. University or college \_\_
- ii. Technical/Vocational \_\_
- iii. Secondary school \_\_
- iv. Primary school \_\_
- v. No education \_\_
- vi. Don't know \_\_
- vii. Don't have \_\_

**Appendix B- Developmental assets questionnaire**

Please try to answer all items as best you can. (This section is more about things that may reflect your experience. Choose the option that works best for you.)

*About your relations with family, friends, and other people in your contexts*

	<b>Not At All or Rarely</b>	<b>Somewhat or Sometimes</b>	<b>Very or Often</b>	<b>Extremely or Almost Always</b>
1. I have a family that gives me love and support.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I ask my parents for advice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I have support from adults other than my parents.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I have good neighbors who care about me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I have a department/school that cares about students and encourages them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. My parent(s)/guardian(s) try to help me succeed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I have parents/guardian who are good at talking to me about things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I feel valued and appreciated by others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I am given useful roles and responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I am included in family tasks and decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I feel safe and secure at school/ the university.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I have a safe neighborhood.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I feel safe and secure at home.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I have a family that knows where I am and what I am doing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I have a department/ school that gives students clear rules.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I have neighbors who help watch out for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I have adults who are good role models for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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18. I have friends who set good examples for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I have lecturers/teachers who urge me to develop and achieve.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I have a family that provides me with clear rules.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. I have a department/school that enforces rules fairly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. I have parents who urge me to do well in school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. I am involved in creative things such as music, theater, or other arts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. I am involved in a sport, club, or other group.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. I am involved in a church, mosque, or other religious group one or more hours every week.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26a. I am spending quality time at home with my parent(s) when we do things together.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### About yourself

	<b>Not At All or Rarely</b>	<b>Somewhat or Sometimes</b>	<b>Very or Often</b>	<b>Extremely or Almost Always</b>
27. I am eager to do well in school/at the university and other activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. I enjoy learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. I am trying to learn new things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. I am encouraged to try things that might be good for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Not At All or Rarely</b>	<b>Somewhat or Sometimes</b>	<b>Very or Often</b>	<b>Extremely or Almost Always</b>
31. I do my assignment/homework.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. I care about school/the university.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. I enjoy reading or being read to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. I think it is important to help other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. I tell the truth even when it is not easy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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- |  |                          |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| 36. I take responsibility for what I do.                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 37. I tell other people what I believe in.                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 38. I say no to tobacco, alcohol, and other drugs.                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 39. I am helping to make my school, neighborhood or city a better place. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 40. I am developing good health habits.                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 41. I am encouraged to help others.                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 42. I am trying to help solve world problems like hunger or disease.     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 43. I am developing respect for other people.                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 44a. I am serving others in my community.                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 45. I plan ahead and make good choices.                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 46. I build friendships with other people.                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 47. I accept people who are different from me.                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 48. I stay away from bad influences.                                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 49. I am able to resolve conflicts without anyone getting hurt.          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 50. I am sensitive to the needs and feeling of others.                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 51. I express my feelings in proper ways.                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 52. I say no to things that are dangerous or unhealthy.                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 53. I feel I have control of my life and future.                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 54. I feel good about myself.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 55. I feel good about my future.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 56. I deal with disappointment without getting too upset.                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 57. I find good ways to deal with things that are hard in my life.       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 58a. I am thinking about what my purpose is in life.                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Appendix C- Five Cs questionnaire**

*The following are more items that may reflect your experience. Please indicate which response option is true for you.*

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither Agree nor Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>
1. I have a lot of friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I do very well in my class work at school/university.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I am better than others my age at sports.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I am happy with myself most of the time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I hardly ever do things I know I shouldn't do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I really like the way I look.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I am just as smart as others my age.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I could do well at just about any new athletic/sport activity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I am popular with others my age.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I am good looking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I usually act the way I am supposed to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I am very happy being the way I am.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. All in all, I am glad I am me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. When I am an adult, I'm sure I will have a good life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Not Sure</b>	<b>Quite Important</b>	<b>Extremely Important</b>
15. Helping to make the world a better place to live in.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Accepting responsibility for my actions when I make a mistake or get into trouble.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Giving time and money to make life better for other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Doing what I believe is right even if my friends make fun of me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<b>Not at All Like Me</b>	<b>A Little Like Me</b>	<b>Somewhat Like Me</b>	<b>Quite Like Me</b>	<b>Very Much Like Me</b>
19. Enjoying being with people who are of a different race/culture than I am.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Knowing a lot about people of other races/cultures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Not at All Like Me</b>	<b>A Little Like Me</b>	<b>Somewhat Like Me</b>	<b>Quite Like Me</b>	<b>Very Much Like Me</b>
21. When I see someone being taken advantage of, I want to help them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. When I see someone being picked on, I feel sorry for them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. When I see another person who is hurt or upset, I feel sorry for them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. It bothers me when bad things happen to any person.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. I feel sorry for other people who don't have what I have.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. It makes me sad to see a person who doesn't have friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither Agree nor Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>
27. I receive a lot of encouragement at my school/university.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. I am a useful and important member of my family.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. I feel like an important member of my local community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Teachers at school/university push me to be the best I can be.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. I have lots of good conversations with my parents.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Adults in my town/city/local community listen to what I have to say.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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	<b>Almost never true or never true</b>	<b>Seldom true</b>	<b>Sometimes true</b>	<b>Usually true</b>	<b>Always true</b>
33. My friends care about me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. I feel my friends are good friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## **Appendix D- Informed consent**

### Informed Consent - Principal

Positiv ungdomsutvikling blant skoleelever: rollen av jobbforming i skolekontekst

Samtykke fra rektor

Jeg vil gjerne spørre om elever ved skolen kan inviteres til å delta i en forskningsstudie utført av førsteamanuensis Nora Wiium ved Universitetet i Bergen. Formålet med studien er å undersøke hvordan skoleelevers bruk av sine strukturelle og kognitive evner, samt samarbeid med medelever i forhold til skoleaktiviteter kan knyttes til positive utfall, slik som kompetanse og karakterbygging. Studien ser også på forholdet mellom engasjement i forskjellige helseatferd, miljøhensyn og positiv utvikling.

Hvis du bestemmer deg for at elevene kan inviteres til å delta i denne studien, er det fint om du kan undertegne samtykkeskjemaet på siste side. Studien består av en spørreundersøkelse med nettbasert spørreskjemaleverandør, SurveyXact, som skal gjennomføres med studentene i løpet av skoletiden og som skal ta ca. 30min.

Vi opplever ikke at spørsmålene i spørreundersøkelsene er sensitive og at de fremkaller bekymringer blant unge deltakere. Imidlertid fremkommer det tydelig i informasjonen til deltakerne at om de skulle være i denne situasjonen, bør de ta kontakt med prosjektlederen.

Deltakelse i denne studien gir ingen personlige fordeler utover at det rent generelt bidrar til å skape bedre holdninger til ungdom og effektive ordninger for ungdom.

Fordi det er en nettbasert undersøkelse, skal IP/adresse registreres ved innsending av spørreskjemaet. Imidlertid vil IP/adressen fjernes og vil ikke bli tatt med i videre behandling av dataene. Resultatet av dette prosjektet vil bli analysert slik at deltakernes identitet eller skolen ikke vil være knyttet til studiens endelige form. Prosjektleder forbeholder seg retten til å bruke og publisere ikke-identifiserbare data. Resultatet av forskningen vil bli publisert i vitenskapelige artikler og presentert ved konferanser. Selv om enkelt svar er konfidensielle, vil det bli presentert samlede data med gjennomsnitt eller generaliseringer av svarene under ett.

Ingen personlig identifiserbar informasjon blir lagret og dataene skal anonymiseres og lagres i henhold til vanlige prosedyrer som er angitt av NSD - Norsk senter for forskningsdata AS.

## Positive Youth Development: Developmental Assets and the Five Cs in Norwegian Youth

Skoleelever deltakelse er helt og holdent frivillig. De kan fritt velge ikke å delta. Hvis elever velger å delta, kan de når som helst trekke seg uten at dette får noen som helst konsekvenser.

Hvis du har spørsmål eller bekymringer mens elevene deltar i studien eller etter at den er fullført, eller hvis du vil ha en kopi av det endelige samlede resultatet av denne studien, kan du kontakte:

Nora Wiium, førsteamanuensis Det psykologiske fakultet Universitetet i Bergen Tlf.: 464 45 734/55 58 28 49 E-post: [Nora.Wiium@uib.no](mailto:Nora.Wiium@uib.no)

Vennlig hilsen

Nora Wiium Prosjektleder

## **Appendix E- Informed consent - Students**

### Electronic Informed Consent - Students

Dette spørreskjemaet er en del av et prosjekt som forsker på utviklingen hos unge mennesker. Du er en av skoleelevene som har blitt utvalgt til å delta i studien. Vi håper derfor du kan bruke litt tid på å fylle ut spørreskjemaet.

Du er ikke forpliktet til å delta, og hvis du velger å delta, kan du trekke deg når som helst. Svarene dine er helt anonyme, og de er underlagt streng taushetsplikt. Det finnes ingen riktige eller gale svar. Det viktigste er at du svarer ærlig, og at svarene dine representerer dine inntrykk og din erfaring.

Tusen takk for hjelpen.

Nora Wiium, førsteamanuensis Universitetet i Bergen Tlf.: 464 45 734 E-post:

Nora.Wiium@uib.no

## Appendix F- Project Approval from NSD



Nora Wiium  
Christiesgate 13  
5020 BERGEN

Vår dato: 18.07.2017

Vår ref: 51708 / 3 / IJJ

Deres dato:

Deres ref:

### Tilbakemelding på melding om behandling av personopplysninger

Vi viser til melding om behandling av personopplysninger, mottatt 20.12.2016.

All nødvendig informasjon om prosjektet forelå i sin helhet 03.07.2017.

Meldingen gjelder prosjektet:

51708	<i>Positive Youth Development among Students: The Role of Job Crafting in the School Context</i>
Behandlingsansvarlig	Universitetet i Bergen, ved institusjonens øverste leder
Daglig ansvarlig	Nora Wiium

Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.

Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, ombudets kommentarer samt personopplysningsloven og helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget [skjema](#). Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en [offentlig database](#).

Personvernombudet vil ved prosjektets avslutning, 31.12.2021, rette en henvendelse angående status for behandlingen av personopplysninger.

Dersom noe er uklart ta gjerne kontakt over telefon.

Vennlig hilsen

Dag Kiber  
Dokumentet er elektronisk produsert og godkjent ved NSDs rutiner for elektronisk godkjenning.

# Positive Youth Development: Developmental Assets and the Five Cs in Norwegian Youth

Ida Jansen Jondahl

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Vedlegg: Prosjektvurdering

## Personvernombudet for forskning



### Prosjektvurdering - Kommentar

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Prosjektnr: 51708

#### FORMÅL

The aim of the study is to investigate whether job crafting can be beneficial in other settings beside the work setting, such as the school. We argue that job crafting can foster positive development among the youth. In this exploratory study, we: (a) examine the extent to which students engage in job crafting activities in school; (b) investigate what forms job crafting takes in the context of school and (c) explore whether job crafting among students is associated with positive youth development.

#### UTVALG OG REKRUTTERING

Utvalget består av skoleelever og studenter, som er 16 år og eldre. Skoleledelsen skal godkjenne at elevutvalget forespørres om deltakelse. Vi anbefaler at førstegangskontakten rettes av skolen/universitetet som har naturlig tilgang til utvalget for å ivareta hensyn til frivillighet og konfidensialitet.

#### INFORMASJON OG SAMTYKKE

Utvalget informeres skriftlig om prosjektet og samtykker til deltakelse. De reviderte informasjonsskrivene, mottatt 03.07.2017, er godt utformet, men vi ber om at følgende tilføyes:

- dato for prosjektslutt og anonymisering

Merk at NSD har skiftet navn til NSD - Norsk senter for forskningsdata.

I tillegg må du i selve spørreskjemaet fjerne setningen "Svarene er helt anonyme, og de er underlagt streng taushetsplikt". Dette gjelder også for den engelske versjonen av spørreskjemaet.

#### SENSITIVE OPPLYSNINGER

Det behandles sensitive personopplysninger om psykiske helseforhold i vid forstand i spørsmålene som omhandler trivsel.

#### OPPFØLGING AV RESPONDENTENE

Den som foretar datainnsamling bør ha kompetanse til å gjøre dette på en slik måte at belastningen på deltakerne blir minst mulig. Man bør være forberedt på å håndtere eventuelle problemer som kan oppstå, både underveis og etter datainnsamling. For eksempel kan enkelte respondenter ha behov for oppfølging, og forsker/student må kunne henvise vedkommende til riktig instans, som for eksempel psykolog, helsesøster eller andre hjelpeinstanser.

#### INFORMASJONSSIKKERHET

Personvernombudet legger til grunn at forsker følger Universitetet i Bergen sine rutiner for datasikkerhet.

#### DATABEHANDLER

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SurveyXact er databehandler for prosjektet. Universitetet i Bergen skal inngå skriftlig avtale med SurveyXactom hvordan personopplysninger skal behandles, jf. personopplysningsloven § 15. For råd om hva databehandleravtalen bør inneholde, se Datatilsynets veileder: <http://www.datatilsynet.no/Sikkerhet-internkontroll/Databehandleravtale/>.

### PROSJEKTSLUTT OG ANONYMISERING

Forventet prosjektslutt er 31.12.2021. Ifølge prosjektmeldingen skal innsamlede opplysninger da anonymiseres. Anonymisering innebærer å bearbeide datamaterialet slik at ingen enkeltpersoner kan gjenkjennes. Det gjøres ved å:

- slette direkte personopplysninger (som navn/koblingsnøkkel)
- slette/omskrive indirekte personopplysninger (identifiserende sammenstilling av bakgrunnsopplysninger som f.eks. bosted/arbeidssted, alder og kjønn)

Vi gjør oppmerksom på at også databehandler må slette personopplysninger tilknyttet prosjektet i sine systemer. Dette inkluderer eventuelle logger og koblinger mellom IP-/epostadresser og besvarelser.