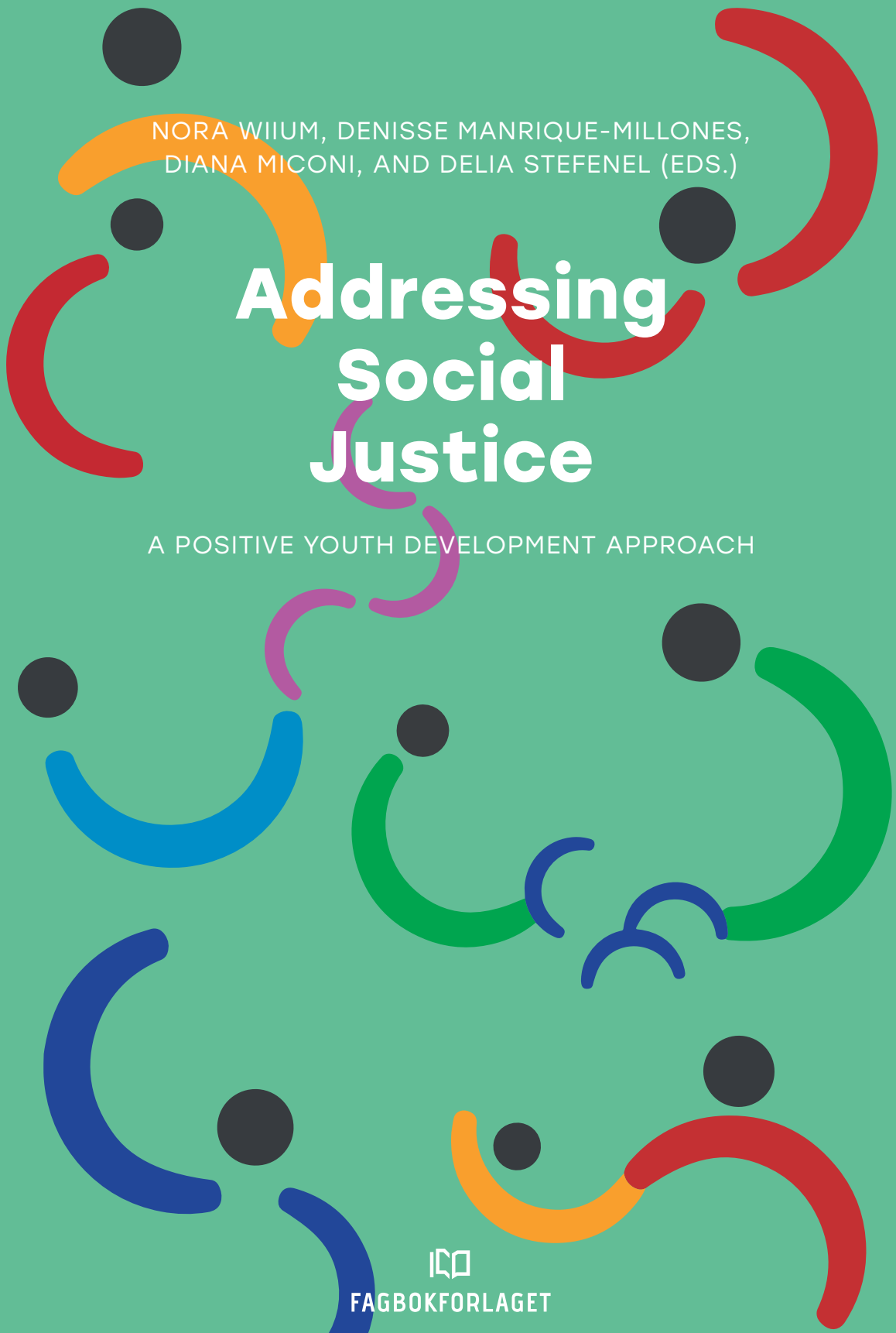
NORA WIIUM, DENISSE MANRIQUE-MILLONES,
DIANA MICONI, AND DELIA STEFENEL (EDS.)

# Addressing Social Justice

## A POSITIVE YOUTH DEVELOPMENT APPROACH



FAGBOKFORLAGET

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# Preface

This publication stems from presentations that were made at the 1st Conference on Positive Youth Development (PYD) in a Cross-national Perspective, hosted virtually by the Department of Psychosocial Science, University of Bergen, Norway. Working under the topic "*Bridging Research & Practice Cross-Nationally: A PYD Approach to Social Justice*", our aim as conference organizers was to bring together experts in research, intervention and policy making who work within a PYD framework to collaborate and create a more just society for young people and for all. The collection of book chapters in this publication signifies our continuous efforts to achieve this aim.

We are grateful to several categories of people for their contributions. First, the authors, who shared their knowledge and wisdom in their respective book chapters; second, this book would not have been possible without the expertise and sacrifice of the partners of The Cross-National Project on Positive Youth Development as well as other research scholars, who edited and reviewed the different book chapters; third, we were fortunate enough to enjoy the administrative skills of staff at the Department of Psychosocial Science, Faculty of Psychology, University of Bergen during the whole writing process; fourth, funds from the University of Bergen Fond (Bergen universitetsfond) and from the Faculty of Psychology, University of Bergen, made it possible to move forward with the writing project; last, we will always be grateful to our adolescent and emerging adult participants whose voices are echoed through the pages of this book.

*Nora Wiium, Denisse Manrique-Millones, Diana Miconi,* & *Delia Stefenel*
Bergen; April 2024

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Introductory Chapter

# Addressing Social Justice within the Positive Youth Development Framework

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## Introduction

Consistent with the PYD perspective, all young people have strengths that can be harnessed to enhance their development if aligned with a supportive and nurturing environment (Lerner et al., 2017). Benson (2007) argued that when asset-building societies and asset-building communities in youth contexts have social norms, policies, programs, and behaviors that support and nurture resources and opportunities, young people do not only thrive, but they are also less likely to engage in risk and problem behaviors. Moreover, youth who are thriving are also those who tend to contribute to societal development (Lerner et al., 2017). Consequently, creating and giving youth equal access to resources and opportunities will assist in addressing social injustice and equity issues existing between and within different groups and clusters of youth.

Due to their present and future contribution to community, national and ultimately global development, youth across the globe constitute a significant unit of their respective national population. Investing in youth will therefore mean economic growth and social stability at different levels of society. However, earlier research and reports indicate that the resources and opportunities available to youth are unevenly distributed across and within countries and contexts. These differences are reflected in indices, such as the Youth Development Index (YDI; Commonwealth Secretariat, 2021) and Global Gender Gap Index (GGGI; World Economic Forum, 2023).

As a measure used in tracking progress on the sustainable development goals associated with youth development, YDI reflects six developmental domains that are all important precursors to social justice: Education; Employment & Opportunity; Health & well-being; Equality & inclusion; Political & civil participation; and Peace & security (Commonwealth Secretariat, 2021). Alternatively, GGGI measures the prospects of females relative to males in four key domains: Economic Participation & Opportunity; Educational Attainment; Health & Survival, and Political Empowerment (World Economic Forum, 2023). These global indices indicate that Western countries, with their economic and technological advancement, are generally doing better on youth developmental indicators, while within countries, males have more access to resources and opportunities for development. Other reports reveal how minorities tend to have limited access to available resources related to education, health, and documentation (United Nations High Commissioner

for Refugees, 2023). Notably, globalization and digitalization have brought about rapid changes in society, contributing to an increase in social inequalities and tensions between communities and identities. The COVID-19 pandemic has also contributed to accelerating social polarization phenomena, increasing social inequalities, and psychological distress, especially among young people (Venkatesh et al., 2021). Based on this evidence, it appears that many young people living in the so-called majority world, in general, and females and minorities in particular, are lacking the needed nurturing environment that will enable them to develop their full potential.

In the subsequent sections, we provide a summary of the conditions and development of different samples of young people living in countries across the globe and discuss how these could have implications for social justice and equity. The publication is a collection of chapters that originated from papers presented at the 1st Conference on Positive Youth Development in a Cross-national Perspective. The virtual conference was held in April 2022 and hosted by the University of Bergen, Norway. With a conference theme on "Bridging Research & Practice Cross-Nationally: A PYD Approach to Social Justice", the chapters provide insights into how Positive Youth Development (PYD), as a strengths-based approach (Lerner et al., 2023), can be used to address issues pertaining to social justice and to advocate for equity among young people from diverse backgrounds. Reiterating Lerner and colleagues (2021), we refer to social justice as a situation where every youth, irrespective of their background characteristic or location, is equipped with the necessary resources and opportunities for growth and development. While some authors of the chapters did focus on markers of social justice, others reflected on how their findings could have implications for the subject matter.

## Highlights from the Book Chapters

The book encompasses this introductory chapter, nine full chapters, and a commentary. The nine full chapters featured in this book are published as a protocol, experimental, theoretical, or empirical studies, using cross-sectional or longitudinal designs. These chapters reflect the voices, perceptions, experiences and developmental outcomes of adolescents and emerging adults from countries located in four continents: Africa, Asia, Europe, and South

America. The location as well as the PYD expertise and opinions of authors of the chapters mirror the diverse countries and continents represented in the different studies. The following provide some highlights of the chapters.

Within PYD research, questionnaires or survey tools reflecting the 5Cs of PYD (i.e., competence, confidence, connection, character and caring; Geldhof et al., 2014) and the Developmental Asset Profile (Benson et al., 2011; Syvertsen et al., 2021) have been used extensively to assess developmental outcomes as well as the personal strengths and contextual resources of young people in different countries, cultures, and contexts. Published as a protocol, *Asgarabad et al.* in chapter 1 propose an outline of a systematic review and meta-analysis of studies using various versions of the 5Cs of PYD questionnaires that have been developed and applied over two decades. Specifically, the authors aim to assess, summarize, and synthesize studies, considering the general and cross-cultural measurement properties (e.g., validity, reliability, responsiveness, and interpretability) of different 5Cs questionnaires. This task is to be able to make evidence-based judgements on the strengths and weaknesses of the scales to conduct valid, reliable, and rigorous research in the future. The chapter also provides a much-needed background for the methodologies of the subsequent chapters.

In chapter 2, *Djuarsa et al.* conducted a study to identify the level and formation process of the 5Cs among 76 lecturer assistants attending university in Indonesia. Using a mixed-method approach, the authors first asked the participants to fill out a questionnaire containing items on the 5Cs and followed that up by interviewing five students from the sample. Findings from the quantitative study indicated medium to high levels of the 5Cs among the lecturer assistants, with mean scores on character and caring being the highest. For the qualitative study, the participants reported that activities such as providing feedback to peers and juniors improved their competence and self-confidence. In addition, helping peers to resolve tasks enhanced their caring skills and character. Working professionally as a lecturer assistant also made an impact on their respect for ethics and responsibility.

In chapter 3, *Vrdoljak et al.* also did a study on the 5Cs to examine how these thriving indicators were associated with family and school factors, such as parental monitoring and school climate in a Croatian sample. Using cross-sectional data collected from 3559 students attending public schools (54% girls; $M_{age}$ = 15.12, *SD* =.39), the authors found that boys were more likely to report higher levels of confidence, competence, and connection, while girls

scored higher on caring and character. In regression analysis, both parental monitoring and school climate were significantly associated with the 5Cs, although the latter appeared to have the strongest association. School climate was also found to be a significant mediator of the association between youth disclosure (a subscale of parental monitoring) and the 5Cs.

In chapter 4, a cross-sectional study involving a sample of 1044 emerging adults (75.5% females; $M_{age}$ = 20.47, *SD* = 3.08) from 11 universities in Spain was conducted by *Gomez-Baya and colleagues* to investigate the associations between the 5Cs and indicators of social contribution and pro-environmental behaviors. Their findings indicated that among the 5Cs, caring was the most reported indicator, while competence was the least. In addition, the 5Cs as one composite score was positively associated with both social contribution (especially family contribution and advising peers) and pro-environmental behaviors like buying local food, having planted trees, and heating with solar energy. Furthermore, thriving indicators, such as connection and character had the strongest associations with social contribution, while character and caring had the strongest associations with the pro-environmental behaviors. These findings are important when considering the promotion of thriving and contribution among adolescents and emerging adults, although future studies may need to consider the influence of other variables (e.g., gender and socio-economic status).

In chapter 5, where several indicators of PYD among young people in Peru were assessed, *Manrique-Millones et al.* collected cross-sectional data from 503 participants (60% females; $M_{age}$ = 19.7, SD = 3.9) to explore the associations between developmental assets (depicting internal assets like social competencies and positive values along with external assets like support and empowerment), the 5Cs and indicators of mental health. Their descriptive analysis showed lower scores on assets, such as positive identity and constructive use of time, and relatively higher scores on commitment to learning, and expectations and boundaries. Via structural equation modelling, the authors observed a positive association between developmental assets (both internal and external) and the 5Cs, as well as a significant association between the 5Cs and mental health. In addition, the 5Cs as a composite variable was found to mediate the association between developmental assets and mental health. Despite these encouraging findings, the authors propose extending the assessment of the different PYD indicators among youth in this South American region, perhaps accompanied by a more qualitative and integrative overview.

In chapter 6, *Olurin and colleagues* explored the developmental assets of youth, who were recruited from institutionalized residential centers (IRC: $n = 122$, $M_{age} = 19.10$, $SD = 3.15$) and institutionalized non-residential centers (INRC: $n = 487$, $M_{age} = 16.52$, $SD = 1.46$) in Nigeria. The authors also examined possible gender and age differences. Their findings indicated that in both centers, commitment to learning was highly experienced, while constructive use of time was the least experienced asset. Gender differences were frequently observed in IRC, with males reporting higher scores on several of the assets relative to females. In INRC, females reported higher scores on three assets compared to males. For age differences, emerging adults reported higher scores on four developmental assets relative to children in IRC, while in INRC, children reported higher scores on six developmental assets compared to emerging adults. The findings suggest that youth in INRC experienced a more nurturing context for positive development compared to youth in IRC, and that males appeared to have greater access to assets than females.

In chapter 7, *Stabbetorp and colleagues* carried out another Croatian study among 424 high school (233 girls; $M_{age} = 16.8$, $SD = 1.21$) and 304 university students (216 girls; $M_{age} = 20.7$, $SD = 1.27$) to investigate the associations between developmental assets and worries about future education, employment, loneliness, and social status. The authors also examined differences in the associations between the two educational stages. Their results indicated that although girls reported higher levels of developmental assets, they also were more likely to report higher levels of future worries, relative to boys. Furthermore, when compared to high school students, university students reported slightly more developmental assets while there was no difference in overall worry across the two educational stages. Moreover, several significant associations were found between the developmental assets and worry. For example, higher levels of developmental assets, such as positive identity, were negatively related to lower levels of future worries in youth, especially among high school students. For external assets, support was negatively associated with worries (in particular, worrying about academic achievement and loneliness) in both high school and university students.

In chapter 8, *Yadegarzadeh et al.* conducted a review to determine the extent to which Technical and Vocational Education and Training (TVET) textbooks in Iran incorporated the 10 basic life skills recommended by the World Health Organization (problem-solving, critical thinking, effective communication

skills, decision-making, creative thinking, interpersonal relationship skills, self-awareness building skills, empathy, coping with stress and coping with emotions). The authors assessed how these life skills varied across three dimensions of competency (knowledge, skill, and attitude). With a multi-method approach, documentary research was used to extract themes, the Delphi method to prioritize the themes, and content analysis through Shannon's entropy method was used to examine the themes about life skills. Their findings indicated that at the level of knowledge as well as skill, problem-solving received the most attention, while at the level of attitude, most emphasis was allocated to critical thinking. Thus, it appears that less attention has been paid to intraindividual skills, such as self-awareness and coping with emotions, in textbooks in Iran.

Finally, in chapter 9, *Danielsen et al.* carried out a study to investigate how gender, socio-economic status (SES), and immigrant background related to the developmental trajectories of academic initiative, academic self-efficacy, and grade point average (GPA) throughout upper secondary education in Norway. Using data collected from 1508 general education students (60.7% girls; mean age at T1 = 17.00, *SD* = .91), the results from latent growth curve modelling indicated group differences related to changes over a three year-period (2016–2019) in GPA, but this finding was not observed in academic initiative or self-efficacy. Furthermore, girls reported greater improvement in GPA when compared to boys, while students with a high SES recorded a larger improvement in their GPA relative to students with a low SES. The results also showed that immigrant youth in Norway experienced a greater improvement in their GPA compared to their non-immigrant peers.

## Positive Youth Development Research and Social Justice

Adopting Hamilton's (1999) tripartite view of PYD, Lerner et al. (2021) described how PYD conceived as a theory of youth development, a frame for program design and as an example of specific youth development programs can be used to address social justice. These three perspectives hinge on a dynamic interaction that is supposed to take place between young people and their contexts if the goal is to advance PYD. Thus, while access to more developmental assets in the same (vertical pile-up) and across different

domains (horizontal stacking) is necessary to ensure thriving and positive development (Benson, 2007), an optimal alignment between youth strengths and their contextual assets is crucial. To ensure this optimal alignment, the meaning and measurement of PYD and its determinants that tend to differ across youth ethnicity, SES, immigration status and other background characteristics (Geldholf et al., 2014; Spencer & Spencer, 2014) would need to be considered in rigorous research in common with the assessment of existing tools (see *Asgarabad et al.*).

While extending research on the PYD perspective outside US contexts, where much of the work in the field has been done, the findings reported in the book chapters reflect the unique conditions of the different contexts, countries and continents exemplified in the book, as well as the significance of other PYD-related factors (see *Yadegarzadeh et al.* and *Danielsen et al.*). Across countries and contexts, it appears that young people are more likely to report personal strengths compared to contextual resources or they only report higher levels of a few PYD indicators (e.g., *Manrique-Millones et al.* and *Djuarsa et al.*). In addition, when gender differences were studied, males in general experienced more of the developmental assets relative to females (*Olurin et al.*), although in countries with relatively high GGGI the situation of females appeared to be better (*Stabbetorp et al.*). Moreover, in terms of the 5Cs, males tended to report more of the efficacious-related Cs (competence and confidence) while girls reported more of the social-emotional Cs (caring and character). Despite these differences, PYD indicators were found to enhance thriving, well-being, and contribution among different samples of young people (e.g., *Gomez-Baya et al.* and *Vrdoljak et al.*).

The theoretical assumption, along with the empirical support of the PYD perspective, suggests that both personal strengths and contextual resources are necessary facilitators of PYD. Indeed, the interaction between micro- and macro-level factors is a core principle in relational developmental systems models (Overton, 2015) on which PYD builds. Most importantly, how these factors at the different levels of youth ecology interact to meet the developmental needs of diverse youth within and between contexts can have some implications for social justice and equity.

Moreover, diverse groups of youth may need diverse combinations of strengths and resources, depending on several factors, including the conditions and culture of their contexts. For instance, while a youth in Nigeria may

need caring and connection because these are more adaptable in his or her collective cultural context, a youth in Norway may need competence and self-confidence due to the expectations for autonomy and self-sufficiency in his or her individualistic cultural setting. While these specifications are important to note, the PYD perspective proposes that thriving is not just possessing one or two of the Cs or developmental assets, but that all Cs or asset categories are needed to facilitate a healthy transition into adulthood and hence youth participation and contribution. Investigating how other PYD resources can be introduced to youth in different cultures and countries may help address social injustice, not just within countries, but across countries as well.

## Conclusions

In many countries, such as the seven represented in these book chapters, policies have been formulated to further the growth and development of young people. While this is an important step forward, several of the policies are yet to be implemented or rather, implemented well. Indices like YDI and GGGI reveal that many countries are not doing well in their empowerment and inclusion of the youth. In the implementation of the policies, working together with other stakeholders at different levels of youth ecology may help maximize efforts while empowering youth with essential personal and contextual resources.

In the conference call for participation, we were interested in creating an arena where experts who work within a PYD framework in relation to research, intervention and policy making would collaborate to bridge research and practice and ultimately contribute to building a more just society for young people and for all. The chapters in this conference book are a way to communicate our continuous interest. To create a just world for young people and for all, social justice and equity across ethnicity, immigrant status, socio-economic status, gender, and other background characteries, would all need to be considered in this collaboration network for PYD. Equally important will be the involvement of the voices and choices of the youth themselves, as echoed in the commentary chapter of this book. As stated in the commentary, the experiences and views of youth can contribute to the understanding of where to direct our scientific attention. As youth face growing global challenges as

well as possibilities that include everything from global poverty to artificial intelligence, they will need to be fully prepared and fully engaged; for it is only then that they can play their role as responsible adults as well as join in the contribution to this more just society.

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Chapter 1

# A Protocol Study for a Systematic Review and Meta-analysis of the Psychometric Properties of the Five Cs Model of Positive Youth Development Scales

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**Abstract:** With the strength-based perspective of Positive Youth Development (PYD) surging ahead with great force in the field of developmental psychology, it is believed that PYD programs will facilitate the development of five PYD indicators: Competence, Confidence, Character, Connection, and Caring. To gauge the effectiveness of PYD programs on youth outcomes, the Five Cs Model of PYD Scale (PYDS) and its short versions, including the 34-item PYDS short form, the 17-item PYDS very short form, the 20-item PYDS-SF Shortened Version, the 78-item Five Cs of PYD scale, and the 40-item Bridge-PYD Instrument have been developed. However, no systematic review of their psychometric quality has been conducted. The objective of the present proposed systematic review and meta-analysis is to evaluate, summarize, and synthesize studies on the measurement properties (validity, reliability, responsiveness, and interpretability, along with the criteria of good measurement properties) of these versions. In compliance with the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P), the search will be carried out in PubMed, Scopus, Web of Science, and PsycINFO databases from the inception (2005) to 12th March 2024. Original articles published in English language on youth ages 10–29 years will be included if they report the reliability or validity, use quantitative methods, are systematic reviews on the Five Cs Model of PYD scales, or use them to assess study outcomes/predictors. Separate evaluators will assess research papers, extract data, and appraise their quality utilizing the COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN) tool. Any discrepancy will be resolved by three senior reviewers. The Grading of Recommendations, Assessment, Development and Evaluations (GRADE) guidelines will be applied to grade the total quality of evidence for the overall rating on each psychometric property. The critical and rigorous quality assessment of these scales is essential to clarify if the results of previous studies were biased and to guide scholars on what version of the Five Cs Model of PYD scales is the most valid, reliable, and appropriate for their research. Such evidence-based judgements on these scales' strengths and weaknesses are crucial to conduct future valid and rigorous research and suggest possible improvements on available measures.

*Keywords:* psychometric properties, reliability, systematic review protocol, the five Cs model of PYD scale, validity.

## Introduction

Throughout the past century, the "deficit perspective" described adolescence as a troublesome period (Erikson, 1968; Freud, 1969; Hall, 1905) that needs to be tamed (Roth & Brooks-Gunn, 2003). Therefore, more conservative developmental research and interventions in adolescence concentrated entirely on risks and vulnerabilities rather than characteristics and experiences that lead to youth thriving, positive developmental outcomes and well-being (Moore et al., 2004). From this deficit perspective, positive development of adolescence was characterized by the absence or reduction of problem behaviors (Crocetti et al., 2014). In response to such a problem-oriented approach, the ecological and asset-based perspective of Positive Youth Development (PYD; Lerner et al., 2005; Lerner et al., 2011) was developed with the purpose of comprehending, instructing, and engaging youth in productive activities. PYD particularly concentrates on empowering youth to take initiative in achieving important social, emotional, and moral competencies, a clear and positive sense of identity, self-efficacy, and self-determination. These are necessary steps toward flourishing and enhancing youths' ability to contribute to their community (Catalano et al., 2002; Damon, 2004; Riggs et al., 2010; Schulman & Davies, 2007).

### The Five Cs Model of Positive Youth Development

One of the most prominent conceptualization models in the field of PYD is the Five Cs Model (Lerner & Lerner, 2013; Lerner et al., 2011), which posits the existence of five developmental indicators. First, Competence is defined as the positive image of individual's activities in the domains of social skills (e.g., empathy), cognitive skills (e.g., decision-making), academic performance (e.g., test scores, school attendance, and school grades), and vocational competencies (work habits and career choice explorations, inclusive of entrepreneurship). Second, Confidence concerns a sense of self-efficacy, self-respect, and positive identity. Third, Character refers to possession of standard ideas for appropriate behaviors, showing respect to cultural and societal standards, and an overall sense of moral correctness. Fourth, Connection pertains to relationships with others, positive bidirectional interaction with family, peers, institutions, and community. Finally, Caring is defined as a sense of

empathy and sympathy for others. These domains have reciprocal influence on each other, and healthy development across all five indicators is crucial for adaptive development (Lerner et al., 2005).

Various measurement tools have been designed, translated, and employed in different studies worldwide to capture different aspects of PYD (e.g., Klein et al., 2006; Sieng et al., 2018). The Five Cs Model of PYD Scale-Long Form (PYDS; 83-item; Lerner et al., 2005; Phelps et al., 2009) has gained ground in the PYD field and a series of short versions have been produced, including the 34-item PYDS short form (PYDS-SF; Geldhof et al., 2014), the 17-item PYDS very short form (PYDS-VSF; Geldhof et al., 2014), the 20-item PYDS-SF Portuguese shortened version (Gaspar de Matos et al., 2018), the 78-item Five Cs of PYD scale (Phelps et al., 2009), and the 40-item Bridge-PYD Instrument (Lopez et al., 2015). The original self-report PYDS measures five independent indicators of Competence (subscales = academic, social, and physical competence, and grades), Confidence (subscales = self-worth and positive identification), Connection (subscales = connection to family, neighborhood, school, and peers), Character (subscales = social conscience, values diversity, conduct behavior, and personal values), and Caring. To calculate the five Cs scores, first, items of each subscale are averaged, and then scores across subscales of each "C" are averaged to provide the scores of each C, except for Caring, which has no subscale; its score is equal to the mean of its items. In the last step, each C is multiplied by 8.33 to convert its score to a 100-point scale. Accordingly, PYDS-SF and PYDS-VSF capture the same characteristics, including Competence (6 and 3 items), Confidence (6 and 3 items), Connection (8 and 4 items), Character (8 and 4 items), and Caring (6 and 3 items), with separate forms for youths in grades 5–7 and youths in grades 8–12 (Geldhof et al., 2014; Geldhof et al., 2014). Items corresponding to the Competence and Confidence subscales are evaluated using a four-point Likert scale, while a five-point Likert scale is used for items corresponding to the Connection, Character, and Caring subscales. An overview of the characteristics of the Five Cs Model of PYD Scales is presented in Table 1.1.

Evidence has documented the psychometric soundness of the 83- and 78-item Five Cs Model of PYD Scale in terms of internal consistency ($\alpha$ = .84-.91; Gestsdottir et al., 2010; Lerner et al., 2005), structural validity (Bowers et al., 2010; Lerner et al., 2005; Phelps et al., 2009), and measurement invariance across time (Bowers et al., 2010; Phelps et al., 2009). The findings of Gaspar

de Matos et al. (2018) on the 20-item PYDS-SF Shortened Version supported its structural validity via exploratory and confirmatory factor analysis, and its internal consistency using Cronbach's alpha (.74–.87) and composite reliability (.74–.85). Additionally, Lopez et al. (2015) in their study revealed that the 40-item Bridge-PYD Instrument can be applied to youths with a diverse age range, that guarantees its generalizability and possesses excellent reliability ($\alpha$ = .92). The PYDS-SF and PYDS-VSF also retain acceptable psychometric properties of the long form, confirming the factorial structure of PYDS (Geldhof et al., 2014) with satisfactory reliability ($\alpha$ = .73–.87; Babaee et al., 2018; Tomé et al., 2019). However, results in some countries have raised some concerns regarding the psychometric properties of PYDS-VSF, including weak internal consistency of its subscales in the Philippines (Buenconsejo et al., 2022), or lack of support for its construct validity in China (Wong et al., 2022). There have also been general methodological concerns regarding the abbreviated tools (Larsson & Larsson, 2002), e.g., their inability to meet reasonable standards of psychometric soundness (Smith & McCarthy, 1995; Smith et al., 2000). In essence, summarizing and comparing the existing findings on the short forms derived from the PYDS is warranted.

Robust evidence has documented the positive association of the Five Cs with adaptive outcomes, e.g., intentional self-regulation (Gestsdottir et al., 2010; Gestsdottir et al., 2017), psychological empowerment (Holsen et al., 2017), life satisfaction (Gaspar de Matos et al., 2018), and academic well-being (Shek & Chai, 2020), as well as their negative link to substance use, delinquent behavior, anxiety/depression, and emotion dysregulation (Conway et al., 2015; Dvorsky et al., 2018). Whether or not these results are reliable depends largely on the psychometric soundness of the instruments used. Thus, a systematic review of the methodological rigor of research papers on their validity is warranted for multiple reasons. First, it would provide researchers, clinicians, and health policy makers with critical and rigorous assessments of the scales to reduce a potential risk of bias in results (Terwee et al., 2016). Second, a meta-analysis would provide researchers with useful information to decide which version of the Five Cs Model of PYD measure is the most valid, reliable, and appropriate form to use in their studies. Third, a systematic review of the potential weaknesses of available measures is key to inform the development of new scales and/or the improvement of existing measures.

In our increasingly globalized and diverse world, ensuring the cross-cultural validity of PYD scales across different countries, ethno-cultural groups and languages is crucial; it is equally important to acknowledge the impact of power dynamics and structural barriers in societies within a social justice perspective. This involves the validation of scales across populations, particularly minority and vulnerable groups, and acknowledging variations in how measures work with different populations.

Such variations can impact the validity of findings in some marginalized or minority populations, and researchers should account for these factors when designing and validating scales to contribute to the promotion of inclusion and social justice. Factors such as systemic racism and discrimination can also impact the validity of PYD scales; thus, researchers must ensure cultural sensitivity and appropriateness across populations. Ultimately, taking these issues into account will enable us to better promote PYD and support adolescent development in diverse contexts.

Whereas there are systematic reviews available on the effectiveness of PYD intervention or prevention programs (e.g., Catalano et al., 2019; Shek & Yu, 2011; Tidmarsh et al., 2022), there is a dearth of reviews and meta-analyses that conduct comprehensive appraisal of the quality of the Five Cs Model of PYD Scales. According to our current understanding, the present systematic review and meta-analysis is the first of its kind that aims to critically evaluate, summarize, and synthesize the available body of research on the measurement properties of the Five Cs Model of PYD scales. As a prerequisite, such studies must possess high-quality methodology and minimal risk of bias to ensure the precision of drawn conclusions regarding the psychometric properties of the tools (de Vet et al., 2011; Terwee et al., 2009). For that purpose, we will follow COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN; Mokkink, de Vet, et al., 2018) criteria (see Tables 1.2 and 1.3). The estimates of the measurement properties will be synthesized to address the following research questions: (1) What sort of evidence is available on the methodological quality (as listed in Table 1.2) of the Five Cs Model of PYD Scales? (2) Which one of the reported psychometric properties of these tools meets the criteria for good measurement properties (as listed in Table 1.3)? and (3) Which of these tools, according to the feasibility of performing a meta-analysis, are the most appropriate for measuring the Five Cs Model of PYD?

**Table 1.1** *Overview of PYDS Long, Short, and Very Short Forms and Their Characteristics.*

| Scale | Developer | Target population | Administration method | Number of items | Subscales (number of items) | Scoring type |
|---|---|---|---|---|---|---|
| The PYDS Long Form | Lerner et al. (2005) | adolescents aged 10–18 | self-report | 83 | 1. Character (21 items)<br>2. Competence (19 items)<br>3. Caring (9 items)<br>4. Connection (22 items)<br>5. Confidence (12 items) | Likert scale |
| The PYDS Short Form | Geldhof et al. (2014) | separate forms for adolescents aged 11–14, and adolescents aged 14–21 | self-report | 34 | 1. Character (8 items)<br>2. Competence (6 items)<br>3. Caring (6 items)<br>4. Connection (8 items)<br>5. Confidence (6 items) | Likert scale |
| The PYDS Very Short Form | Geldhof et al. (2014) | separate forms for adolescents aged 11–14, and adolescents aged 14–21 | self-report | 17 | 1. Character (4 items)<br>2. Competence (3 items)<br>3. Caring (3 items)<br>4. Connection (4 items)<br>5. Confidence (3 items) | Likert scale |
| The PYDS-SF Portuguese Shortened Version | Gaspar de Matos et al. (2018) | youths aged 16 to 29 | self-report | 20 | 1. Character (4 items)<br>2. Competence (4 items)<br>3. Caring (4 items)<br>4. Connection (4 items)<br>5. Confidence (4 items) | Likert scale |
| The Five Cs of PYD | Phelps et al. (2009) | adolescents aged 10–12 | self-report | 78 | 1. Character (20 items)<br>2. Competence (11 items)<br>3. Caring (9 items)<br>4. Connection (22 items)<br>5. Confidence (16 items) | Likert scale |
| The Bridge-PYD Instrument | Lopez et al. (2015) | adolescents aged 7 to 18 | self-report | 40 | 1. Character (9 items)<br>2. Competence (8 items)<br>3. Caring and Compassion (7 items)<br>4. Connection (7 items)<br>5. Confidence (9 items) | Yes/no |

*Notes*. PYDS = Positive Youth Development Scale, $\alpha$ = *Cronbach*'s Alpha.

**Table 1.2** *The Definitions of the Measurement Properties' Domains, Sub-domains, and Aspects Based on COSMIN (Mokkink et al., 2010a; Mokkink et al., 2010b).*

| Domain | Measurement property | Aspects | Definition |
|---|---|---|---|
| Reliability | | | Presenting consistent scores in similar conditions |
| | 1. Internal consistency | | The extent the items of a tool are inter-correlated |
| | 2. Measurement error | | The dissimilarity between the unobserved true value of a variable and its observed value |
| Validity | | | The extent that a tool assesses the construct it is intended to assess |
| | 1. Content validity | | A tool's ability to adequately capture all aspects of the intended latent construct |
| | | 1.1 Face validity | The extent that a tool's items truly reflect the construct they were developed to measure |
| | 2. Construct validity/ Hypotheses testing | | The level that the tool's scores are compatible with hypotheses or theoretical model |
| | | 2.1 Structural validity | How well a tool can reflect the dimensionality of the latent construct it was developed to measure |
| | | 2.2 Cross-cultural validity/measurement invariance | How well a tool can function like the original tool in various cultural groups |
| | 3. Criterion validity | | The extent to which the tool's scores are correlated with a "gold standard" measure |
| | 4. Known-group validity | | How well the PROM can distinguish the subgroups of a sample |
| Responsiveness | | | The capability of a tool to discover the change in the scores of the aimed construct over time |
| | 1. Longitudinal validity | | How well a tool can discover the "expected changes" in the scores of the aimed construct over time |
| Interpretability | | | How well the qualitative meaning (i.e., everyday understanding or clinical meaning) can be assigned to a tool's scores |

*Notes*. Interpretability is not one of the measurement properties, but a critical characteristic of a measure.

**Table 1.3** *COSMIN Criteria for Good Measurement Properties (Mokkink et al., 2018b; Prinsen et al., 2018).*

| Measurement property | Rating | Criteria |
|---|---|---|
| **Structural validity** | + | 1. CTT: One of the following criteria in CFA should be met:<br>· CFI/ TLI/ comparable measure >.95<br>· SRMR <.08<br>· RMSEA <.06<br>2. IRT/Rasch: All the following criteria should be met:<br>· No violation of unidimensionality: CFI/ TLI/ comparable measure >.95 OR SRMR <.08 OR RMSEA <.06<br>· No violation of local independence: residual correlations among the items after controlling for the dominant factor <.20 OR Q3's<.37<br>· No violation of monotonicity: adequate looking graphs/ item scalability >.30 and adequate model fit: IRT: $\chi^2$>.01; Rasch: infit and outfit mean squares ≥.5 and ≤1.5 OR Z standardized values > −2 and <2 |
| | ? | 1. CTT: Not reporting all information for "+"<br>2. IRT/Rasch: Not reporting model fit |
| | - | Not meeting criteria for "+" |
| **Internal consistency** | + | At least low evidence for sufficient structural validity (assessed via GRADE) and $\alpha$(s)≥0.70 for each unidimensional scale or subscale |
| | ? | Not meeting criteria for low evidence or higher |
| | - | At least low evidence for sufficient structural validity and Cronbach's alpha(s)<.70 for each unidimensional scale or subscale |
| **Reliability** | + | ICC/ weighted Kappa ≥.70 |
| | ? | ICC/ weighted Kappa not reported |
| | - | ICC/ weighted Kappa <.70 |
| **Measurement error** | + | SDC/ LoA < MIC |
| | ? | MIC is not defined |
| | - | SDC/ LoA >MIC |
| **Hypotheses testing/ construct validity** | + | Most evidence in studies (75% or more) are in line with the hypotheses |
| | ? | Hypotheses are not defined (by review team) |
| | - | Evidence is not in line with the hypotheses |

| | | |
|---|---|---|
| **Cross-cultural validity/measurement invariance** | + | No important difference between group factors (e.g., age) in multiple group factor analysis OR no important DIF for group factors (McFadden's $R^2$ <.02) |
| | ? | The absence of multiple group factor analysis or DIF analysis |
| | - | Important differences between group factors or DIF |
| **Criterion validity** | + | Correlation with gold standard/ AUC ≥.70 |
| | ? | Not reporting all information for sufficient rating |
| | - | Correlation with gold standard/ AUC <.70 |
| **Responsiveness** | + | Results are in line with the hypothesis or AUC ≥.70 |
| | ? | No hypotheses were defined (by review team) |
| | - | Results are not in line with the hypotheses or AUC <.70 |

*Notes.* "+" = Sufficient, "?" = Indeterminate, "-" = Insufficient, CTT = Classical test theory, CFA = Confirmatory factor analysis, IRT = Item response theory, CFI = Comparative fit index, TLI = Tucker-Lewis index, RMSEA = Root mean square error of approximation, SRMR = Standardized root mean residuals, $\alpha$ = Cronbach's alpha, GRADE = Grading of Recommendations, Assessment, Development and Evaluations, ICC = Intra-class correlation coefficient, SDS = Smallest detectable change, LoA = Limits of agreement, MIC = Minimal important change, DIF = Differential item functioning, AUC = Area under curve.

## Materials and Methods

### Inclusion Criteria

The proposed systematic review and meta-analysis aligns with the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P; Page et al., 2021). Studies will be included in this study if they: 1) used the Five Cs Model of PYD Scales, 2) were published in or after 2005 (when the first version of PYDS was developed), 3) were published in the English language, and 4) focused on youth ages 10–29 years based on the suggestion of Catalano et al. (2019). They also must have either: 1) provided quantitative reports on the development and/or user rating (acceptability or appropriateness) of the Five Cs Model of PYD Scales, 2) reported the reliability or stability (test re-test, inter-rater, internal consistency, and multiple method reliability) of the Five Cs Model of PYD scales, 3) reported the validity (content, structural, construct, response process, and item functioning validity) of the Five Cs Model of PYD scales, 4) used quantitative methods and all types of study designs – namely, cohort studies, randomized/non-randomized trials, case-control studies, on-group, post-intervention, and cross-sectional studies, 5) used the Five Cs Model of PYD scales to assess study outcomes and/or risk factors (predictor variable), or 6) were systematic reviews on the Five Cs Model of PYD scales. The following studies will be excluded: 1) non-empirical research (editorials and theoretical framework discussions), 2) literature reviews, and 3) qualitative studies that aimed at developing, translating, adapting, and improving the Five Cs Model of PYD scales. Studies categorized as grey literature will be included if they can meet our eligibility criteria.

### Information Sources

By conducting a literature review using keywords, studies will be identified in three main domains: "Positive Youth Development," "Measures," and "Psychometric Properties" (Table 1.4). To perform the pilot searches, domains will be searched separately. Next, a thorough search will be run combining all domains to make sure a suitable search strategy is adjusted. PubMed, Scopus, Web of Science, and PsycINFO databases will be searched from the inception (2005) to 12$^{th}$ March 2024. Grey literature will be searched via the European Association for Grey Literature Exploitation (EAGLE). To cover more studies, we will search related scientific journals, as well as references of references. Experts in this field will be contacted to access under-print literature.

**Table 1.4** *Search Filter – PubMed Search Query.*

| | Search Strategy | Number of records |
|---|---|---|
| #1 | Positive Youth Development[Title/Abstract] | 943 |
| #2 | (instrumentation[sh] OR methods[sh] OR "Validation Studies" OR "psychometrics" OR psychometr*[tiab] OR "outcome assessment"[tiab] OR "outcome measure*" OR "discriminant analysis" OR reliab*[tiab] OR unreliab*[tiab] OR valid*[tiab] OR "internal consistency"[tiab] OR (cronbach*[tiab] AND (alpha[tiab] OR alphas[tiab])) OR (item[tiab] AND (correlation*[tiab] OR selection*[tiab] OR agreement OR test-retest[tiab] OR (test[tiab] AND retest[tiab]) OR (reliab*[tiab] AND (test[tiab] OR retest[tiab])) OR stability[tiab] OR interrater[tiab] OR inter-rater[tiab] OR intrarater[tiab] OR intra-rater[tiab] OR intertester[tiab] OR intratester[tiab] OR intratester[tiab] OR intra-observer[tiab] OR kappa[tiab] OR kappa's[tiab] OR kappas[tiab] AND (measure OR measures OR (intraclass[tiab] AND correlation*[tiab]) OR "factor analysis"[tiab] OR "factor analyses"[tiab] OR "factor structure"[tiab] OR "factor structures"[tiab] OR dimension*[tiab] OR subscale*[tiab] OR (multitrait[tiab] AND scaling[tiab] AND (analysis[tiab] OR analyses[tiab])) OR "item discriminant"[tiab] OR "interscale correlation*"[tiab] OR error[tiab] OR errors[tiab] OR (uncertainty[tiab] AND (measurement[tiab] OR measuring[tiab])) OR "standard error of measurement"[tiab] OR "Item response model"[tiab] OR IRT[tiab] OR Rasch[tiab] OR "Differential item functioning"[tiab] OR DIF[tiab] OR "computer adaptive testing"[tiab] OR "item bank"[tiab] OR "cross-cultural equivalence"[tiab]) | 496,293 |
| #3 | ((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((Surveys and Questionnaires[MeSH Terms]) OR ("Surveys and Questionnaires"[Title/Abstract])) OR (Survey Methods[MeSH Terms])) OR ("Survey Methods"[Title/Abstract])) OR (Questionnaires and Surveys[MeSH Terms])) OR ("Questionnaires and Surveys"[Title/Abstract])) OR (Methods, Survey[MeSH Terms])) OR ("Methods, Survey"[Title/Abstract])) OR (Survey Method[MeSH Terms])) OR ("Survey Method"[Title/Abstract])) OR (Methodology, Survey[MeSH Terms])) OR ("Methodology, Survey"[Title/Abstract])) OR (Survey Methodology[MeSH Terms])) OR ("Survey Methodology"[Title/Abstract])) OR (Surveys[MeSH Terms])) OR (Surveys[Title/Abstract])) OR (Survey[MeSH Terms])) OR (Survey[Title/Abstract])) OR (Questionnaire Design[MeSH Terms])) OR ("Questionnaire Design"[Title/Abstract])) OR (Design, Questionnaire[MeSH Terms])) OR ("Design, Questionnaire"[Title/Abstract])) OR (Designs, Questionnaire[MeSH Terms])) OR ("Designs, Questionnaire"[Title/Abstract])) OR (Questionnaire Designs[MeSH Terms])) OR ("Questionnaire Designs"[Title/Abstract])) OR (Baseline Survey[MeSH Terms])) OR ("Baseline Survey"[Title/Abstract])) OR (Baseline Surveys[MeSH Terms])) OR ("Baseline Surveys"[Title/Abstract])) OR (Survey, Baseline[MeSH Terms])) OR ("Survey, Baseline"[Title/Abstract])) OR (Surveys, Baseline[MeSH Terms])) OR ("Surveys, Baseline"[Title/Abstract])) OR (Respondents[MeSH Terms])) OR (Respondents[Title/Abstract])) OR (Respondent[MeSH Terms])) OR (Respondent[Title/Abstract])) OR (Questionnaires[MeSH Terms])) OR (Questionnaires[Title/Abstract])) OR (Questionnaire[MeSH Terms])) OR (Questionnaire[Title/Abstract])) OR (((((((Self Report[MeSH Terms]) OR ("Self-Report"[Title/Abstract])) OR (Report, Self[MeSH Terms])) OR ("Report, Self"[Title/Abstract])) OR (Reports, Self[MeSH Terms])) OR ("Reports, Self"[Title/Abstract])) OR (Self Reports[MeSH Terms])) OR ("Self Reports"[Title/Abstract]))) OR (index)) OR (indices)) OR ("self-report")) OR ("self-report measures")) OR ("assessment tools")) OR ("measurement scale")) (instrument)) OR ("measurement instrument")) OR (scale)) OR (measure)) OR (tool) | 6,0179,418 |
| #4 | #1 AND #2 AND 3 | 18 |
| **Filters applied: Full text, Humans, English, from 2005/1/1–2022/12/12** | | |

## Search Strategy

To develop the search strategy, a senior librarian from the Faculty of Medicine at Iran University of Medical Sciences will aid. All studies that have evaluated psychometric properties of the Five Cs Model of PYD scales in youths ages 10–29 will be included in this search strategy (see Table 1.4 for the sample search strategy). The search strategy will be adjusted based on a second version of the COSMIN initiative's search filter (Terwee et al., 2009).

## Data Screening

The Rayyan QCRI online software (Ouzzani et al., 2016) will be employed to manage references, review titles and abstracts, and detect any duplicate entries. Two independent researchers will screen the literature (MHA and PSY). If their potential disagreements are not resolved through discussion, they will refer to a third researcher (SAA). In the screening step, the articles' titles and abstracts will be reviewed and studies not compatible with our study objectives will be excluded. The eligibility process involves reviewing the full texts of the articles and excluding the ones that fail to meet our eligibility criteria. Articles that meet our inclusion criteria will be included in the analysis. A template of the search and screening process has been visually depicted in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flowchart (Figure 1.1).

## Data Collection Process

Prior to data charting and extraction, a data extraction form will be created (see Table 1.5 for a sample form). Subsequently, sample data extraction of five studies will be done to identify and fix the potential defects and shortcomings of the form. Data from the selected articles will be extracted separately by three researchers (PSY, RZ, and NH), and three senior researchers (MHA, SAA, and ETC) will be consulted in case of any ambiguities. For studies with missing data, we will request data from the corresponding author by contacting them via email.

*Care Chronicles, 5*(19), 34–36. https://doi.org/10.3348/kjr.2004.5.1.11

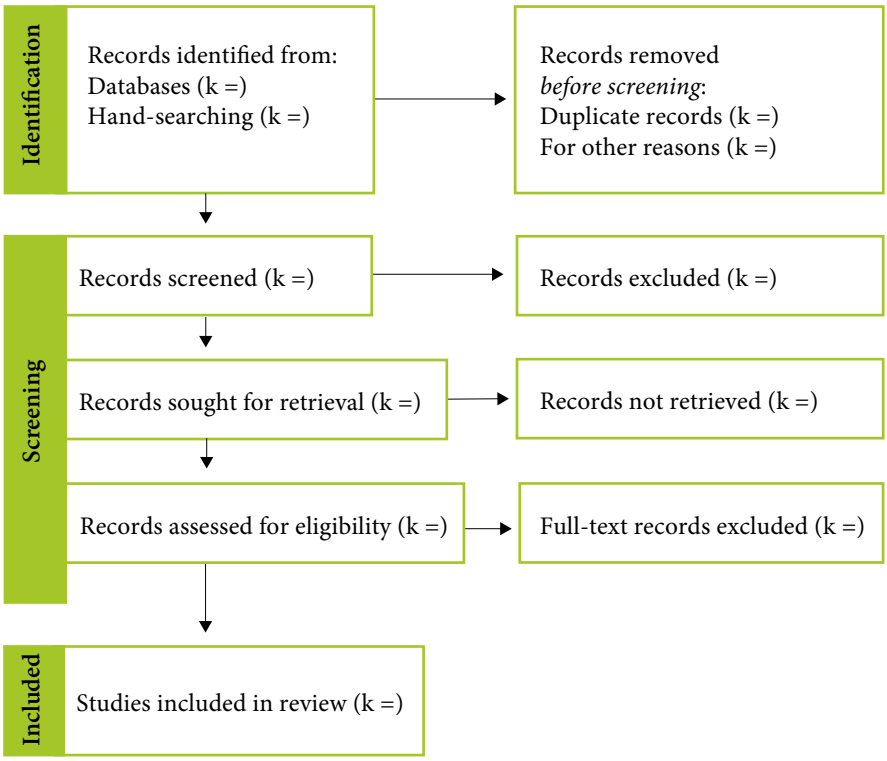


**Figure 1.1** *Search and screening process.*

## Data Extraction

The extracted data in the form will include: author(s), published year, country, language, sample size, number, age, and gender of participants, country group by income level (based on new World Bank country classifications by income level: 1- Low income, 2- Lower-middle income, 3- Upper-middle income, and 4- High income), family income level (1- Low income, 2- Lower-middle income, 3- Upper-middle income, and 4- High income), minority/majority, ethno-cultural group, immigration status, study setting (family/home, community, school, etc.), number of domains/subscales (excluding demographic information), number of questions, internal consistency, reliability, measurement error, face validity, content validity, structural validity, construct validity, cross-cultural validity, known-group validity, criterion validity, longitudinal validity, interpretability, and responsiveness.

**Table 1.5** *Data Extraction Form*

| | Author (s) | Published year | Country | Language | Participants (N/ age/ gender) | Country group by income level | Family income level | Minority/ majority | Ethno-cultural group | Immigration status | Study setting | Number of subscales | Number of questions | Reliability |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | |

| | Internal consistency | Measurement error | Validity | Content validity | Face validity | Construct validity | Structural validity | Cross-cultural validity | Criterion validity | Known-group validity | Responsiveness | Longitudinal validity | Interpretability |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | |

*Notes*. N = number.

## Outcomes

The most important outcomes of this study will include: 1) a comprehensive and clear picture of the psychometric properties (as listed in Tables 2 & 3) of the Five Cs Model of PYD scales, and 2) identification and comparison of the weaknesses and challenges of the Five Cs Model of PYD scales to inform on the most valid and reliable tools for measuring the Five Cs model of PYD under different circumstances.

## Risk of Bias in Individual Studies

The COSMIN tool (Mokkink, de Vet, et al., 2018) will be applied to measure risk of bias in each study. This tool evaluates the quality of study methodology and was specifically designed for studies on the psychometric properties of measurement tools. The 116-item COSMIN's Risk of Bias checklist consists of ten criteria (as listed in Table 1.2), including nine measurement properties along with detailed standards for questionnaire development (Prinsen et al., 2018) as follows: (1) validity (content, face, construct, structural, cross-cultural, criterion, known-group, and longitudinal validity) (Evans, 1996; Kerlinger, 1966; Mokkink et al., 2010; Prinsen et al., 2018; Teresi et al., 2009; Terwee et al., 2007), (2) reliability (measurement error, internal consistency, and reliability-stability) (de Vet et al., 2006; Mokkink et al., 2010; Rosner, 2015; Tavakol & Dennick, 2011), (3) responsiveness (Cohen, 2013; Guyatt et al., 1987; Yang & Berdine, 2017), and (4) interpretability (Prinsen et al., 2018).

## Meta-analysis of Psychometric Properties

Data pooling might not be doable in all meta-analyses; however, it is not impossible. Thus, if applicable, it will be included in our analysis ahead of data synthesis. Since there is controversy on preferred strategies and substantial discrepancies have been found when conducting two strategies for majority of cases (Borenstein et al., 2021), the conventional psychometric meta-analysis by Hunter and Schmidt (2004; 2014) will be applied. Their psychometric-principle-based approach argues that the large amount of observed variability in the association between two variables in primary evidence stems from the sources of artifact variability, such as measurement error (due to unreliable instruments), sampling error, and range restriction. Hence, meta-analyses need to calculate the potential

moderators in the relationships and rectify artifact variability across studies. To do so, investigators should adjust the artifact variability across studies through procedures such as deducting it from the total variance observed or study design.

Fisher's Z is opted for as the standardized effect size with a range from $-\infty$ to $+\infty$ and interpretation criteria resemble those for a correlation coefficient. In case intraclass, Pearson, or Spearman correlations are reported, we will utilize the Fisher's variance stabilizing transformation (Rosenberg et al., 2000; Rosenthal et al., 1994) to convert them to Fisher's Z. When unstandardized beta coefficients and *F*-ratios are reported, we will first convert them to *r* and afterwards to Fisher's Z (Rosenberg et al., 2000; Rosenthal et al., 1994). If no other statistics are reported but *p* values, we will first convert it to Z-score, after that to *r*, and finally to Fisher's Z (Rosenberg et al., 2000). If studies involve follow-up assessments, we will extract a) the total effect size for each psychometric property, and b) the effect sizes for each follow-up interval.

Comprehensive Meta Analysis V. 3.0 software (Borenstein, 2022) will be used to perform analyses. Random-effects models will be used with the assumption that the mean of effect size is unstable across studies and consequently, heterogeneity is likely. Heterogeneity will be assessed through the appraisal of the Cochrane's Q test (heterogeneity is present if significant) and the $I^2$ statistic (heterogeneity-related variability in effect estimates) (Higgins et al., 2003). $I^2$ statistic is interpreted as not important (0–40%), moderate (30–60%), substantial (50–90%), and considerable (75–100%) (Higgins et al., 2019). In the presence of considerable heterogeneity, we will conduct sensitivity analysis to make sure that the results of meta-analysis are robust. In addition, funnel plots will be employed to discover the small study effects and reporting bias, where applicable (Higgins et al., 2019).

When pooling the data is not doable, we will make a qualitative abstract based on the studies' findings on measurement properties separately for each of the Five Cs Model of PYD scales. In case of inconsistencies across the results of different studies, we will provide potential justifications, or will sum up the results per subgroup of consistent results, if any pattern emerges. In the absence of any rational justification or clear pattern of findings, results will be rated based on the majority of findings.

## Assessing Quality of Measurement Properties

The criteria of COSMIN for good measurement properties will be used to measure the quality of each study's result on measurement properties of the Five

Cs Model of PYD scales, where each property will be rated on a scale of "*insufficient*, (-)" "*indeterminate*, (?)" or "*sufficient* (+)" (as defined in Table 1.3). Based on the COSMIN criteria, the lowest score of a property will be considered as its total quality. The total quality will be interpreted as high quality (50%), moderate quality (30–50%), and low quality (less than 30%) (Mokkink, de Vet, et al., 2018; Prinsen et al., 2018; Terwee et al., 2018). According to the taxonomy, there are four quality domains encompassed by psychometric properties : reliability, validity, responsiveness, and interpretability. As all articles might not assess all measurement properties, only those properties that were evaluated in each study will be completed. Where possible, all quality domains will be evaluated separately in the present systematic review and meta-analysis. Owing to the lack of criteria for rating EFA in COSMIN, our decision will be based on the Terwee et al.'s (2007) suggestion: EFA is proper if no theoretical or empirically emerged structural model is proposed in the literature. In case a theoretical hypothesis is present, or the empirical evidence has documented a stablished factorial model, confirmatory factor analysis should be conducted (Bollen, 1989; Vet et al., 2005). To rate the quality of EFA, we will use the following criteria: (+) = the selected factor can explain 50% or higher of variance OR elected factors explained less than 50% of variance but authors could justify their choice, (?) = unable to assign a score due to unclear or missing information, such as the absence of explained variance, and (-) = Criteria for "+" were not met (Terwee et al., 2007).

## Confidence in Cumulative Evidence

After summarizing the pieces of evidence utilized for general ratings on each one of psychometric properties, the trustworthiness of the summarized evidence will be rated on a scale from "*very low*" (e.g., we are skeptical about the measurement property's estimate: it is highly likely that the actual measurement property is considerably different from the measurement property's estimate) to "*high*" (e.g., we are assured that the estimate of the measurement property is quite similar to the real measurement property), according to the modified Grading of Recommendations, Assessment, Development and Evaluations (GRADE) approach (Balshem et al., 2011; Prinsen et al., 2018). Two independent reviewers (MHA and ETC) will assess the general quality of summarized results. A senior reviewer (SAA) will be consulted for discrepancies, and consensus will be reached.

### Recommendations for Selecting an Instrument

The evaluation of psychometric properties of the Five Cs Model of PYD scales, and recommendations for future applications, will be conducted according to the combination of the scores of general ratings for each one of the psychometric properties and the results of grading (Prinsen et al., 2018). The results of all the studies included for each measure will be classified into three recommendation categories (Mokkink, de Vet, et al., 2018; Mokkink, Prinsen, et al., 2018): (a) the Five Cs Model of PYD scales can be potentially introduced as the most proper instrument for the Five Cs Model of PYD in adolescents; (b) the Five Cs Model of PYD scales can be potentially recommended, though more studies on its validation are required; and (c) the Five Cs Model of PYD scales is not to be recommended. The reason for which each of the Five Cs Model of PYD scales is labeled as one of the above categories will be provided. Future directions for research will be presented, where applicable.

## Discussion

The primary objective of the proposed systematic review is to offer a summary statement on the suitability of using the Five Cs Model of PYD scales among youth aged 10 to 29. We seek to design a review protocol to critically evaluate, summarize, and synthesize research on the measurement properties (validity, reliability, responsiveness, and interpretability, as well as the criteria of good measurement properties) of the Five Cs Model of PYD scales.

The existing systematic reviews are concentrated mostly on the outcomes of PYD programs (e.g., Catalano et al., 2019; Shek & Yu, 2011; Tidmarsh et al., 2022), whereas no systematic review and meta-analysis was conducted to appraise the quality of the Five Cs Model of PYD scales. The contribution of this proposed systematic review to the existing literature is to primarily provide a comprehensive and clear picture of the psychometric properties of the Five Cs Model of PYD scales. Subsequently, we aim to identify and compare their weaknesses and challenges in terms of validity and reliability, and finally, to introduce the most valid, reliable, and appropriate tools for measuring the Five Cs Model of PYD. In light of the critical and rigorous quality assessments on these scales, the transparency, clarity, and reproducibility of the previous findings will be identified (Shamseer et al., 2015). Therefore, as

an example, we will be able to understand the extent to which the results of the previous studies were influenced by the risk of bias. Furthermore, such evidence-based judgments on their potential weaknesses may highlight the need for the improvement of the existing measures.

The present protocol has two major limitations. First, the heterogeneity may be high because of the dissimilarity of study designs and samples (e.g., general population, at-risk adolescents, disabled youth, etc.) and high level of heterogeneity may prevent us from performing data synthesis and meta-analysis. Second, the planned search process will only include studies in the English language. The exclusion of non-English studies may limit evaluation of tools' interpretability (Boström & Broberg, 2018). Additionally, it means that a significant body of evidence in other languages will be missed for assessing cross-cultural and cross-national validity/measurement invariance of the tools (e.g., Ghasemi et al., 2019).

## Ethics and Dissemination

Since this project does not include data collection directly from the participants, ethical approval is not required. The results of the planned review will be published in a peer-reviewed journal.

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Chapter 2

# The Level and Formation of the 5Cs of Positive Youth Development Among Students as Lecturer Assistants

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**Abstract:** This mixed-method approach study aims to identify the level and the formation process of the 5Cs of PYD among students as teaching assistants. We recruited all lecturer assistants in the psychology faculty at Atma Jaya Catholic University of Indonesia (AJCUI) (N = 76) to fill out the 5Cs questionnaires and interviewed five students from this population. We implemented an exploratory sequential design by conducting a quantitative followed by a qualitative approach. The instrument comprised the Indonesian adaptive 5C scale to measure their PYD level and questions asking how the assistant activities build their PYD characteristics. Due to the COVID-19 breaks, we collected quantitative and qualitative data online. We utilized descriptive statistics to describe the level of the 5Cs and thematic content analysis to identify their formation process. The result revealed that the student's 5Cs levels tend to be high ($M$ = 3.81 (above the scale mid-score, 3); $SD$ = 0.57). Activities such as providing feedback to their peers and juniors build more substantial competence on the subject matter and develop self-confidence. Helping their peers to resolve the task enhances their caring and character. Generally, working professionally as a lecturer assistant made them respect ethics and responsibility. Further, they can develop positive relationships with their peers. These findings strengthen previous studies explaining the impact of student teaching programs on positive youth development.

*Keywords:* Positive Youth Development, 5Cs, lecturer assistant, student teaching program

## Introduction

Youths aged 15–25 years face risks. At that age, individual brain development is still immature; therefore, their decisions and choices sometimes do not reflect the best options (Yusuf & Sabarinah, 2018). Young people, primarily in their teenage years, are more likely to act on impulse. They often misinterpret others' emotions in their environment, experience various accidents, and engage in conflicts and potentially risky activities. They rarely tend to think before acting, hardly consider the consequences of their actions, or barely conceal their dangerous or inappropriate activities (Edwards & Rodak, 2016). Even so, we remain optimistic about our youth. Positive Youth Development (PYD) appreciates the enthusiasm (competent, caring, confident, connected, and having positive character) rather than the destructive side of youth (e.g., drugs, bullying, and disordered eating) (Lerner, 2005). PYD pursues youth welfare, meaning youths who can adapt to their lives and show promising results (Holsen et al., 2016).

Teachers, parents, and other youth supervisors can develop their positive characteristics in various activity programs such as sports-based, music-based, or education-based schemes. One education-based activity program considered promising to support PYD is offering youth to become teachers for their peers or younger children – the teenagers-as-teachers program (Worker et al., 2018).

Worker et al. (2018) stated that young people could learn more about roles, develop cognitive and socio-emotional skills, and place themselves in new contexts through the teenagers-as-teachers program. They understand their self-development through interaction with their younger colleagues and can evaluate their teaching skills via the development of their younger students. In this program, their interest in school and participation increases (Dean & Murdock, 1992). They are more engaged in real-life problem-solving, gaining insight into teamwork, evaluating their teaching performance, and being better prepared to enter adulthood (Murdock et al., 2003; Ripberger et al., 2009). They can also learn about social and emotional aspects (Shanahan, 2015) and better understand child development (Schine & Campbell, 1989).

In Indonesia, similar models of the teenager-as-teacher program are tutoring, mentoring, and teaching assistants in higher education (Tanojo, 2015). The senior students assist the lecturer in helping their younger students to

study. The program is implemented formally by the faculty. The assistants receive training and guidance from the lecturer on assisting their junior before the semester begins. The teaching assistants' activities depend on the type of assistance the lecturer expects. But generally, they should prepare themselves before giving feedback on their peer's assignments. They must ensure the work has been done before the lecturer discusses it in class. They must read and make notes on the material and discuss the project with the lecturer. They should supervise practicums, such as statistical analysis with specific software, organize the schedule of laboratory usage, observe and monitor the intake data through formal psychological testing, etc. These activities are mainly conducted outside of teaching hours.

At this moment, there is a crucial need to have students as teaching assistants, especially for faculty applying student-centered learning methods in their curriculum (Andriani et al., 2018; Raja et al., 2018; Widyaningrum & Damayanti, 2017). They may implement project-based, field practice teaching methods or laboratory practicum that force students to study independently. The authors conducted a small survey of the psychology students at Atma Jaya Catholic University of Indonesia (AJCUI) to understand the performance evaluation of the teaching assistants. The result showed that the students reported feeling satisfied with the support, especially when they felt frustrated doing their difficult assignments. The teaching assistant supported them in understanding the study material and encouraged them emotionally. They did not feel alone. This program shows promising positive psychological development for the students (both for the teaching assistant and the recipient of support). However, we have a problem: the number of students who are willing to be teaching assistants is insufficient. We have the intention to promote this program to the students. Therefore, we must explore the PYD level and the PYD formation process among the teaching assistants.

We argue that teaching assistants' activities and jobs will likely help them develop the 5Cs: competence, confidence, character, caring, and connections. They can enhance their *cognitive competence* when they explain the subject material to their peers during the feedback session. By re-reading and re-studying the subject, they will have a deeper understanding of it. They must also be creative when explaining the subject material so their peers will better understand it. During feedback sessions on the assignment, peer objections may challenge them. They should still be objective, open to various ideas from

their peers, and show accommodative communication. Their competence to handle disagreements and stay in positive affection can strengthen their *social competence*. These activities are relevant to the definitions of *competence* described by Dimitrova and Wiium (2021).

They should develop *care* to support their peers to achieve excellent academic results. Showing empathy and compassion toward their peers will help the class achieve the study's goal. These virtues correspond to Abdul Kadir and Mohd's (2021) and Lerner's (2009) descriptions of *caring* in the 5Cs. Allied with Dimitrova & Wiium's (2021) explanation of *confidence* and *connection*, we believe that the achievement of helping others will contribute to their *confidence* and the positive interaction between the teaching assistants with their peers and lecturers in and outside the class can help them to build a healthy *connection.* When they successfully support their peers, they will have pride in their values and capacity, and when the relationship is constructed positively, they will gain assistance in future collaborations. A teaching assistant can shape their *character* through role management. There is a dynamic situation and function when they play their role as a "teacher" and a friend. They must consider the best moment when they should be teachers and when they should be friends. They learn how to conduct themselves as obedient, emphatic, disciplined, and ethical.

This study aims to (1) identify the level of the 5Cs of the teaching assistant and (2) describe the process of building the 5Cs in the teaching assistant. Identifying the level of 5Cs via the 5C scale will help to determine whether they have adequate scores of positive characteristics. Further, by employing interviews, we can understand how those positive characteristics can be developed through assistance activities. We expect the result will show which engagement during the interaction with the students could strengthen their positive traits and behaviors. The findings may give insight into how to shape particular positive behavior/character from the 5Cs by utilizing assistance activities and employing them in an education module. The interviews were conducted with several teaching assistants after measuring the population of teaching assistants in a faculty.

This study is significant both for theoretical academic and practical situations, considering little research discussing the psychological outcomes of being a teaching assistant in the university setting. So far, many studies have explored teenagers as teachers (Van Dam, 2019; Worker et al., 2019), the effect of the teaching assistant's work on the student's performance (Andriani et al.,

2017; Marx et al., 2016; Watcharapunyawong, 2018), or on work roles and the challenges of being a peer tutor (Abbot et al., 2018). These studies did not explain whether the process of being a teaching assistant could help the development of positive development characteristics. This study will fill a gap in the literature on the psychological impact of being a teaching assistant among emerging adults. We expect data on the level of 5Cs and explanations about the process of the formation of the 5Cs can support the faculty in developing a module or design to enhance the program.

## Methods

### Research Design

We applied a mixed-method approach with an exploratory sequence design to achieve our objective. The exploratory sequence design encompassed quantitative followed by qualitative data collection as a sequence to understand the results comprehensively (Creswell, 2015). The quantitative method will support us in identifying the level of the teaching assistants' 5Cs. Next, the qualitative approach will help us describe the formation process of the 5Cs in their activities. The participants were teaching assistants in the psychology faculty at AJCUI. We conducted a survey, collecting quantitative data from 76 teaching assistants at the bachelor level (Table 2.1 describes the number of teaching assistants and the subject's lecture). Next, for the interview in the qualitative approach, we randomly sampled five participants from that population using an online name lottery.

### Research Instruments

*Quantitative design*. We applied the Indonesian-adapted version of the 5C scale (Suryani et al., 2019) and kept the five-point Likert-scale model of the instrument. Suryani et al. (2019) adapted and tested the psychometric elements of the scale by including 606 students (16–23 years old) from two cities, Jakarta (urban) and Bandar Baru (rural). It comprises five positive psychological aspects: competence (six items with Cronbach's alpha = .73), confidence (six items with Cronbach's alpha = .83), character (eight items with Cronbach's alpha = .71), caring (six items with Cronbach's alpha = .81), and

connection (eight items with Cronbach's alpha = .79). The Cronbach's alpha of all subscales was reliable with coefficient above .70. (Anastasi & Urbina, 1997). The samples of items in the 5C scales are displayed in Table 2.2.

In the *qualitative approach,* we developed an interview protocol with items in the 5C scale as the reference (Table 2.3). We asked these questions on the field with probing and additional inquiries for more detailed information and deeper understanding.

**Table 2.1** *Number of Participants Based on the Subject Lecture.*

| Name of subject lecture | Number of classes | Number of teaching assistants | % |
|---|---|---|---|
| 1. Bahasa Indonesia (Indonesian language) | 1 | 1 | 1.32 |
| 2. Qualitative research method | 7 | 7 | 9.21 |
| 3. Basic statistics | 8 | 16 | 21.05 |
| 4. Inferential statistic | 7 | 14 | 18.42 |
| 5. Psychometric | 1 | 2 | 2.63 |
| 6. Test construction | 5 | 10 | 13.15 |
| 7. Training | 4 | 8 | 10.52 |
| 8. Observation and interview methods | 9 | 18 | 23.67 |
| Total | 44 | 76 | 100 |

**Table 2.2** *Samples of Items in the 5C Scales.*

| Dimensions of 5Cs | Sample of items |
|---|---|
| Competence | 1. I have a lot of friends.<br>2. I do very well in my classwork at school/university.<br>3. I am better than others my age at sports. |
| Confidence | 1. I am happy with myself most of the time.<br>2. I really like the way I look.<br>3. I am good-looking. |
| Character | 1. I hardly ever do things I know I shouldn't do<br>2. I usually act the way I am supposed to.<br>3. I help to make the world a better place to live in. |

| | |
|---|---|
| Caring | 1. When I see someone being taken advantage of, I want to help them.<br>2. When I see someone being picked on, I feel sorry for them.<br>3. When I see another person who is hurt or upset, I feel sorry for them. |
| Connection | 1. I receive a lot of encouragement at my school/university.<br>2. I am a useful and important member of my family.<br>3. I feel like an important member of my local community. |

**Table 2.3** *List of Questions in the Interview Session.*

| Topics | Questions |
|---|---|
| Motivation | What is your motivation for being a teaching assistant? Which subject were you responsible for?<br>*Probing: why did you choose that particular subject?*<br>*Probing: what is the initial thought or experience that drove you to be an assistant in that subject?* |
| Activities | What are your activities as a teaching assistant?<br>*Probing: What is your job description? Did you do more than your job description? What are they? Why did you do that?* |
| Benefit | What is the benefit of being a teaching assistant?<br>*Probing: Did you think you experienced development compared to when you were not a teaching assistant?* |
| Competence | How does being a teaching assistant help you develop the quality of your:<br>1. Social skills?<br>*Probing: please explain your experience with this development.*<br>2. Academic skills?<br>*Probing: please describe your experience with this development.*<br>3. Cognitive abilities?<br>*Probing: please tell me your experience with this development.*<br>4. Work ability?<br>*Probing: please explain your experience with this development.* |
| Confidence | How has being a teaching assistant helped you develop your self-confidence? |
| Character | How can being a teaching assistant help you develop respect for and obedience to the rules that apply in your environment? |

| | |
|---|---|
| Caring | How has being a teaching assistant helped you develop awareness and care for those around you?<br>*Probing: do you have an experience where you think you have improved your understanding of others?*<br>*Probing: Did you ever feel that your empathy and sympathy are better than before you were a teaching assistant?* |
| Connection | How has being a teaching assistant helped you build relationships with those around you?<br>*Probing: please explain how your network is getting wider by being a teaching assistant.*<br>*Probing: Is your number of friends growing?*<br>*Probing: Have you joined a new community?* |

## Data Analysis

*The quantitative data*. In data analysis for quantitative data, we identified the minimum and maximum 5Cs scores and then calculated their mean scores and standard deviation. We worked with participant total scores in each dimension divided by the number of items in each dimension; therefore, we have means scores in the 1–5 range. Subsequently, we compared the mean scores with the scale scores (1–5) to interpret the measurement results, whether below or above the scale's mid-point, namely three. Next, we made a standard for diagnosing the scores by dividing the scale score range into four categories. Scores in the 1.00–2.00 range are categorized as very low, 2.01–3.00 as low, 3.01–4.00 as medium, and 4.01–5 as high. This setting standard method was encouraged by norm development steps explained by Anastasi and Urbina (1997), Crocker and Algina (2008), and Gilford and Fruchter (1978).

*The qualitative data*. We analyzed the participants' reports from the interview by using the thematic analysis method. In this method, as Willig (2013) and Creswell (2015) explained, we identified and organized the patterns and meanings of the stories shared by the participants. To determine the pattern, we made coding and labels. From this, we conclude the theme. Next, we presented our findings to participants to guarantee an accurate analysis and avoid misinterpretation of the narration to achieve the result's credibility.

# Results

## The 5Cs Level

The teaching assistants' 5Cs level tended to be at the medium and high levels (higher than scores 3 and 4) (Table 2.4). The lowest level was *competence* (M = 3.26, SD = .26, medium), and the highest was *character* (M = 4.11, SD = .40, high).

**Table 2.4** *Description of the Teaching Assistants' 5Cs Level.*

| 5Cs | Min–Max Scores | *M* | *SD* | Level |
|---|---|---|---|---|
| Competence | 1.50–4.67 | 3.26 | .62 | Medium |
| Confidence | 1.33–5.00 | 3.80 | .66 | Medium |
| Character | 3.00–5.00 | 4.11 | .40 | High |
| Caring | 1.83–5.00 | 4.07 | .61 | High |
| Connection | 2.25–4.88 | 3.83 | .55 | Medium |

In qualitative approach, we prepared to include eight participants; however, our data achieved saturation when we interviewed the fifth participant. The five teaching assistants interviewed in this study have excellent GPAs (min 3.44; max 3.87, *M* = 3.71, *SD* = .17) and have been teaching assistants for 1–2 years (M = 1.6, SD = .55). They assisted lectures for subjects Basic Statistics, Bahasa Indonesia, Psychometrics, Test Construction, Observation & Interview Methods.

## The Formation of 5Cs in Teaching Assistants' Activities

1. Motivation for being a teaching assistant

The participants revealed that they became teaching assistants because of personal interests such as the hobby of teaching, concern for helping others, and self-development.

> *When we talk about becoming an assistant, firstly because I want to help people… (WR).*

*I have a hobby. My hobby is teaching. So, I always wanted to be a teaching assistant; I want to teach. I want to share my knowledge with people. I've never been afraid of a lack of knowledge… (ME).*

*…that's why I want to try to be a teaching assistant at Bahasa Indonesia. I feel it's a good opportunity because I like feedback. No matter how often we write, sometimes we don't use effective sentences. So, I think it could help me to start from scratch again and improve my writing style (EV).*

2. Task description of a teaching assistant

The participants described their tasks description and responsibilities as teaching assistants: managing deadlines and homework for the students, providing feedback on student assignments, giving marks for tasks and duties, discussing the subject material, coordinating with lecturers for practicum or fieldwork, and assessing students' home assignments.

*…for example, when dealing with students who haven't submitted the assignments or have a bad mark on exercises, I can help them handle it and support them to raise their scores. I helped them. Some of them did not pay attention in class or ask many questions. I have to take care of and accompany them. (WR)*

*In my class, I applied feedback to improve the quality of their paper before they submitted it to the lecturer. As a teaching assistant in Basic Statistics, I guide them to make a good summary. Sometimes with my partner, we made exercise questions. Recently, we made a bank of questions to prepare them for the midterm test. They can exercise their comprehension (ME).*

*In the observation and interview methods class, it seems we did everything. We prepare the consultation schedule, arrange PPT for the practicum class, remind the lecturer about the topic and*

*agenda for the next class, and give feedback for their assignment from the lecturer (GA).*

*As teaching assistants, we facilitate lecturers and students. I thought the teaching assistant job was only teaching them in practicum. After getting involved, I found it is not only teaching (EV).*

3. Benefit of being a teaching assistant

The participants explained that working as teaching assistants allowed them to train their social sensitivity, social adjustment, public speaking, time management, interpersonal relationships, subject mastery, and professionalism, as well as earn a salary.

*When we meet more people, we understand how to interact with them, personally or as a group. We know how to approach this type or that type of person. We can appreciate individual differences (WR).*

*You know that I like teaching. Being a teaching assistant allowed me to train my public speaking ability. I also should have good time management skills because I have classes to attend and organizational activities, and I still have to give my time for this role. The last one, in this role, I am developing a social relationship. Outside the class, we can still be friends with our juniors. Supervising and accompanying them may build a closer relationship and make them feel more comfortable and confident studying the subject (ME).*

*I think I have improved. Before being a teaching assistant, I ignored the consequences of my writing. When I give feedback on my juniors' writing, I ask them to think about what they should do for the next sentence or paragraph. I also asked them what would happen in the current work's future. Not only say yes today but consider the consequences (BF).*

*I can have a better understanding of the subject materials. The juniors prefer to ask their seniors rather than the lecturer to understand the problems in the assignment. So, I need to read and study more to respond to their questions (GA).*

*The benefit is we receive a salary, but I did not see the amount. Working in this program allows me to learn more. I can study from two different lecturers for the subject (EV).*

4. The formation of social competence

The participants described that the activities of a teaching assistant could support them in developing their social adjustment because they work with many students and lecturers. They also learned to be open to various opinions and perspectives and speak and act assertively.

*I feel at least I can help them. I learned how to communicate and treat them well. I can't use the same approach and generalize my treatment to everyone because they are different. Maybe giving this treatment to that person will work, but not to others, or the treatment can impact each person differently (WR).*

*… socializing, of course. I can get to know more student types. Some ask and request us impolitely as if we are their servant or contrary, they ask us very politely, or those who are afraid to ask and to the point of doubting themselves. I think it's cool that they can feel comfortable talking to us. It is also a privilege to have a relationship with the lecturer (BF).*

*…I learned a lot about assertiveness, and how to speak assertively. I think it changed a lot in me (GA).*

*As a teaching assistant, I must learn how to accommodate the lecturer and the students. We also should have a good relationship with them, and it is not easy. I understand how to handle the students (EV).*

5. The formation of cognitive and academic competence

The participants explained that being a teaching assistant can aid them in sharpening their analytical thinking, decision-making, and critical thinking, widening their perspective and deepening their understanding of the subject. These developments are beneficial for their subsequent study.

> *The work as a teaching assistant sharpens concentration and makes you think faster. We cannot waste time because we must give feedback on the students' papers, which is a lot! (BF)*

> *About decision-making, I felt a dilemma. I cannot give bad or good grades for the quiz subjectively because we have the answer key. It stresses me because our role is to support them in reaching better scores. Then, when I find one or two words similar to the key, I can accept them as the correct answer (EV).*

> *… academically, it helps me. At the beginning of being a teaching assistant, I forgot the definition, function, and logic of standard deviation usage. By helping my juniors, I learn again and now can keep remembering it (ME).*

> *It helps me widen my perspective. Moreover, the method I learned in class while running my role as teaching assistant supports me a lot for my final thesis (BF).*

> *It recalls my memory of Psychometrics. I know that Basic Statistics is different than Psychometrics. But Basic Statistics is fundamental for Psychometrics, so remembering it helps me avoid misdirecting the students (GA).*

6. The formation of professionalism

The participants revealed that being a teaching assistant coaches them to be responsible and professional: in appearance, in making objective and fair decisions, and in being responsive.

*…for example, about the time arrangement. First, you are not allowed to be late! When making scheduled meetings, you should confirm with the lecturer and not miscommunicate with the students. Even if there is miscommunication, we must apologize; the mistake is on us. Probably it was because of a misunderstanding. It has to be fair, so you can't just blame the students like that (BF).*

*… just professional. Sometimes the students are my juniors in a student organization. I know them well. Because of our closeness, sometimes they ask questions to which I should not reveal the answer (GA).*

*When we are in an online class, I have to open my camera. I think we should not wear a T-shirt, but if we don't have a choice, the T-shirt should be in good shape. Do not show your messy appearance (ME).*

7. The formation of the connection

The participants described that being a teaching assistant widens their connection.

*We can also get to know the other teaching assistants and make friends with them (WR).*

*… previously we already knew each other, but through this class, we can be closer friends than before (ME).*

*Of course, I could have more friends. At first, our relationship was between mentee and mentor, but then we could be friends (BF).*

8. The formation of confidence

The participants described that the status of a teaching assistant could enhance their self-confidence. When they do public speaking in lecturing, they gain confidence.

> *Being a teaching assistant makes me feel "I am a plus", and I have confidence when talking to others who are still learning (WR).*

> *I gain confidence when I do public speaking. Academically, I am confident because I have mastered the subject previously (ME).*

> *Students in my class were the ones who were repeating the course. Therefore, I am confident in my mastery of the subject (EV).*

9. Formation of character.

The participants explained that they learned to respect others and conduct themselves ethically in interacting and communicating with the students and lecturers.

> *My schedule on Wednesday is full. I have classes from the morning until the afternoon. Next, I teach until evening followed by a meeting. Suddenly at 9 p.m., a student contacted me and asked for a discussion about the subject material, which forced me to open a book again. I didn't know how to react to that. That is a challenge for me. I learned how to be assertive and accommodating at the same time. But because I like teaching, I tried my best to help them (ME).*

> *When I need to confirm something with the lecturer, I try to respect her time. When the students and I finish our discussion at 8 p.m., I will confirm with the lecturer the following day (BF).*

> *I am concerned about my communication with the lecturer and the student. I should use a different approach to keep respect for them and be effective (EV).*

10. The formation of caring

The participants reported that being a teaching assistant fostered empathy for the students. The participants gave attention to and listened to those who had academic problems and those who wanted to learn more and were enthusiastic.

> *I applied to be a teaching assistant because I want to help. Even when I retired as a teaching assistant, I liked helping my peers when they had a problem with the subject (WR).*

> *When exercising questions, some ask for additional time, about five minutes. I saw they were serious and enthusiastic; I could tolerate it and support them to finish their assignment. I think it is OK for exercise, but I cannot do it for the exam (ME).*

> *Some students don't know about item analysis. So, I encourage them and share the resources I have. I share the book and links to related journal topics (BF).*

> *I care for them by reminding them to submit tasks and assignments the night before and the day of the deadline. I am eager to ensure they submit all tasks to have complete grades (EV).*

### Communicative Validity

We utilized the communicative validity method to ensure the credibility of the analysis. We summarized and presented the results and asked for feedback from the participants. All participants agreed with the results. They also confirmed that being a teaching assistant developed and enhanced their skill, competencies, and character, as mentioned in the 5Cs.

## Discussion

This study aimed to describe the teaching assistants' 5Cs level and the formation of the 5Cs through the teaching assistant activities. We found that the

5Cs levels are medium tending to be high, with character and caring means scores as the highest. In qualitative analysis, we found that one activity, namely marking scores on exercise questions and assignments, could contribute to their positive development. For example, when a teaching assistant has to mark scores on tasks or assignments, they want to raise the student's score by grading the work process and not only based on the rubric fulfillment (right-wrong answers). However, they found that some students' performance is still below standard even though they have given better scores and accommodated them with various resources (books, journals, videos, etc.). Here, the teaching assistant found a dilemma and dissatisfaction. Through this experience, they could learn how to cope with unfortunate events even when they had helped those in need. This experience is relevant to the 5Cs' character, caring, and professionalism.

The competence, confidence, and connection were at a medium level. The teaching assistant reported that being involved in teaching activities allowed them to deepen their knowledge of the subject by reviewing the topics before lecturing in practicum sessions and by writing the questions and answers for exercises, quizzes, or assignments. At the same time, this activity can build their self-confidence. After re-studying the subject, they believe they have sufficient knowledge to be shared. Further, practicing public speaking could enhance their self-confidence. The connection was built by having interactions and activities with the students and the lecturer (note: they can be assistants for more than one subject). With this connection, they can have more resources and extend their support systems which are probably beneficial for their future. For example, they can consult the lecturer they work with besides their supervisor when doing a bachelor thesis and ask the students to participate in their research thesis. The interaction also improves the social competence of the teaching assistant. They should be sensitive to when and how to ask and respond to their communicant partners.

Regarding the research questions presented in this study, we may conclude that the teaching assistants had an adequate level of positive development. The process of 5Cs formation in a teaching assistant program involving managing class activities, supervising, and tutoring peers was able to form competence, confidence, character, connection, and care for the youth. These findings are relevant to Murdock et al. (2003) and Worker et al. (2008) in that the teenager-as-teacher program can develop young people's PYD.

The teaching assistants also mentioned the benefits of being an assistant. They can rehearse their social skills, deepen their knowledge, elevate their positive character, and earn a salary. Earning a salary made them respectful and responsible about their job. This study confirmed that teaching assistant activities are valuable for the positive psychological development of young people.

## Limitations of the Study and Future Direction

We understand that the method in this study is still lacking. Although we employed random sampling in qualitative data collection, we should consider using extreme case sampling to match the explanatory sequence design. The quantitative approach gave us the score distribution of the 5Cs to identify the participants with the lowest and highest scores. Participants belonging to these extreme positions may provide richer interview data.

Next, we did not determine whether the current 5Cs level resulted from the teaching assistant activities because we did not measure them before their job. We did not conduct a comparison analysis, which we consider essential to test the effect of the activities. Therefore, we suggest that the subsequent research measure the pre-and post-test of 5Cs before and after the teaching assistant activity. This study has relatively strong validity because we included the population in the 5Cs measurement. Moreover, in the qualitative data analysis, we achieved data saturation. We suggest the researcher ask the participants about their 5Cs before and after finishing their roles in future studies.

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Chapter 3

# Parenting Practices and School Climate: Association with the 5Cs of Positive Youth Development in Croatia

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**Abstract:** Positive youth development (PYD) is based on five characteristics (5Cs): competence, character, confidence, caring, and connection. The literature suggests that all young people have certain strengths and that, with appropriate support in their surroundings, we can influence their development in a positive direction. The most important environments for adolescents to thrive are family and school. Therefore, the aim of this study was to examine the relationship between family and school factors, and positive youth development. The study was conducted within the broader project Testing the 5C Framework of Positive Youth Development: Traditional and Digital Mobile Assessment – P.R.O.T.E.C.T. funded by Croatian Science Foundation (UIP-2020-02-2852). Participants were 3,559 (54% female and 3% did not want to declare) first-year secondary school students ($M_{age}$ = 15.12, SD = .39) from eight cities in Croatia. Assessment was conducted online during regular school hours and lasted an average of 40 minutes. The following measures were used: *Short Measure of the Five Cs*, PYD-SF which consists of five subscales: competence, character, confidence, caring, and connection; *Parental Monitoring*, with subscales: parental knowledge, youth disclosure, parental solicitation, parental control, and overcontrol; and *School climate questionnaire*. Several hierarchical regression analyses were conducted to analyse how parental monitoring and school climate predict PYD characteristics. The results showed that the components of positive development are associated with family and school factors, i.e., all predictors together explain between 13% and 40% of PYD characteristics. Although the parental monitoring variables were significantly associated with PYD, the strongest predictor was the school climate ($\beta$ = .21 to $\beta$ = .27). Also, school climate has proven to be a significant mediator between youth disclosure and PYD. The results emphasise the importance of developing parenting skills that support open communication, especially within the school context.

*Keywords:* parenting, school climate, PYD, 5C model, youth disclosure

## Introduction

Positive youth development (PYD), with its main principle being that all youths have strengths and an inherent capacity for growth, development and thriving, is an increasingly emerging field of science and practice worldwide. The core ideas in PYD include developmental contexts, places, settings, ecologies, and relationships with the potential to generate support, opportunities, and resources for adolescents (Benson et al., 2007). One of the most widespread and validated frameworks for conceptualising PYD is the 5C model (Lerner, 2005), which emphasises the interaction of internal characteristics of youth that help them to thrive and the quality of support in their environment. Within the 5C model, *competence* reflects cognitive, social, academic, and vocational competencies, or positive views of one's abilities in domain-specific areas; *confidence* is an internal sense of overall positive self-worth and self-efficacy, the individual's view of own positive value and capacities, while *connection* refers to the individual's positive relationships with other people and/or organisations, positive bonds with peers, family, school, and community. *Character* includes the internalisation of social rules and norms, sense of right and wrong, and moral integrity, and finally, *caring* is seen as the capacity to sympathise and empathise with others, or to achieve closeness in one's social network (Dimitrova & Wiium, 2021; Lerner et al., 2021).

The literature suggests that there are some gender differences in PYD. Girls have higher scores on character, caring and connection, while boys have higher scores on competence and confidence (Gomez-Baya et al., 2022). Because girls are taught to be attentive from an early age, they have more strongly developed empathy later in life (Eisenberg & Lennon, 1983) and are also more likely to respect rules and social norms (Galasso et al., 2020). Girls are more oriented toward social relationships and perceive higher levels of classmate and close friend support than boys (Rueger et al., 2008). On the contrary, girls have a lower sense of competence and confidence. One of the more prominent reasons is the importance of physical appearance for a feeling of competence, especially in early adolescence. Furthermore, boys are more strongly affected by a feeling of incompetence in the school and academic environment, and girls by a feeling of incompetence in social relationships (Abela & Hankin, 2009). In general, boys express a higher level of self-confidence compared to girls (Marsh et al., 1991).

All models of PYD, including the 5Cs, share the idea of dynamic relationships between the individual and the context (Lerner et al., 2021). This idea is complementary to the Ecological Systems Theory's five systems in which development occurs: Microsystem, Mesosystem, Exosystem, Macrosystem, and Chronosystem (Bronnfenbrenner, 1979). From the PYD perspective, the most interesting system so far has been the microsystem, more specifically the family and school context.

Studies of family risk and protective factors over the years have consistently emphasised the correlation between specific parental practices and family interactions with adolescent mental health (problems), well-being and positive youth development. There is a body of evidence from cross-sectional studies indicating that stable and supportive home environment, family attachment, cohesion, positive relationships, open communication, parental warmth, but also parental monitoring and satisfaction within the family form a protective family environment that promotes and protects mental health and well-being (Aguirre-Davila et al., 2021; Maglica et al., 2021; Vélez et al., 2019). Prospective longitudinal studies such as that of Alm et al. (2020) also support the idea that poor family relationships in adolescence may be a risk factor for mental health problems later in life. Studies from the PYD framework also indicate positive and significant correlations with parental engagement, warmth and autonomy support, strong relationships with parents (Bakhshaee et al. 2016; Mohamed et al., 2017; O'Connor et al., 2010), parental responsiveness (Yu &Shek, 2021), parental monitoring, trust, absence of alienation, and communication with parents (Kaniušonyte, 2015; Novak et al., 2021).

Parenting practices include parental supervision of the child's behaviour and activities, the quantity and quality of communication, setting limits, and teaching norms, values, and goals (Dorius et al., 2004, Stattin and Kerr, 2000; Tharp & Noonan, 2012). The parent-child relationship based on parents' awareness of their child's activities represents a key parenting practice for young people's development (Kapetanovic & Boson, 2020). Stattin and Kerr (2000) emphasise that parental monitoring cannot be effective without positive exchange with the adolescents and their willingness to share information. Adolescent-driven, voluntary communication and disclosure emerges as one of the strongest protective factors for adolescent mental health, and some authors of prospective longitudinal studies have found that it predicts fewer depressive symptoms (Hamza & Willoughby, 2011) or the externalising of problems

(Kapetanovic et al., 2020). That being said, monitoring reflects proper attunement between parent and adolescent, at best based upon good communication and warm relationship. Adequate parental monitoring and control delays the initiation of risky activities, decreases adolescent substance use, diminishes risky sexual and delinquent behaviour of other kinds (Ryan et al., 2015; Tharp & Noonan, 2012). On the other hand, if adolescents see parental involvement in their life as intrusive, that can negatively affect developmental outcomes (León-del-Barco et al. 2019, De Kemp et al, 2006). Parent-initiated communication, asking questions, and solicitation, which are often related to monitoring and setting rules, should not be intrusive because adolescents can perceive them as overly controlling and threatening (Hawk et al., 2008), which in turn may have negative consequences on their development (Hessel et al., 2016).

The second micro-ecological context is school, with its importance for multiple domains of adolescent functioning like cognitive and social development, vocational development, identity formation, and peer relationships (Gomez & Ang, 2007). School represents the primary and natural setting for the development of personal and social skills that help adolescents to promote their health and well-being (Goldenberg et al., 2019; Tomé et al., 2019). Respecting the fact that adolescents spend most of their time in the school environment, school becomes a habitat for positive interactions and for opportunities that promote PYD. One of the constructs usually measured within the school context is school climate. It is a broad, multidimensional construct that includes physical security, individuals' relationships at school such as those with teachers, employees and parents, educational methods, and school physical environment (National School Climate Center, 2007). School climate dimensions such as teacher support, autonomy support and connectedness have been shown to be associated with PYD (American School Health Association, 2004; Bakhshaee et al., 2016; Bundick & Tirri, 2014), predict future adolescent emotional health (Kidger et al., 2012) and purposefulness (Bundick & Tirri, 2014). In the study by Bakhshaee et al. (2016), teacher support, along with parental engagement and autonomy, explained 40% of the variance in PYD. School feelings are also significantly influenced by adolescents' competence, and the 5Cs play an important role in promoting positive interpersonal relationships and adolescent well-being (Tomé et al., 2020).

Despite the growing literature on positive youth development and the importance of the family and school context for youth to thrive, positive youth

development has not yet been recognized as an important research question in Croatia. As a result, there are few studies (e.g., Gomez-Baya et al., 2022; Novak et al., 2021, Vrdoljak et al., 2023) examining positive youth development among Croatian youth. Additionally, in cross-cultural PYD studies, direct examinations of the family factors' contribution to PYD is uncommon (Bradley et al., 2021; Chen et al, 2019; Dutra-Thomé & Ponciano, 2021).

For this reason, this paper focuses on individual differences (i.e., gender) and family and school context as predictors of positive development among secondary school students in Croatia. The aim of this study is to examine how determinants of parental practices and school climate are associated with specific components of the 5C model.

## Methods

### Participants and Procedure

The research was conducted within the broader project: *Testing the 5C Framework of Positive Youth Development: Traditional and Digital Mobile Assessment – P.R.O.T.E.C.T.* funded by the Croatian Science Foundation (UIP-2020-02-2852). The sample presented in the paper consists of the first wave of the study, and participants were first-year secondary school students ($M_{age}$ = 15.12, SD = .39) from eight cities in Croatia. There were a total of 3,559 students (54% female and 3% did not want to declare their gender). The sample included public schools[1]: 39.5% of students were enrolled in grammar schools, 43.6% in four- or five-year vocational schools, and 16.9% students were attending three-year vocational schools.

The approval for the study was obtained from the Ministry of Science and Education, National Agency for Education, and the institutional ethics

1 In the Croatian education system, primary school lasts eight years. After primary school, students enrol in secondary school: grammar – gymnasium (which lasts four years) or vocational school (which can last three to five years). While grammar schools prepare students for university, vocational schools that last three years educate students for professions such as hairdresser, shoemaker, auto mechanic, florist… Four-year vocational schools are, for example, technical and business schools, and five-year vocational school is medical school. Most students in Croatia (99%) attend public schools, which are free.

committee. Because of questions related to mental health and risk behaviours, parents' active consent was sought for the participation of their children in the research. Before completing the questionnaire, participants were informed about the purpose of the study and were asked to give informed consent. Participation was completely confidential and voluntary. Assessment was conducted during regular school hours and lasted an average of 40 minutes. For each included class, the research coordinator provided detailed instructions and a link to online questionnaires on the SurveyMonkey platform.

## Measures

A battery of instruments was applied within this project, but only the measures used for the purposes of this paper will be described here. All measures used were either constructed in Croatia or translated to Croatian and validated in several preliminary studies (e.g. Maglica et al., 2021), and their internal consistency was checked.

*Parental Monitoring* (Stattin & Kerr, 2000). The questionnaire contains 27 items and five subscales – Parental knowledge (knowledge about what their adolescents are doing and where they are), Youth disclosure (adolescent's voluntary sharing of information), Parental solicitation (gathering information about children's activities by asking the children themselves and talking with their friends), Parental control (setting rules that the adolescent must follow) and Overcontrol (too much control). Participants express an opinion on a Likert-type scale where 1 = None of the time and 5 = All of the time. Cronbach's alphas were between $\alpha = .76$ (Parental knowledge) and $\alpha = .87$ (Parental control).

*Croatian school climate questionnaire* (Velki et al., 2014) contains 15 items. The questionnaire is characterised by a one-factor structure and contains items that include sense of belonging and safety at school, relationship between teachers and students, atmosphere for learning, and parental connection with school and involvement in children's education. Participants express an opinion on Likert-type scale where 1 = Strongly disagree and 5 = Strongly agree. Cronbach's alpha was $\alpha = 0.92$, which is in line with the high internal consistency of $\alpha = .90$ found by Velki et al. (2014).

*Short Measure of the Five Cs,* PYD-SF (Geldhof et al., 2014). The questionnaire contains 34 items and five subscales – Competence (ability to master

various life domains, including academic excellence, social, and interpersonal skills), Confidence (overall positive outlook of oneself, high self-awareness), Character (ethical sense of right or wrong, respect toward social and cultural standards and integrity), Connection (positive and mutual relationships with important people and institutions) and Caring (compassion and sympathy for others). Each of the subscales that measure Competence, Confidence and Caring consist of six items, while the subscales of Character and Connection consist of eight items each. Participants express an opinion on a five-point Likert-type scale where 1 = not at all like me and 5 = just like me. Cronbach's alphas were between $\alpha = 0.70$ (Competence) and $\alpha = 0.90$ (Confidence). The reliability of subscales was in line with the studies by Maglica et al. (2021), who found Cronbach's alphas between $\alpha = 0.67$ (Competence) and $\alpha = 90$ (Competence), and by Gomez-Baya et al. (2022), who found Cronbach's alphas between $\alpha = 0.67$ (Competence) and $\alpha = 0.86$ (Caring).

Demographic data were also collected, such as age, gender, where they come from, and which school they attend. The male gender is indicated in the databases with the number 1, and the female with the number 2.

## Results

In order to elucidate research questions, a series of statistical analyses was conducted. Descriptive statistics are presented with normality tests and inter-correlations of variables used. Several hierarchical regression analyses were conducted to analyse how parental monitoring and school climate predict PYD characteristics. To examine the mediation effect of school climate on the relation between youth disclosure and PYD, a PROCESS macro procedure for SPSS (Hayes, 2013) was used.

Descriptive statistics, skewness, and kurtosis will be first presented in the results section (Table 3.1).

**Table 3.1** *Descriptive Statistics, Skewness, and Kurtosis of all Measured Variables*

| | Male | | Female | | Total | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Variables | M | SD | M | SD | M | *SD* | min | max | Skew | Kurt |
| Parental knowledge | 3.70 | .76 | 3.85 | .74 | 3.77 | .76 | 1 | 5 | -.56 | .01 |
| Youth disclosure | 3,61 | .78 | 3.83 | .88 | 3.72 | .85 | 1 | 5 | -.36 | -.42 |
| Parental solicitation | 3.05 | .88 | 3.41 | .93 | 3.25 | .92 | 1 | 5 | -.08 | -.50 |
| Parental control | 3.54 | 1.02 | 4.00 | .89 | 3.79 | .98 | 1 | 5 | -.66 | -.20 |
| Overcontrol | 2.30 | .85 | 2.20 | .90 | 2.25 | .88 | 1 | 5 | .51 | -.24 |
| School climate | 51.14 | 11.19 | 50,67 | 10.40 | 50.76 | 10.78 | 15 | 75 | -.44 | .56 |
| Competence | 3.56 | .65 | 3.33 | .65 | 3.42 | .67 | 1 | 5 | -.33 | .01 |
| Character | 3.59 | .61 | 3.86 | .53 | 3.73 | .60 | 1 | 5 | -.60 | .80 |
| Confidence | 3.82 | .78 | 3.46 | .93 | 3.60 | .90 | 1 | 5 | -.60 | -.16 |
| Caring | 3.74 | .82 | 4.19 | .70 | 4.00 | .80 | 1 | 5 | -.86 | .73 |
| Connection | 3.56 | .64 | 3.49 | .67 | 3.51 | .67 | 1 | 5 | -.39 | .11 |

**Table 3.2** *Correlation Matrix of the Study Variables*

| Variables | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. P. knowledge | .71** | .46** | .38** | -.21** | .38*** | .14** | .43*** | .21** | .31** | .36** | .07** |
| 2. Youth disclosure | - | .53** | „.37** | -.31** | .36** | .19** | .43** | .27** | .32** | .39** | .09** |
| 3. P. solicitation | | - | .48** | -.01 | .22** | .16** | .30** | .14** | .29** | .32** | .17** |
| 4. P. control | | | - | .10** | .16** | .02 | .28** | .00 | .27** | .11** | .20** |
| 5. Overcontrol | | | | - | -.22** | -.08** | -.22** | -.19** | -.13** | -.22** | -.03 |
| 6. School climate | | | | | - | .27** | .40** | .36** | .30** | .57** | -.05* |
| 7. Competence | | | | | | - | .25** | .56** | .13** | .53** | -.20** |
| 8. Character | | | | | | | - | .25** | .64** | .44** | .14** |
| 9. Confidence | | | | | | | | - | .08** | .59** | -.24** |
| 10. Caring | | | | | | | | | - | .34** | .20** |
| 11. Connection | | | | | | | | | | - | -.11** |
| 12. Gender | | | | | | | | | | | - |

*Note.* ***p < .001; **p < .01; *p < .05

The average values of the parental monitoring subscales were around the middle of the range, with the exception of the Overcontrol subscale, where average value was located in the lower part of the range. Average values for the PYD subscales were similar. The Caring subscale showed a slightly higher average value. The average value of the school climate scale was in the upper part of the range. The results also showed that variables have a normal distribution trend considering that the skewness is in the +/-3 and the kurtosis is in the +/-10 range (Kline, 1998).

Associations between parental monitoring, school climate, and PYD characteristics were tested by Pearson's correlation coefficients (Table 3.2).

The intercorrelation matrix showed that correlations between parental monitoring, school climate and PYD characteristics were mainly positive and significant, except for the overcontrol subscale, which was significantly negatively related to school climate and PYD characteristics.

Next, a hierarchical regression analysis was performed in order to investigate the effects of parental monitoring and school climate on PYD characteristics. We decided to include family and school variables in separate steps in the regression analysis to test whether the school context could explain differences in positive youth development beyond the family context. Because family context, i.e., parental monitoring, has a longer-lasting influence on adolescents than school climate, parental monitoring was included first in the regression model.

In the first step, gender was introduced because previous research indicates that there are differences between girls and boys in the average values of PYD components (Gomez-Baya et al., 2022). The results showed that girls have higher scores on the subscales of character and caring, while boys have higher scores on the subscales of competence, confidence, and connection. In the second step, parental monitoring measures were introduced. Youth disclosure and parental solicitation are positive predictors of all PYD characteristics. Parental knowledge was a positive significant predictor of caring, connection, and character. Parental knowledge was also a significant predictor of confidence, but this significance was very low in the second step, while it was no longer significant in the third step. Parental control was a positive significant predictor of character and caring and negative significant predictor of competence, confidence, and connection. Overcontrol significantly negatively predicted all PYD characteristics except competence. In the third

step the school climate was introduced. The school climate was the strongest positive predictor of positive youth development. All predictors together explained between 13% and 40% PYD characteristics.

**Table 3.3** *Results of Hierarchical Regression Analysis Predicting PYD Characteristics*

| Criterium | Model | *R* | $R^2$ | *F* | β |
|---|---|---|---|---|---|
| Competence | **1. step** | .20 | .04 | **134.65**** | |
| | Gender | | | | **-.23**** |
| | 2. step | .31 | .10 | **56.46**** | |
| | Gender | | | | **-.23**** |
| | P. knowledge | | | | .01 |
| | Youth disclosure | | | | **.13**** |
| | P. solicitation | | | | **.15**** |
| | P. control | | | | **-.06**** |
| | Overcontrol | | | | -.03 |
| | 3. step | .37 | .13 | **69.05**** | |
| | Gender | | | | **-.21**** |
| | P. knowledge | | | | -.03 |
| | Youth disclosure | | | | **.10**** |
| | P. solicitation | | | | **.14**** |
| | P. control | | | | **-.06**** |
| | Overcontrol | | | | .00 |
| | School climate | | | | **.21**** |
| Character | **1. step** | .14 | .02 | **63.98**** | |
| | Gender | | | | **.14**** |
| | **2. step** | .50 | .25 | **170.40**** | |
| | Gender | | | | **.08**** |
| | P. knowledge | | | | **.23**** |
| | Youth disclosure | | | | **.15**** |
| | P. solicitation | | | | **.06**** |
| | P. control | | | | **.10**** |
| | Overcontrol | | | | **-.13**** |
| | **3. step** | .55 | .30 | **192.00**** | |
| | Gender | | | | **.10**** |
| | P. knowledge | | | | **.17**** |
| | Youth disclosure | | | | **.12**** |
| | P. solicitation | | | | **.04*** |
| | P. control | | | | **.09**** |
| | Overcontrol | | | | **-.10**** |
| | School climate | | | | **.26**** |

| | | | | | |
|---|---|---|---|---|---|
| Confidence | **1. step** | .24 | .06 | **183.58**** | |
| | Gender | | | | **-.26**** |
| | **2. step** | .40 | .16 | **98.28**** | |
| | Gender | | | | **-.26**** |
| | P. knowledge | | | | **.05*** |
| | Youth disclosure | | | | **.21**** |
| | P. solicitation | | | | **.08**** |
| | P. control | | | | **-.08**** |
| | Overcontrol | | | | **-.11**** |
| | **3. step** | .47 | .22 | **123.86**** | |
| | Gender | | | | **-.24**** |
| | P. knowledge | | | | -.01 |
| | Youth disclosure | | | | **.17**** |
| | P. solicitation | | | | **.07**** |
| | P. control | | | | **-.08**** |
| | Overcontrol | | | | **-.07**** |
| | School climate | | | | **.27**** |
| Caring | **1. step** | .20 | .04 | **127.20**** | |
| | Gender | | | | **.20**** |
| | **2. step** | .41 | .17 | **103.00**** | |
| | Gender | | | | **14**** |
| | P. knowledge | | | | **.12**** |
| | Youth disclosure | | | | **.10**** |
| | P. solicitation | | | | **.10**** |
| | P. control | | | | **.12**** |
| | Overcontrol | | | | **-.08**** |
| | **3. step** | .46 | .20 | **109.72**** | |
| | Gender | | | | **.16**** |
| | P. knowledge | | | | **.08**** |
| | Youth disclosure | | | | **.07**** |
| | P. solicitation | | | | **.09**** |
| | P. control | | | | **.11**** |
| | Overcontrol | | | | **-.05**** |
| | School climate | | | | **.20**** |
| Connection | **1. step** | .11 | .01 | **37.90**** | |
| | Gender | | | | **-.11*** |
| | **2. step** | .48 | .23 | **154.22**** | |
| | Gender | | | | **-.16**** |
| | P. knowledge | | | | **.16**** |
| | Youth disclosure | | | | **.15**** |
| | P. solicitation | | | | **.23**** |
| | P. control | | | | **-.08**** |
| | Overcontrol | | | | **-.13**** |
| | **3. step** | .64 | .40 | **301.81**** | |
| | Gender | | | | **-.19**** |
| | P. knowledge | | | | **.06**** |
| | Youth disclosure | | | | **.09**** |
| | P. solicitation | | | | **.21**** |
| | P. control | | | | **-.09**** |
| | Overcontrol | | | | **-.07**** |
| | School climate | | | | **.46**** |

*Note.* β = standardised regression coefficients; **p < .01; *p < .05

Given that youth disclosure was a significant predictor in all regression analyses and that its effect diminished when school climate was introduced, the mediating effect of school climate in the relationship between Youth disclosure and PYD was tested (see Figure 3.1). Additional theoretical assumptions can be found in literature: Hamza & Willoughby (2011) indicate that youth disclosure proves to be one of the strongest protective factors for adolescent mental health. Mediation was verified by the Hayes process (Hayes, 2013).

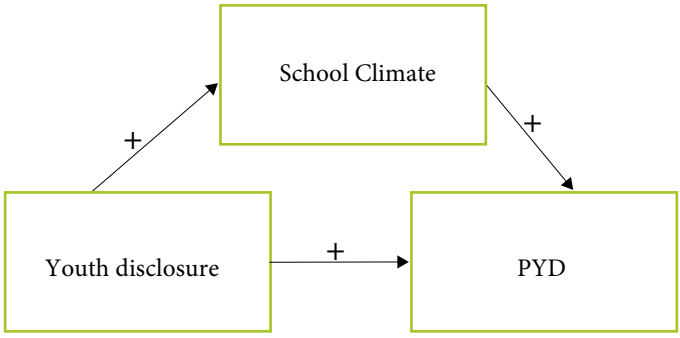


**Figure 3.1** *Schematic Representation of the Hypothesised Mediation Model*

The analysis showed that school climate was a significant mediator in the relationship between youth disclosure and PYD, which was valid for all five characteristics of positive development: Competence ($z = .07$, $p = .00$, *CI* 95% = .08 to .13 which excluded zero), Character ($z = .07$, $p = .00$, *CI* 95% = .08 to .12 which excluded zero), Confidence ($z = .12$, $p = .00$, *CI* 95% = .10 to .15 which excluded zero), Caring ($z = .07$, $p = .00$, *CI* 95% = .04 to .08 which excluded zero) and Connection ($z = .07$, $p = .00$, *CI* 95% = .15 to .21 which excluded zero).

## Discussion

The present study examined the effects of parental monitoring and parents' interest in adolescents' daily activities, and effects of school climate on five characteristics of PYD in a large sample of Croatian adolescents, first-year

students in secondary schools. In addition, gender differences were taken into account. Regarding parental dimensions, it was found that males perceive significantly more parental control and solicitation, and report more parental knowledge and their readiness to disclosure. Gender differences were also found on certain dimensions of positive youth development. Male adolescents reported higher results on the dimensions of confidence, competence, and connection, while female adolescents showed higher results on caring and character dimension. When examining the contextual variables, it appears that school climate is the strongest predictor of positive youth development, while parental variables have different effects on each of the 5Cs. An interesting finding is that school climate is a significant mediator of the relationship between youth disclosure and positive youth development.

## Gender Differences

Considering that positive youth development is not only the result of interactions in the microsystem, but also in other, broader ecological systems, it is not surprising that gender differences appeared in the 5Cs. Indeed, it appears that Croatian girls exhibit more indicators of character and caring, whereas Croatian boys exhibit more indicators of competence, confidence, and connection. The results are in line with previous research on Croatian adolescents (Gomez-Baya et al., 2022), except for the results related to gender and connection. The lower levels of connection that girls exhibit can be explained by the finding that girls are more affected by positive and negative social relationships and are more susceptible to interpersonal stress (Berk, 2018). The differences obtained may be under the influence of traditional gender roles and an upbringing that teaches young girls to be gentle and caring and boys to be strong and independent (Tejerina-Arreal et al., 2020; Kapungu et al., 2017). In our study, boys generally reported higher self-esteem than girls, and indicators of competence and confidence relate to the construct of self-esteem. These findings are also consistent with other research on a sample of Croatian adolescents, e.g., male adolescents report higher emotional self-efficacy (Reić Ercegovac et al., 2021) and higher levels of mental health, while female adolescents report higher levels of depression, anxiety, and stress (Maglica et al., 2021, Novak et al., 2021).

## Parental Monitoring and Positive Youth Development

Adequate parental monitoring enables adolescents to feel loved, safe, and important to their parents. Youth disclosure and parental solicitation are dimensions of parental monitoring that imply open and honest conversation between the two. As such, they foster closeness and trust and help the adolescent thrive (Cadman et al., 2022; McNeely & Barber, 2010). When parents solicit information from their adolescents about where they are and what they are doing, and set rules and boundaries for appropriate adolescent behaviour, adolescents tend to show more positive developmental outcomes (Fletcher et al., 2004). Positive parenting, as measured by high levels of parental monitoring and maternal warmth, was also positively correlated with individual self-regulatory behaviours, which in turn positively influenced higher levels of PYD and even contribution to the community (Lewin-Bizan et al., 2010; Napolitano, 2011). It is therefore not surprising that both are positive predictors of all 5Cs. Kaniušonyte (2015) presented evidence that parental monitoring is strongly related to contribution – to self, family and community as PYD outcome. Parental knowledge proved to be an important predictor of caring and connection, and predicts more positive character. If a parent does not know what their child is doing, they have no way of teaching their child how to behave in different situations.

While parental control is a positive predictor of character and caring, it is also a negative predictor of competence, confidence, and connection. On the one hand, parental control involves setting boundaries and modelling not only appropriate behaviours but also caring. And because character refers to internalised norms, greater parental control is expected to promote character development. On the other hand, autonomy has been shown to be important for positive youth development (Aguirre-Davila et al., 2021), and parental control is antithetical to autonomy. This may be why parental control is a negative predictor of competence, confidence, and connection. It is also possible that parental control interacts with adolescent personality traits, for example, conscientiousness. If an adolescent is prone to self-criticism, he or she may perceive parental control as constant criticism and internalise it in ways that promote self-criticism. Perceived negative feedback can thus lead to lower self-esteem, but also to an emotional disconnection from the parents who are the source of that negative feedback.

## School Climate and Positive Youth Development

School climate emerged as the strongest predictor of 5Cs, with regression coefficients ranging from .21 (Competence) to .46 (Connection). The results indicate that school climate is of great importance in promoting positive youth development, which once again confirms that school is an important environment for socio-emotional development and mental health promotion (Tomé et al. 2019). Adolescents' psychological well-being and development are thus significantly influenced by their experiences at school (Wigfield et al., 2006). Even though relationships with parents were found to be important for the positive development of Croatian youth, they are not decisive. Not all families have the same living conditions; they differ in family structure, socioeconomic status, environmental support, to name just a few differences. For this reason, not all children have the same opportunities to flourish. On the other hand, the school context can compensate for these differences and provide social justice and well-being for all young people.

## Mediation Effect of School Climate

School climate proved to be a significant mediator in the relationship between youth disclosure and all 5Cs. This finding indicates that future studies should examine associations between parental monitoring, especially willingness to disclose information to parents, and relationships that adolescents establish within the school context. Somewhat related to our findings, there are other studies showing that parental support contributes directly to school connectedness but also has indirect effects on adolescents' school engagement as well as on their academic achievement (Bradley et al., 2021; Cheung et al., 2012). Chen et al. (2019) have found that family support is positively related to students' behavioural and emotional school engagement. Although schools are traditionally seen as environments where youth can learn and enhance academic skills, our findings suggest that there is a significant interaction of school and family context that has to be taken into account. If parents foster open relationships with their adolescents, combining it with boundaries, schools have a responsibility to ensure a positive and engaging culture that enables positive youth development. The link between these two could be assertiveness, which is developed by parents and encouraged by the school.

## Conclusions

In the context of prevention science, our results indicate that intervention programs should build competence, confidence and connection in girls, and character and caring in boys. This study shows how important it is to invest in the school system and school climate, not only by improving material conditions, but also by improving students' sense of safety and belonging, and training teachers how to adapt to the needs of each child. The National Association of Social Workers (2021) defines social justice as equal economic, political, and social rights and opportunities for all. Although this study did not focus on social justice, the results indirectly confirm how important it could be that schools offer opportunities for participation and give youth a voice, since on a daily basis adolescents spend more time in schools than at home. By helping youth develop a positive social identity and learn how to value diversity, and by encouraging them to proactively seek justice (The Southern Poverty Law Center, 2018), we also promote their positive development. Our findings suggest that both parents and schools should be encouraged to increase their engagement in students' lives and their schooling. Interventions should emphasise personal initiative taking and teaching assertive communication skills, consistent with the social justice framework.

### Limitations

Only first-year secondary school students participated in this study, which means that we cover only a small age range in adolescence. The fact that all participants attended public schools may affect generalizability in the global context; however, in the Croatian context, most adolescents are enrolled in public schools. Self-assessment questionnaires were used, which have certain shortcomings, namely a possibly limited ability to assess one's own thoughts, emotions, and behaviours, the giving of socially desirable answers, and the problem of reference points.

Another shortcoming of the study is its correlational design, which does not allow for causal conclusions since direction of relationships is not clear. To gain more valid insights into the results obtained, a longitudinal design of the study is needed and is in fact already taking place. It would also be interesting to compare how parental perceptions of monitoring and teachers' perceptions

of school climate predict positive adolescent development. Nevertheless, due to the sample size, findings seem to complement the existing corpus of literature.

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Chapter 4

# Positive Youth Development, Social Contribution, and Pro-environmental Behaviour in a Sample of Spanish Emerging Adults

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**Abstract:** Positive Youth Development (PYD) is a strength-based perspective that posits that healthy development emerges because of the alignment between personal strengths and contextual assets. This work is based on the 5Cs model of PYD, which comprises five thriving indicators (competence, confidence, connection, character and caring) which are expected to be associated with positive youth outcomes. The aim of this study was to examine the relationships between the 5Cs of PYD and indicators of social contribution and pro-environmental behaviours. A cross-sectional study was conducted in winter and spring of 2021 with a sample of 1044 emerging adults (75.5% females; $M_{age}$ = 20.47, $SD$ = 3.08) from 11 universities in Spain, who completed online self-report measures of PYD, social contribution and pro-environmental behaviour. The results showed that overall PYD was positively associated with both social contribution (especially family contribution and advising peers) and pro-environmental behaviours. Connection and character had the strongest positive associations with social contribution, while character and caring had the strongest associations with the pro-environmental behaviours. In line with these findings, PYD promotion programs could be a valid intervention approach to foster more contribution to others and pro-environmental behaviours.

*Keywords:* 5Cs of PYD, social contribution, pro-environmental behaviour, emerging adults, Spain.

## Introduction

Youth research has traditionally taken a deficit perspective, which has marked the design of intervention programs (Geldhof et al., 2014). Research evidence indicates that youth interventions have less impact if they only focus on risks and vulnerabilities and suggest that promoting healthy development requires a strength-based approach (Benson et al., 2006; Kia-Keating et al., 2011). The Positive Youth Development (PYD) framework defines a strength-based conception of the transition to adult life in which positive results emerge as consequence of the intersection between personal skills and contextual developmental assets in young people (Dimitrova & Wiium, 2021; Gomez-Baya et al., 2022; Lerner, 2005; Lewin-Bizan et al., 2010). This theory is derived from developmental systems theory, that states that youth development emanates from the reciprocal interactions between biological, individual, and contextual influences (Lerner et al., 2005). Lerner and his colleagues (2005) conceptualized a 5Cs model of PYD – that is, five interactive strengths, which are supposed to be associated with better health and well-being (Bowers et al., 2010; Domiguez-Espinosa et al., 2021; Gomez-Baya et al., 2021; Milot Travers & Mihalik, 2021). Specifically, the 5Cs, also referred to as thriving indicators, are competence (a positive perceived self-efficacy in different aspects), confidence (an overall positive self-worth), connection (positive relationships with others), character (internalization of society rules), and caring (ability to act with both sympathy and empathy with other people).

Lerner et al. (2003) defined thriving as a youth trajectory characterized by contribution to self, family, community, and civil society. Contribution as a result of thriving is considered as the sixth C within the PYD model. Some studies have differentiated thriving components, both at the individual level (e.g., self-regulation skills, resilience, psychological and academic adjustment, and healthy lifestyles) and at the social level (e.g., prosocial behaviours and social engagement with others) (Branquinho & Gaspar de Matos, 2019; Catalano et al., 2004; Durlak et al., 2007; Gaspar de Matos et al., 2018; Olson & Goddard, 2015). Some studies have concluded that the 5Cs and positive outcomes are bidirectionally related across development. In this connection, Lewin-Bizan et al. (2010) conducted a longitudinal study in the United States and showed some upward spirals or positive developmental cascades. Bidirectional interrelations were observed in the follow-up among positive parenting, better self-regulation skills,

more PYD and greater social engagement. Geldhof et al. (2013) indicated that the process of developing thriving consists of adaptive self-regulations between youth strengths and ecological assets. Thus, thriving should not only be conceived at an individual level, but it is also important to highlight the relevance of the developmental contexts and relationships.

Lerner et al. (2003, 2012) concluded that thriving is the basis of personhood and civil society and is a remarkable marker of health and successful developmental dynamics between the person and the context. Sherrod (2007) argued that the construct of civic engagement may partly overlap with the contribution dimension (the sixth C) of PYD model, underlining the proactive role of youth as "agents of change in building the assets-promoting qualities of communities and societies" (p. 63). In this regard, Umholtz (2013) encouraged the design of intervention to promote youth engagement through environmental-based experiential education for sustainable development. An intervention program developed by this author showed that environmental education could help to create life purpose and reconnect with their community and environment, in youth with low SES. From a social constructivist approach, PYD would be a consequence of environmental education, since it provides contextualized and collaborative learning, as well as individualized attention (Umholtz, 2013). Thus, a positive interaction may be expected between youth participation in environmental action and both individual and community development (Bøhlerengen & Wiium, 2022; Gómez-Baya et al., 2020).

Developing youth as active citizens may contribute to creating the needed environmental and social change to reach more sustainable communities (Schusler et al., 2009). Schusler and Krasny (2010) examined environmental action as context for youth development. In a qualitative study, these authors conducted narrative interviews with educators of environmental action programs for youth and with their youth participants. These programs produced an improvement in environmental attitudes and behaviours, as well as presented other positive outcomes, such as increased decision-making and citizenship skills and enhanced physical and psychological well-being. Thus, PYD intervention programs may offer a practical framework for understanding the power of environmental action to care for and improve both the environment and youth well-being. Consequently, complementary social and environmental action would be expected to support more positive outcomes in youth development. Schusler et al. (2009, p. 16) defined environmental action as the "process of co-creating environmental

and social change that builds individuals' capabilities for further participation contributing to personal and community transformation".

## The Present Study

Although some evidence has been collected within the relational developmental systems regarding thriving outcomes from PYD, more research is needed to examine the separate role of the 5Cs. The relational developmental systems theory posits that contribution is positively associated with the presence of the 5Cs, so that both social contribution and contribution to environment could be described as expected correlates of thriving. More research is needed to investigate the relationships between PYD and both social contribution and pro-environmental behaviours. Social contribution can be considered as an understanding of and commitment to enhance other people and one's community that transcend self and self-interest (Lerner et al. 2003). Pro-environmental behaviours can be defined, following Emmons (1997), as deliberate behaviours, composed of decisions, planning, implementation and reflection, aimed at achieving a concrete environmental result. To date, PYD literature has given more focus to social participation and engagement, and less efforts have been made to examine the association between PYD and environmental action. This evidence could be useful to support the design of programs to integrate the promotion of PYD and youth contributions to both society and environment.

Furthermore, most research has been performed in the United States and countries in Northern Europe, so that more evidence is also needed to find the validity of the model in other countries, such as Spain. The latest demographic data from the Spanish Youth Institute (2017) have shown a population of 7 117 534 young people aged between 15 and 29 (50.8% males). Youth population represents 15.3% of the total population of Spain, a percentage that is lower than that from the European Union (17.4%). Moreover, in Spain, better youth policies are necessary to promote social participation (only 27.5% of Spanish youth collaborate with an NGO or with some association, and up to 61.5% show little or no interest in politics) and to improve youth employment (nearly half a million of young people aged between 16 and 29 are unemployed) (Comas Arnau, 2010; Spanish Youth Institute, 2021). Thus, the aims of the present study were: a) to describe the 5Cs of PYD, social contribution and pro-environmental behaviours in a sample of Spanish emerging adults, in order to examine the need to design

intervention programs; and b) to identify the associations between the 5Cs of PYD and different indicators of social contribution and pro-environmental behaviours. Positive associations are expected between the 5Cs of PYD and social and pro-environmental contribution, in line with previous studies on thriving indicators (Branquinho & Gaspar de Matos, 2019; Catalano et al., 2004; Durlak et al., 2007; Gaspar de Matos et al., 2018; Olson & Goddard, 2015).

## Methods

### Participants and Data Collection Procedure

A cross-sectional study was carried out online in the winter and spring of 2021, with a sample of 1044 youth (75.5% females; Age range = 18–28; $M_{age}$ = 20.47, *SD* = 3.08). These participants were enrolled in 11 universities from different parts of Spain: University of Huelva, Loyola University (Campus of Seville and Cordoba), Complutense University of Madrid, University of Granada, University of Salamanca, University of La Laguna, University of Zaragoza, University of Santiago, Polytechnic University of Valencia, University of Valencia, and University of Oviedo. They were selected by convenience, controlling for geographical distribution, that is, including universities from the North, South, West, East, Central, and the island territory. In each university, the degrees and academic years were randomly selected. Regarding nationality, most of the participants were Spanish (95.2%). 33.9% of the sample lived in a big city (>300 000), 32.4% lived in medium-sized cities (between 50 000 and 300 000), and the other third of the sample lived in small towns and rural areas. Most of the sample indicated a socioeconomic status as the mean of the population (83.6%). With regards to the degree of study, 41.6% studied Social Sciences and Law, 24.7% studied Health sciences, 20.3% studied Sciences, Engineering or Architecture, and 13.5% studied Arts and Humanities.

### Instruments

#### *Positive Youth Development*

PYD Short Form by Geldhof et al. (2014) and adapted to Spanish by Gomez-Baya et al. (2019), which is a self-report questionnaire composed of 34 items, assessed Competence (6 items; a positive view of one's actions in

different domains; e.g., "I do very well in my class work at the university"; α = .73), Confidence (6 items; a sense of self-worth in general; e.g., "When I am an adult, I'm sure I will have a good life"; α = .77), Character (8 items; considered as respect for the rules of one's society and culture, and a sense of integrity; e.g., "I hardly ever do things I know I shouldn't do"; α = .59), Connection (8 items; positive relationships with others; e.g., "I feel like an important member of my local community"; α = .77) and Caring (6 items; defined as developing sympathy and empathy for others; e.g., "It bothers me when bad things happen to any person"; α = .82). The items were assessed using a 5-point Likert-type scale, 1 = strongly disagree and 5 = strongly agree, 1 = not important and 5 = extremely important, or 1 = not at all like me and 5 = very much like me. Mean scores were calculated for each dimension of the 5Cs with their respective indicators. Overall PYD score was created by calculating the mean of the five dimensions.

### *Social Contribution*

Five indicators, adapted from Geldhof et al. (2014) were administered: "How many hours do you spend in a typical week: volunteering or doing something without pay to make your community a better place / helping friends or neighbours / helping your family / mentoring others or advising peers / participating in university committees or government?". Five response options were used, "0 hours," "1 hour," "2 hours," "3–5 hours," and "6 or more hours," encoded from 1 to 5.

### *Pro-environmental Behaviours*

Ten indicators of pro-environmental behaviours were presented, which were specifically developed for the purposes of the present research. These items were organized in two separated blocks. The first block was introduced by this sentence "Please indicate how often you perform each of the following behaviours" and the indicators were: 1) When it is feasible for me, I try to go on foot or by bicycle to places; 2) When buying food, I look at the place where it is produced and I try to choose those that are produced locally (nearby); 3) In the cold months, at home or at work, I try to have the heating high enough to be able to be in short sleeves or with little clothing; 4) When I have had the opportunity to do so, I have planted trees; 5) I turn off the lights when leaving the rooms, and 6) I tend to use the plane for my leisure or work trips even though

there are alternatives by train. Response categories were: always or almost always, quite a few times, about half the time, a few times, never or very rarely.

Furthermore, the second block was introduced by this sentence "Please indicate to what extent you consider it likely that you would do the following", and these indicators were described: 1) If I had to buy electrical appliances, I would pay more attention that the price is not high than that they consume little energy; 2) If I were to buy or rent a house, it would be very important for me that the water for domestic use (shower, bathroom, kitchen) could be heated with solar energy; 3) If I had to choose the heating system for my house, I would try to use solar energy, even if it is more expensive than other systems, and 4) If I was driving a car, I would try to go at a lower speed than the maximum allowed (120 km/h) to save fuel. The indicators are assessed following this response scale: sure yes, maybe yes, I don't know, probably not, sure not.

### Data Analysis Strategy

Descriptive statistics are presented for PYD overall score and its separate 5Cs (i.e., mean and standard deviation). Frequency distribution is presented for the indicators of social contribution and pro-environmental behaviour. An overall score of social contribution was calculated to perform the subsequent analyses. Further, bivariate zero-order Pearson correlations were conducted between PYD, the 5Cs and the indicators of social contribution and pro-environmental behaviour. These analyses were performed with the statistical package SPSS 21.0 (IBM Corp, 2012).

## Results

### Descriptive Statistics of Study Variables

Table 4.1 shows the descriptive statistics of the 5Cs and the overall score of PYD. Moderate to high means were detected in the 5Cs and the overall PYD score. The greatest mean was observed in caring, while the lowest one was found in competence. Table 4.1 also presents bivariate correlations between the dimensions. Results showed positive associations among the 5Cs. The strongest correlations were observed between competence, confidence, and connection. However, caring did not correlate with competence nor confidence.

**Table 4.1** *Descriptive Statistics of PYD and the 5Cs, and Bivariate Correlations.*

| | Min | Max | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Competence | 1.00 | 5.00 | 3.01 | .71 | 1 | | | | | |
| 2. Confidence | 1.50 | 5.00 | 3.64 | .69 | .60*** | 1 | | | | |
| 3. Connection | 1.50 | 5.00 | 3.61 | .61 | .51*** | .55*** | 1 | | | |
| 4. Caring | 1.50 | 5.00 | 4.32 | .59 | .06 | .01 | .20*** | 1 | | |
| 5. Character | 2.00 | 5.00 | 4.00 | .43 | .27*** | .43*** | .40*** | .43*** | 1 | |
| 6. Overall PYD | 2.05 | 5.00 | 3.71 | .42 | .75*** | .78*** | .78*** | .45*** | .68*** | 1 |

*Note.* *** $p < .001$.

Figure 4.1 represents the percentage distribution of the responses in the indicators of social contribution. The most frequent activities of social contribution were helping the family and mentoring others or advising peers. Nearly two-thirds of the sample helped their family three hours or more in a week, while nearly half reported advising others. Furthermore, the participation in university committees or government was very low, as well as the participation in volunteering activities.

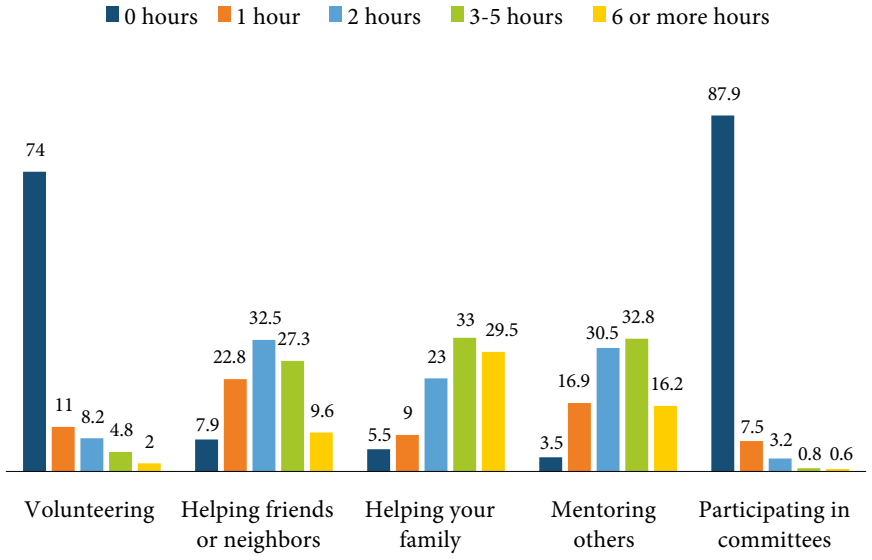


**Figure 4.1** *Percentage Distribution of the Indicators of Social Contribution*

Furthermore, Table 4.2 describes the percentage distribution of the indicators of pro-environmental behaviour. Most of the sample indicated that they went on foot or by bike when possible and turned off the lights when leaving the rooms. However, less than a quarter of the sample bought local food and planted trees. Furthermore, less than half of the sample bought electrical appliances depending on the consumption, would rent/buy a house with solar energy, or reduced speed to save fuel. Moreover, just half of the sample would choose a solar heating system.

**Table 4.2** *Percentage Distribution of the Responses in the Indicators of Pro-environmental Behaviour.*

| | Never or very rarely | A few times | About half the time | Quite a few times | Always or almost always |
|---|---|---|---|---|---|
| Go on foot or by bike | 12.1 | 13.2 | 11.2 | 25.5 | 38.1 |
| Buy local food | 34.5 | 28.0 | 14.2 | 14.6 | 8.7 |
| Have the heating high | 59.0 | 23.3 | 7.8 | 5.8 | 4.1 |
| Have planted trees | 44.8 | 26.8 | 10.5 | 9.3 | 8.6 |
| Turn off the lights | 1.7 | 1.9 | 3.8 | 13.1 | 79.5 |
| Use the plane | 61.3 | 15.8 | 8.5 | 6.2 | 8.2 |
| | **Sure yes** | **Maybe yes** | **I don't know** | **Probably not** | **Sure not** |
| Electrical appliances depending on the price, not the consumption | 17.3 | 24.6 | 18.4 | 28.6 | 11.1 |
| Rent/buy a house with solar energy | 16.6 | 36.5 | 19.1 | 21.3 | 6.5 |
| Heating system with solar energy | 17.2 | 32.8 | 23.6 | 19.7 | 6.7 |
| Lower speed to save fuel | 24.2 | 22.2 | 18.5 | 24.1 | 11.0 |

In the second block of indicators, character correlated with buying electrical appliances depending on the consumption, more probability to rent/buy a house with solar energy, using a heating system with solar energy, and reducing speed to save fuel. Caring was positively related to greater probability of renting/buying a house with solar energy and lower speed to save fuel. Finally, competence correlated with lesser probability of buying electrical

appliances depending on the consumption and lesser probability of reducing speed to save fuel. Overall PYD was associated with renting or buying a house with a solar system and using a heating system with solar energy. All the significant correlations observed between PYD and pro-environmental behaviours were small in size.

**Table 4.3** *Bivariate Correlations between PYD, 5Cs and the Indicators of Social Contribution.*

| | Volunteering | Helping friends or neighbours | Helping your family | Mentoring others | Participating in committees | Overall social contribution |
|---|---|---|---|---|---|---|
| Competence | .11*** | .09** | .09** | .11*** | .14*** | .16*** |
| Confidence | .03 | .06 | .13*** | .05 | .07* | .11*** |
| Connection | .18*** | .14*** | .27*** | .20*** | .15*** | .31*** |
| Caring | .16*** | .17*** | .17*** | .21*** | -.04 | .24*** |
| Character | .23*** | .20*** | .20*** | .19*** | .05 | .29*** |
| Overall PYD | .19*** | .17*** | .24*** | .21*** | .11*** | .31*** |

*Note.* *** $p < .001$; ** $p < .01$; * $p < .05$

**Table 4.4** *Bivariate Correlations Between PYD, 5Cs and the Indicators of Pro-environmental Behaviour (Block 1).*

| | **Go on foot or by bike** | **Buy local food** | **Have the heating high** | **Have planted trees** | **Turn off the lights** | **Use the plane** |
|---|---|---|---|---|---|---|
| Competence | .04 | .04 | -.11** | .04 | -.06 | -.08* |
| Confidence | -.02 | .05 | -.06 | .05 | -.02 | -.03 |
| Connection | .02 | .05 | -.02 | .03 | -.04 | -.06 |
| Caring | -.02 | .03 | .07* | .08* | -07* | .04 |
| Character | .04 | .16*** | .06 | .12*** | .07* | .01 |
| Overall PYD | .01 | .08* | -.03 | .08* | -.01 | -.05 |

*Note.* *** $p < .001$; ** $p < .01$; * $p < .05$

**Table 4.5** *Bivariate Correlations Between PYD, 5Cs and the Indicators of Pro-environmental Behaviour (Block 2)*

| | Electrical appliances depending on the prince, not the consumption | Rent/buy a house with solar energy | Heating system with solar energy | Lower speed to save fuel |
|---|---|---|---|---|
| Competence | -.08* | -.02 | -.01 | -.10** |
| Confidence | .04 | .01 | .05 | -.02 |
| Connection | -.01 | .03 | .06 | -.01 |
| Caring | .01 | .12*** | .06 | .10** |
| Character | .09** | .21*** | .19*** | .16*** |
| Overall PYD | .01 | .09* | .09** | .02 |

*Note.* *** $p < .001$; ** $p < .01$; * $p < .05$

## Discussion and Conclusion

The aims of the present study were to examine PYD, social contribution and pro-environmental behaviours in a sample of Spanish emerging adults, as well as to analyse their interrelations. First, results pointed out moderate to high means in PYD overall score and its respective 5Cs, with the highest score detected in caring and the lowest in competence. Regarding social contribution, more frequent contribution was observed in helping family and advising/mentoring others, while less contribution was detected for the participation in committees and volunteering. These results are consistent with previous studies with Spanish youth (Gomez-Baya et al., 2019), and indicate a greater social engagement with people in the microsystem (family and peers) and more barriers to participate in community initiatives, as already noted by Comas Arnau (2010).

With regards to pro-environmental behaviours, most of the sample indicated that they went on foot or by bike whenever possible and turned off the lights when leaving the rooms. However, the other pro-environmental behaviours showed more reduced frequencies. Second, several correlations were found between PYD and social contribution/pro-environmental behaviours. Small to moderate positive associations were detected between the 5Cs and

the indicators of social contribution. The strongest correlations were found with family contribution and advising peers. These results may be due to the closer connection of youth with their microsystem, which allows them to provide a more direct and prolonged service.

The dimensions of PYD with the strongest correlation with social contribution were connection and character. Furthermore, only a small number of positive correlations were observed between the 5Cs and the pro-environmental behaviours. The dimensions of PYD more related to pro-environmental behaviours were character and caring. The findings on the correlations between PYD and social contribution are in line with a previous study with Spanish sample by Gomez-Baya et al. (2019), and with other works by Crocetti et al. (2014) in Lithuanian youth and Lewin-Bizan et al. (2010) in an American sample. Furthermore, the correlations between PYD and pro-environmental behaviours are in line with findings by Bøhlerengen and Wiium (2022) on environmental attitudes, behaviours, and responsibility perceptions in Norwegian youth, and by Kabir and Wiium (2021) on environmental concerns on emerging adults in Ghana. These results are consistent with the developmental contextual view of thriving as presented by Lerner et al. (2003), in which thriving youth are expected to show a commitment to society beyond the limits of one's own existence. Thus, civic engagement is an expression of PYD (Sherrod, 2007).

The present study has revealed evidence for the interrelations between PYD and both social and pro-environmental contribution, as expressions of thriving. Another novelty of the present study is the identification of specific associations with the 5Cs. Connection, caring and character were the dimensions with the strongest correlations with these forms of contribution. These Cs reflect positive relationships with others, empathy and compassion for others, and respect for social norms, which represent other-oriented aspects of PYD (while competence and confidence may be more self-oriented).

Some practical implications may be derived from these results. As argued by Lerner (2015), the PYD framework could guide the design of evidence-based actions aimed at meeting the challenges of the twenty-first century. These actions may produce changes in the relationships between youth and their developmental contexts in order to contribute to social justice and environmental protection. Recently, Lerner et al. (2021) indicated that all young people could thrive when equal and fair opportunities are provided to build agency through participation in and leadership of meaningful activities. First,

more initiatives should be conducted to encourage youth volunteerism and participation in committees and politics in their own communities. Moreover, more programs should be developed to promote pro-environmental behaviours and more ecological consciousness in youth population. Second, some programs to foster social and environmental engagement should be designed, which in turn may encourage the fulfilment of the 5Cs (competence, confidence, connection, character and caring). As indicated by Agans et al. (2014), extracurricular programs may be important ecological assets to promote positive developmental outcomes, because they provide some opportunities to learn and practice life skills, establishing mutually beneficial intergenerational relationships, and engaging in socially valued activities. In this connection, previous research has showed that the breadth of participation in out-of-school activities was related to greater PYD, more contribution and less risk behaviours.

Recently, Branquinho and Gaspar de Matos (2019) examined the efficacy of the project Dream teens, a youth participatory action-research project, in a national sample of Portuguese adolescents and youth. Results indicated that the participation was considered by youth as a remarkable individual asset and was related to greater integration in volunteer activities and mentoring, more positive leadership skills and more active citizenship. In the Dream teens project, adolescents and youth participants are empowered to design projects applicable to their own contexts and to create ways to improve youth civic participation. Participants felt that their voices were heard, being considered as experts in their own living contexts and their own psychological well-being. Indeed, Frasquilho et al. (2018) argued that these adolescent-led intervention projects were specifically effective in promoting PYD. Furthermore, recent work by Schusler et al. (2019) has proposed some possibilities to integrate youth participation and ecological and social work by examining youth reflections about their roles in the movements of social and environmental justice, after celebrating the "Where I Stand Youth Summit" in Chicago. These authors concluded that youth population can build agency and solidarity in relation to social and environmental justice, by redefining what knowledge matters, changing the intentions to act and providing opportunities for self-restoration in their own communities.

Despite the novelty of this study and the promising results detected for the PYD literature, some limitations may be acknowledged. Because

a cross-sectional design has been followed, the conclusions can only be based on the bidirectional associations, so that no directionality may be concluded. Thus, a longitudinal study could be recommended as a future research line to examine if PYD contributes to social contribution and pro-environmental behaviour, or perhaps PYD emerges as a result of the contribution to others or the environment. Moreover, other variables could be controlled in future research, such as empathy or self-regulation skills, because they could be potential mechanisms or mediators. Because self-report measures were used to assess the 5Cs and contribution, scores could be biased by social desirability, and assessment with multiple informants may be recommended. A qualitative study could be a promising research line to explore the mechanisms implicated within these correlations observed in the present study.

As a conclusion, the present work has presented some evidence for the positive relationships of PYD with both social contribution and environmental behaviour in a sample of Spanish emerging adults, as well as presenting the separate interrelations for the 5Cs. These results have underlined the need to encourage social contribution and pro-environmental behaviours in Spanish youth, and the importance of addressing this goal jointly with the promotion of PYD.

## Ethics Statement

The studies involving human participants were reviewed and approved by the bioethics committee of the University of Huelva. The participants provided their written informed consent to participate in this study.

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Chapter 5

# Positive Youth Development in Peru: A Study of Developmental Assets, 5Cs and Mental Health

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**Abstract:** The term "Positive Youth Development" (PYD) has been defined in a number of different ways, but it generally refers to an emphasis on the developmental characteristics that contribute to effective outcomes and behaviors of young people. To better understand the patterns and relationships of two of the main PYD models, the present study examined the associations between developmental assets, 5Cs (competence, confidence, connection, caring and character) and mental health in a sample of young Peruvians. Cross-sectional data was collected from 503 young participants from Peru ($M_{age}$ = 19.7, SD = 3.9). The findings of structural equation modeling indicated a positive relationship between the 5Cs and developmental assets, as well as a significant association between the 5Cs and mental health, and a mediator role of the 5Cs in the relationship of developmental assets and mental health. Furthermore, one factor of external developmental assets (i.e. Constructive use of Time) was the only dimension with a below average score. We discussed the importance of implementing a PYD perspective in this particular setting.

*Keywords:* 5Cs, developmental assets, Peru, Positive Youth Development, mental health, structural equation modeling

## Introduction

The perspective of Positive Youth Development (PYD) emerged during the 1990s, looking into adolescence as a period full of resources, conversely to negative personal theories of behavior in which negative traits were attributed to youth and identified as problems to be solved (Brendtro et al., 1990). According to the PYD perspective, the conditions of the psychosocial environment are of utmost importance for the development and well-being of young people (Lerner et al., 2005). The objective of PYD is therefore to enhance the skills of young people, while highlighting the role of the community as a mobilizing agent since it is the environment in which young people develop, noting that the community encompasses the family, educational institution, neighborhood and peer group, among others (Damon, 2004; Lerner et al., 2005; Lerner et al., 2013).

There are several theoretical models that work under the PYD perspective, some being: The Targeting Life Skills (Hendricks, 1996; 1998), The Four Essential Elements (Brendtro et al., 1990; Kress, 2003), Community Action Framework for Youth Development (Connell et al., 2000), the 5Cs (Lerner, 1995) and the developmental assets (The Search Institute, 1997; 2007), with the latter two being among the most important due to their extensive empirical support.

### Tenets of Positive Youth Development: The 5Cs and Developmental Assets

Richard Lerner and his research team described the importance of offering development opportunities to adolescents, grouped into the 5Cs (competence, confidence, connection, caring and character), which are interconnected indicators that together obtain positive results in the mental and psychological health of young persons (1995, 2005). According to the 5Cs, *Competence* denotes the capacity and ability of the person to face various challenges and circumstances of life; *Confidence* is a positive belief about the value and efficacy of personal resources; *Connection* is related to positive interpersonal relationships in different development contexts, such as family, peers and communities; *Character* regulates behaviors towards social functioning, and finally, *Caring* implies having a sense of sympathy or empathy towards others. The definitions of the 5Cs have evolved over time. Lerner suggested *Contribution* as a sixth C, identifying it as one of the essential components of youth development (Lerner,

2004). Furthermore, recent research has expanded upon a new operationalization by including a seventh C of *Creativity* as a resource for encouraging youth flourishing in diverse social and cultural settings (Abdul Kadir et al., 2021; Dimitrova et al., 2021; Manrique-Millones et al., 2021a).

During the 1990s, Peter Benson and the Search Institute developed a theory for youth development based on resilience (Benson et al., 1998; Benson et al., 1999). The goal of the new approach was to highlight resources accessible to young people that would promote their development, with emphasis on these individuals' accomplishments rather than their weaknesses. The resilience method focuses on both the internal and external qualities that young people already possess, with the idea that developing these strengths will promote positive outcomes and help prevent undesired behaviors in young people.

Research studies on the Developmental Assets Model hold that internal and external factors are crucial in fostering PYD (Adams et al., 2019; Benson et al., 1999; Wiium et al., 2019).

Cross-cultural studies have highlighted the heterogeneity and use of external and internal assets. For example, African countries such as Ghana seem to prioritize internal assets similarly to studies in Norwegian youth. In contrast, studies on youth from Slovenia reported more external assets, specifically support and empowerment (Fernandes et al., 2021).

Growing research has corroborated the prevalence of developmental assets in multiple samples from outside the United States (US), namely Africa (Adams et al., 2018), Europe (Issa et al., 2020), and Latin America (Manrique-Millones et al., 2021), as well as their psychometric qualities across other ethnic groups and nations, although the assets were determined based on youth samples from the US (Scales et al., 2017; Wiium et al., 2018). It has been empirically demonstrated that developmental assets play a crucial role in achieving favorable results and protecting young people against a wide range of risks and problematic behaviors. Although research on PYD is on the rise in different countries around the world, empirical studies using more than one theoretical model simultaneously have remained scarce in South America.

## Positive Youth Development and Mental Health

As mentioned above, the PYD perspective shares the idea that every young person has the potential for successful and healthy development, and as such

it has been associated with a number of positive outcomes in diverse areas, such as educational settings (Adams et al., 2019; Ardoin et al., 2022; Novak et al., 2021), physical activities and sports (Bateman et al., 2020; Martins et al., 2021), nutrition (Edwards & Cheeley, 2016; Wiium, 2021); climate change (Kabir & Wiium, 2021; Pereira & Freire, 2021), civic engagement (Law & Atkinson, 2021; Middaugh et al., 2017), and mental health (Kabir et al., 2021; Manrique-Millones et al., 2021; Onyeka et al., 2022), among others.

Increasing research has associated the 5Cs with mental health (Kabir et al., 2021; Manrique- Millones et al., 2023; Tomé et al., 2021). Gómez-Baya et al. (2022) conducted a study with young Spanish and Croatian participants and revealed an inverse association of confidence and connection with depression symptoms. A cross-cultural study in a sample of youths from Portugal, Slovenia and Spain found a significant association between anxiety and the 5Cs across the three countries (Kozina et al., 2021).

The results of several studies support a positive relationship between developmental assets and mental health. A study conducted in South America with Peruvian and Colombian emergent adults, reported a positive correlation between mental health indicators and developmental assets (Manrique-Millones et al., 2021b). Similarly, Wiium et al. (2021) reported that Norwegian youth with poor mental health experienced fewer developmental assets than their peers.

## Peruvian Youth in Context and National Policies

The National Institute of Statistics and Informatics (INEI, 2022) reported that in 2022 the youth population represented 27% of the total Peruvian population. Among these youths, 3 out of 10 adolescents do not finish high school at the normative age, and 17 out of every 100 adolescents and young people between the ages of 15 and 29 do not study or work.

The National Youth Policy Law was enacted in Peru in 2019 to address the current situation of the young population, with a projection to the year 2030. This law is aimed at achieving a future situation in which at least 8 out of 10 young people between the ages of 15 and 29 age improve their integral development with a subsequent effective participation in society (Secretaría Nacional de la Juventud, 2019). Nevertheless, since its promulgation in 2019, this law has not yet had a regulatory channel and thus has not been enforced (Mesa de Concertación para la Lucha contra la Pobreza, 2022).

Despite the period of sustained economic growth Peru has undergone in the last 17 years, important improvement is needed in development indicators in the areas of education, work and mental health (OECD, 2017).

## The Present Study

The present study evaluates a structural model involving developmental assets, the 5Cs and mental health in a sample of Peruvian young participants. We aimed:

1. To examine the relationship between developmental assets (internal and external) and mental health.
2. To analyze the association of developments assets (internal and external) with the 5Cs.
3. To investigate the association between the 5Cs and mental health.
4. And to study the indirect effects (mediation) of the 5Cs and the association between developmental assets and mental health. See Figure 5.1.

First, we hypothesized that there is a positive relationship between developmental assets and mental health based on previous literature. Second, we expect to find a positive association between the variables (i.e., developmental assets and 5Cs). Third, we expect a positive association between the 5Cs and mental health. Finally, we hypothesized the mediation effect of the 5Cs on the association between developmental assets and mental health.

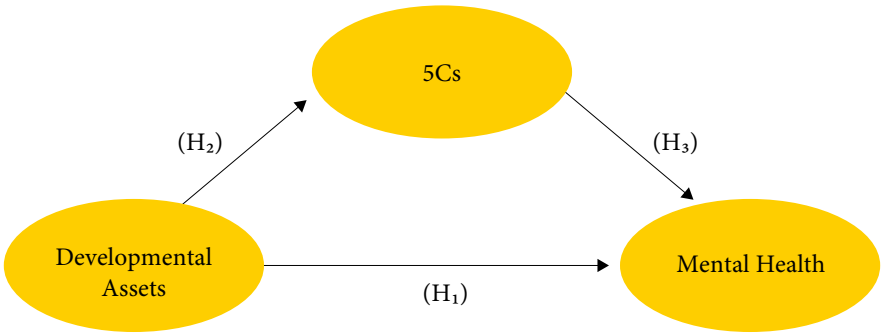


**Figure 5.1** *Theoretical Model Proposed of the Effects of Developmental Assets on Mental Health, Through the 5Cs of Positive Youth Development.*

# Method

## Participants

Cross-sectional data on 503 young participants in Peru (60% females) was collected. The participant ages ranged from 15 to 29 ($M_{age}$ = 19.7, SD = 3.9). In addition, the level of education of the parents was recorded, with 25.5% of youths stating that their fathers had a university degree while 0.8% were illiterate, and 19.9% reporting that their mothers had a university degree while 1.2% had no education.

## Instruments

### *The 5Cs of Positive Youth Development-Short Form (Geldhof et al., 2014; Manrique-Millones et al., 2023)*

This 34-item scale assesses indicators of healthy youth development across five dimensions. *Competence* (e.g., "I do very well in my class work at school/university."), *Confidence* (e.g., "I am happy with myself most of the time"), *Character* (e.g., "I usually act the way I am supposed to."), *Caring* (e.g., "When I see another person who is hurt or upset, I feel sorry for them") and *Connection* (e.g., "I feel like an important member of my local community").

Participants were asked to rate their opinion on a five-point Likert-style scale, where 1 indicates "strongly disagree" and 5 indicates "strongly agree. For the Character subscale, the same Likert-type scale was used, with 1 denoting "not important" and 5 denoting "extremely important". Finally, for the Caring subscale, a five-point Likert-type scale was given, with 1 being "not at all like me" and 5 being "very much like me".

Mean scores were used to generate the values for each of the 5Cs of the PYD construct, with higher scores representing higher levels of each C. All the McDonald's omega coefficients for the subscales in this study were satisfactory, ranging from ω = .76 to ω = .95.

### *Developmental Assets (Search Institute, 2007)*

The developmental assets comprise a total of 58 items that evaluate personal, family, school and related resources from the world of peers and the neighborhood, incorporating support and experiences to promote positive development during adolescence. The scale consists of two dimensions: external and internal

assets. The former refers to the support from family, communities and schools or universities young people need. This dimension is divided into four factors: support (e.g., "I have parents/guardian who are good at talking to me about things"), empowerment (e.g., "I am included in family tasks and decisions"), boundaries and expectations (e.g., "I have a department/school that enforces rules fairly") and constructive use of time (e.g., "I am spending quality time at home with my parent(s) when we do things together"). The internal assets dimension highlights the social-emotional strength and values nurtured by young people and is divided into four indicators: commitment to learning (e.g., "I am encouraged to try things that might be good for me"), positive values (e.g., "I am developing respect for other people"), social competencies (e.g., "I express my feelings in proper ways") and positive identity (e.g., "I am thinking about what my purpose is in life"). The McDonald's omega coefficients were adequate, ranging from $\omega = .50$ to $\omega = .89$.

### *Mental Health Continuum-Short Form (MHC-SF; Keyes, 2005)*

The original 14-item questionnaire evaluates positive mental health and is divided into three dimensions: emotional well-being (e.g., "During the past month, how often did you feel interested in life"), social well-being (e.g., "During the past month, how often did you feel that you had something important to contribute to society") and psychological well-being (e.g., "During the past month, how often did you feel that you liked most parts of your personality").

According to their experiences over the past month, the participants were asked to rate the items on a six-point Likert scale, having the alternatives: never, once or twice, about once a week, two or three times a week, almost every day, and every day. In this study, the total MHC-SF score was determined as a measure of overall mental health. A higher score would, therefore, represent a higher level of mental wellness. The McDonald's omega coefficients were adequate, ranging from $\omega = .82$ to $\omega = .89$.

## Procedure

The current study was part of a larger cross-sectional study on PYD in several countries (see Wiium and Dimitrova, 2019). The institutional review board of the Research Committee of the Universidad San Martín de Porres in Peru granted ethical approval for the study. To ensure linguistic equivalence

of the instrument, the survey was translated from English to Spanish and then back-translated. Young people completed a set of self-administered scales and sociodemographic data using two methods: the face-to-face approach (i.e., paper and pencil), with the majority of participants recruited from universities, and the virtual approach (i.e., online platform), in which a link was made available and shared on various social media platforms. Participants were asked to give informed consent and were given the option to withdraw from the survey at any time without any penalty. Additionally, participants were ensured that their participation was anonymous and that the data collected would only be utilized for research purposes.

## Statistical Analysis

Initially, the internal structure of each scale was evaluated with confirmatory factor analysis using polychoric correlation matrices. The estimator used was the weighted least squares with adjusted mean and variance (WLSMV), a recommended procedure for ordinal items (Beauducel & Herzberg, 2006; Gana & Broc, 2019). This allowed the parceling of the study variables to be placed in the model (Hagtvet & Nasser, 2004) and the scores of these variables were scaled to values between 0 and 30 to facilitate their visualization with the consideration that this procedure does not affect the values of the correlations between the variables. The theoretical model was analyzed by means of structural equations modeling with the robust maximum likelihood estimator, which is appropriate for numerical variables and because it is robust to deviations from inferential normality (Muthen & Muthen, 2017). Fit assessment was performed using the comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized residual root mean square (SRMR). CFI values > .90 (Bentler, 1990), RMSEA < .100 and SRMR < .080 (Browne & Cudeck, 1992) were used. All these analyses were carried out with controlling according to the demographic characteristics for sex and age. For the mediation analysis, the bootstrapping method (resampling) was used with 5000 iterations and establishing a 95% confidence interval (Yzerbyt et al., 2018). Regarding the reliability analysis, the internal consistency method with the omega coefficient (ω) was used. The correction in the calculation of the omega coefficient was also considered due to the presence of correlated errors (Raikov, 2004).

The software used was "R", version 4.1.2 and the lavaan library was used in its version 06-10 (Rosseel, 2012).

## Results

### Descriptive and Correlation Analyses

The total scores of the indicators were calculated for the study variables, which were scaled with values between 0 and 30 in order to facilitate the interpretation of results. The mean score for each external developmental asset was above average, with the exception of Creative Use of Time, which had the lowest score ($M$ = 11.5; $SD$ = 5.9); regarding internal developmental assets, all four dimensions scored above average, with Commitment to Learning having the highest mean score ($M$ = 22.7; $SD$ = 4.9) and Positive Identity having the lowest mean score ($M$ = 18.6; $SD$ = 5.9). Concerning the 5Cs, Confidence and Character had the highest mean score ($M$ = 21.5; $SD$ = 6.3 and $M$ = 21.4; $SD$ = 4.9, respectively) and the lowest score was Competence ($M$ = 17.8; $SD$ = 5.0). Finally, the dimension of social well-being had the lowest score ($M$ = 15.1; $SD$ = 7.0) while emotional well-being had the highest score ($M$ = 21.7; $SD$ = 6.1). Table 5.1 shows the correlation matrix of the variables, in which the correlations ranged between .12 and .77 for the study variables. In addition, Table 5.1 also shows the McDonald's omega coefficients that were found, with values ranging from .50 to .95.

### Measurement and Structural Analysis

First, the MHC-SF scale was analyzed, obtaining a good fit for the original structure of three correlated factors, $\chi^2(74) = 271.5$, $p < .001$, CFI = .921, RMSEA = .075, SRMR = .058. The variable developmental assets were analyzed per dimension. For external assets, we initially obtained an inadequate model fit, and thus, considering the modification indices and in consistent with our theoretical framework, item 15 was removed and the covariance of the errors of items 23 with 24 and 9 with 10 were allowed to correlate, obtaining a good fit, $\chi^2(267) = 987.3$, $p < .001$, CFI = .906, RMSEA = .073, SRMR = .071. Regarding internal assets, due to low factor loadings, items 48, 53, 54, 55 and 58 were removed and the covariance of the errors of items 39 and 42 was

allowed, obtaining a good fit, $\chi^2(398) = 1242.7$, $p < .001$, CFI = .905, RMSEA = .065, SRMR = .069. Finally, concerning the 5Cs scale, after removing items 8, 11, 14, 31 and covarying the errors of items 33 and 34, an adequate fit was obtained, $\chi^2(394) = 1611.3$, $p < .001$, CFI = .938, RMSEA = .078, SRMR = .071.

Two models were tested, representing each developmental asset. Regarding the model involving external assets (see figure 5.2), an adequate model fit was initially not obtained, $\chi^2(71) = 407.4$, $p < .001$, CFI = .881, RMSEA = .098, SRMR = .074, and therefore, it was respecified allowing the covariance between the indicators of Character and Care of the 5Cs, $r = .46$, achieving an adequate adjustment, $\chi^2(70) = 306.6$, p < .001, CFI = .916, RMSEA = .082, SRMR = .067. This result confirms $H_{2a}$ on the direct relationship of external assets in the 5Cs, $\beta = .73$, $p < .001$, and $H_{3a}$ on the positive effect of the 5Cs on mental health, $\beta = .99$, $p < .001$. Nevertheless, the effect of external assets on mental health ($H_{1a}$) was not confirmed, $\beta = -.09$, $p = .145$. These results were calculated controlling for gender and age. See Figure 5.2.

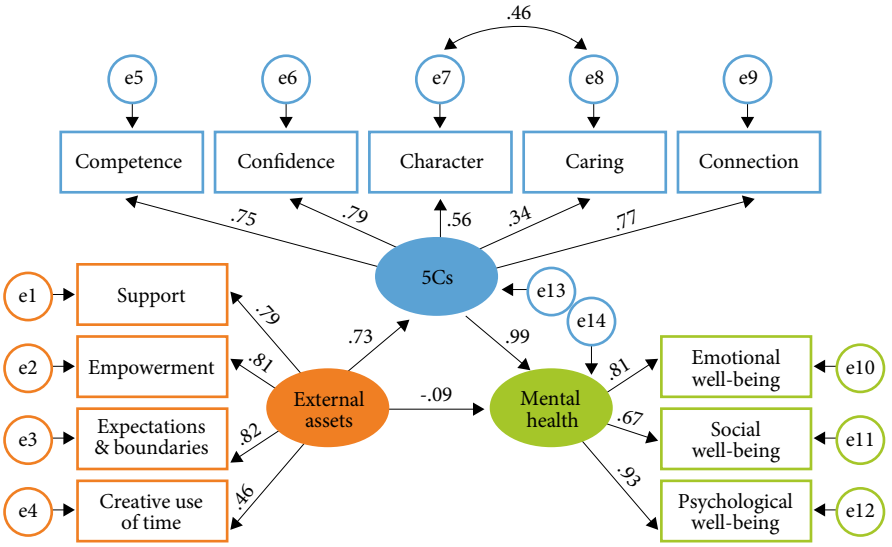


**Figure 5.2** *Results of the Structural Model on the Effect of External Assets and 5Cs on Mental Health. Standardized Estimates are Shown after Controlling for Gender and Age.*

**Table 5.1** *Descriptive Statistics, Internal Consistencies and Correlations for the Variables.*

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Emotional well-being | – | | | | | | | | | | | | | | | |
| 2. Social well-being | .55 | – | | | | | | | | | | | | | | |
| 3. Psychological well-being | .77 | .60 | – | | | | | | | | | | | | | |
| 4. Support | .38 | .38 | .40 | – | | | | | | | | | | | | |
| 5. Empowerment | .42 | .37 | .49 | .62 | – | | | | | | | | | | | |
| 6. Expectations & Boundaries | .40 | .34 | .48 | .67 | .67 | – | | | | | | | | | | |
| 7. Creative use of time | .26 | .34 | .28 | .41 | .33 | .34 | – | | | | | | | | | |
| 8. Commitment to Learning | .42 | .27 | .52 | .36 | .49 | .52 | .19 | – | | | | | | | | |
| 9. Positive Values | .42 | .43 | .53 | .43 | .48 | .54 | .32 | .65 | – | | | | | | | |
| 10. Social Competence | .43 | .38 | .55 | .40 | .50 | .54 | .24 | .60 | .70 | – | | | | | | |
| 11. Positive Identity | .42 | .35 | .49 | .35 | .36 | .39 | .26 | .50 | .49 | .51 | – | | | | | |
| 12. Competence | .53 | .53 | .62 | .34 | .42 | .38 | .36 | .34 | .36 | .43 | .42 | – | | | | |
| 13. Confidence | .63 | .46 | .71 | .36 | .41 | .36 | .27 | .39 | .41 | .43 | .47 | .65 | – | | | |
| 14. Character | .40 | .32 | .48 | .37 | .41 | .38 | .18 | .45 | .54 | .51 | .35 | .36 | .40 | – | | |
| 15. Caring | .25 | .22 | .31 | .24 | .26 | .28 | .12 | .29 | .40 | .39 | .19 | .20 | .20 | .55 | – | |
| 16. Connection | .49 | .57 | .62 | .51 | .58 | .56 | .33 | .44 | .51 | .51 | .42 | .58 | .56 | .48 | .32 | – |
| Mean | 21.7 | 15.1 | 20.9 | 17.0 | 20.0 | 21.1 | 11.5 | 22.7 | 19.7 | 20.7 | 18.6 | 17.8 | 21.5 | 21.4 | 19.5 | 19.1 |
| *SD* | 6.1 | 7.0 | 6.1 | 5.6 | 5.4 | 5.1 | 5.9 | 4.9 | 4.2 | 4.8 | 5.9 | 5.0 | 6.3 | 4.9 | 6.4 | 4.8 |
| α | -1.0 | 0.0 | -0.8 | -0.2 | -0.6 | -0.5 | 0.2 | -0.6 | -0.3 | -0.3 | -0.1 | -0.3 | -1.0 | -0.6 | -0.6 | -0.4 |
| ω | .85 | .82 | .89 | .83 | .75 | .83 | .50 | .89 | .85 | .78 | .71 | .76 | .95 | .86 | .92 | .78 |

*Note*. SD = standard deviation; α: alpha; ω: omega

Analysis of the mediating role of the 5Cs in the relationship of external assets and mental health was also performed by bootstrapping of 5000 iterations, obtaining a statistically significant mediating effect, $\beta = .73$, $p < .001$.

Regarding the internal assets in the mental health explanatory model, an inadequate fit was initially obtained, $\chi^2(71) = 397.3$, $p < .001$, CFI = .887, RMSEA = .096, SRMR = .077. Therefore, the model was respecified allowing covariance between errors of the Character and Caring indicators of the 5Cs, $r = .45$, resulting in an adequate fit, $\chi^2(70) = 303.8$, $p < .001$, CFI = .919, RMSEA = .082, SRMR = .073. This result confirms the $H_{2b}$ on the direct relationship of internal assets on the 5Cs, $\beta = .76$, $p < .001$, and the $H_{3b}$ on the positive effect of the 5Cs on mental health, $\beta = .89$, $p < .001$. Similar to the previous model, $H_{1b}$ on the effect of internal assets on mental health was not confirmed, $\beta = .04$, $p = .598$. These results were calculated controlling for sex and age, and are shown in Figure 5.3. Finally, analysis of the mediating role of the 5Cs in the effect of internal assets with mental health was also performed, obtaining a statistically significant effect, $\beta = .68$, $p < .001$, by bootstrapping of 5000 iterations.

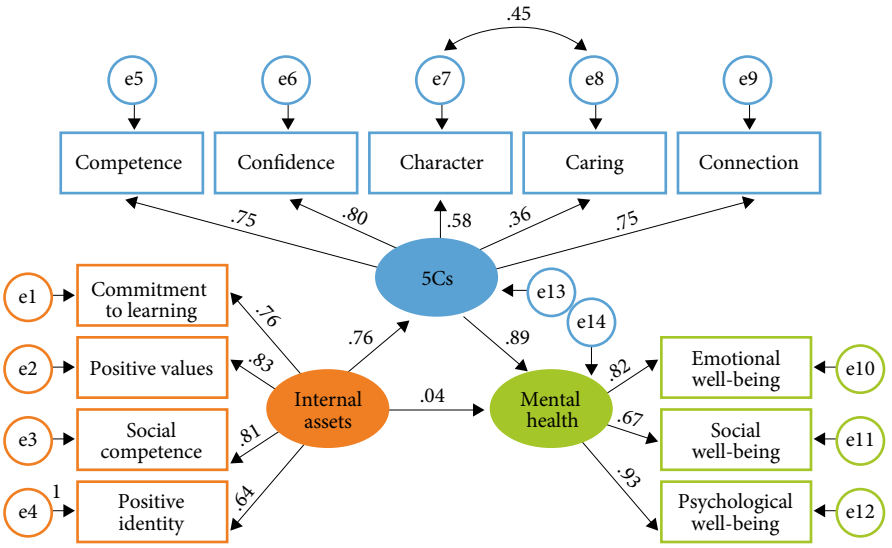


**Figure 5.3** *Results of the Structural Model on the Effect of Internal Assets and the 5Cs on Mental Health. Standardized Estimates are Shown After Controlling For Gender and Age.*

## Discussion

The main objective of this study was to evaluate a model with two of the main constructs of PYD (i.e., developmental assets and the 5Cs) and its effect on mental health in young Peruvian participants, being one of the few studies that involves two constructs of positive development in a sample of Peruvian youth. The study conducted by Fernandes et al. (2021) also involved both constructs comparing different realities (i.e., Turkey, Ghana, Kosovo, Slovenia, Norway and Portugal), concluding that it is important to take into account cultural differences to establish adequate intervention programs and youth policies.

Within the model proposed in the present study, we also assessed the relationship among developmental assets, the 5Cs and mental health. Additionally, we aimed to analyze a possible mediating role of the 5Cs on the association of developmental assets and mental health. The results showed a positive relationship between development assets and the 5Cs, as well as a significant positive link between the 5Cs and mental health. Moreover, a significant mediating effect of the 5Cs was found. Nonetheless, one should be cautious as these are preliminary results and models were modified in order to get adequate model fit.

The relationship between developmental assets and mental health was not significant. It should be noted that these results are preliminary and that more longitudinal studies are needed.

First, we expected a positive association between developmental assets and the 5Cs, which was in this study. There are several definitions for PYD, with the developmental resources that contribute to positive outcomes and behaviors in young people generally being highlighted. Both development assets and the 5Cs of PYD are of great importance, yet there is limited research on their benefits in a model. From previous literature (Eglantina et al., 2023; Fernandes et al., 2021) it can be concluded that the more internal (i.e. individual skills, competencies, commitment to learning, positive values, social competencies, and positive identity) and external (i.e. support, empowerment, expectations, and constructive use of time) developmental assets the young person has, the greater the probability that they will have a healthy and caring lifestyle in the long term, thus indicating that the development of assets and the promotion of the 5Cs could be taken into account together.

Thus, it is important to strengthen a wide range of resources capable of helping young people not only to overcome risks or any other adverse events present in daily life, but also to have fulfillment in their lives. In the Peruvian sample it was of concern to note that the dimension that most needs revision is related to the constructive use of time. Questions regarding the positive ways young Peruvians spend their time should be made. In Peru, some public organizations promote the participation of adolescents and young people, such as the Advisory Council for Children and Adolescents (CCONNA), and the Regional Youth Council (COREJU). Nonetheless, problems have been detected in the effectiveness of both organizations, with the main issue being related to the incidence of youth participation in these institutions.

The National Youth Secretary has considered these problems and has undertaken a restructuring of the Regional Youth Council. It is expected to involve around 2 000 adolescents and young people. This organization will allow discussion of the regional reality and possible national solutions (UNICEF-PERU, 2018).

Second, a positive relationship between the 5Cs of PYD and mental health was hypothesized. Our results confirmed this hypothesis. Different studies have reported and highlighted that the flourishing characteristics of the 5Cs will allow the development of positive qualities and, in turn, reduce the risks of presenting any problem that affects the psychological health and well-being of the young person. Embracing this same idea, Rothes et al. (2022) emphasized that when these indicators (i.e., 5Cs) are built and consolidated, a clear life purpose is generated, which, in turn, influences in motivation. Furthermore, Hernández-Torrano et al. (2020) added that general well-being is also generated and contributes to a good state of mental health for youths.

Third, we hypothesized a positive relationship between developmental assets and mental health, which was not confirmed in the present study. Initially, this result seemed counterintuitive, since a previous study including emergent Peruvian and Colombian adults obtained a statistically significant positive result between these variables (Manrique-Millones et al., 2021). We believe that the presence of the 5Cs may have induced this difference. This may also be somewhat explained by the mediating role of the 5Cs, in which the five indicators would explain the relationship between developmental assets and mental health. Likewise, another important factor is the way in which the calculation of the scores of each construct was operationalized.

In this study, the means of each dimension were used, while in the previous study, the frequency of development assets was used as criteria.

Although we found some interesting findings, there are some limitations which should be mentioned. First, the sample encompassed young participants with a broad age range from 15 to 29 years old. Although this wide spectrum of age could impact the perception of the variables studied, it is important to mention that all the analyses were performed controlling for age and gender, to reduce as much as possible any undesired effect of these sociodemographic variables. For future studies the inclusion of more homogeneous samples is recommended. Likewise, more gender-based studies are suggested, as this can differ culturally.

Second, the internal consistency of the constructive use of time was rather low and might, to some extent, have impacted our results. It is important for future research to address this issue and analyze this particular dimension using a qualitative approach, such as with focus groups or interviews, to obtain more accurate information based on potential cultural differences. Third, although we have tested each measure of the developmental assets (internal and external) and the 5Cs individually, while trying to fit the model with all variables together, some construct similarities may have been present. For example, in the internal assets, positive identity, which reflects self-esteem and self-worth, correlated with confidence which refers to a sense of self-worth and positive self-efficacy. Concerning external assets, support, which involves family, neighborhood and, in general, a good environment where the youth feel assisted and protected, was associated with connection which refers to positive links with people or institutions. This is not uncommon and has been reported in previous studies involving both PYD constructs (Fernandes et al., 2021). Finally, the cross-sectional nature of the data does not allow the analysis of causality of the variables or to evaluate the dynamics of behavior. It is recommended to use a longitudinal design for future research given its far-reaching strengths.

Despite the above limitations, the results of the present study provide insight into the relationship between the 5Cs, developmental assets, and mental health in young Peruvian participants. The developmental assets can be analyzed as a foundation for PYD and the 5Cs can be considered a result of adequate resources in juvenile contexts and personal strengths (Fernandes et al., 2021).

We need the support and commitment of the authorities to promote laws and proposals regarding the Peruvian youth agenda by adopting a PYD framework that has been demonstrated to have a positive effect related to mental health and is supported by the findings of the present research.

Peruvian adolescents and young people should be the priority population in the design of development policies and should have greater participation in decision-making. Guaranteeing the full exercise of their rights, access to adequate and quality services, as well as timely and pertinent information, is essential to enhance their growth opportunities.

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Chapter 6

# Gender and Age Differences in Developmental Assets of Nigerian Youth in Institutionalised Residential and Non-Residential Centres

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**Abstract:** This chapter explores the developmental assets (DA) of Nigerian youth who were selected from institutionalised residential centres (IRC: $n$ = 122, $M_{age}$ = 19.10, $SD$ = 3.15) and institutionalised non-residential centres (INRC: $n$ = 487, $M_{age}$ = 16.52, $SD$ = 1.46). The study examined the youth's DA across gender, age, and centres. A questionnaire consisting of demographic variables and Search Institute's Developmental Assets Profile was used to collect data. Results (mean scores) indicated that in both centres, Commitment to learning was highly experienced, while Constructive use of time was the least experienced asset ($M$ = 3.38 and $M$ = 2.62, respectively, in IRC; $M$ = 3.44 and $M$ = 2.98, respectively, in INRC). Gender differences ($p$ <.*05*) were repeatedly observed in IRC, with males reporting higher scores on seven out of eight assets compared to females. In INRC, females reported higher score on three assets relative to their male counterparts. Age differences were also observed, with emerging adults reporting higher scores on four DA relative to children in IRC, while in INRC, children reported higher scores on six DA compared to emerging adults. The findings suggest that youth in INRC experienced a more nurturing context for positive development compared to youth in IRC. Males also appeared to have more access to assets than females. Differences in the experiences of developmental assets among the youth appear to reflect uneven distribution of assets and resources across the two institutional centres and gender. The implications for social justice are discussed.

*Keywords:* developmental assets, youth, institutionalised residential centres, institutionalised non-residential centres, Nigeria

## Introduction

The accessibility and distribution of resources in a nation can empower citizens towards development when fairness and equality are in place. For many individuals in developing countries like Nigeria, growing up is challenging due to societal parameters like poverty, unemployment, crime, and insecurity, causing vulnerability for many (Adeboye, 2015). Nigeria's newly revised version of the national youth policy (NYP) seeks to ensure that youth are empowered through different initiatives that could promote national development

(Federal Ministry of Youth and Sports Development, 2019). The paradigm shift of positive youth development (PYD), as against the deficit approach in youth studies and initiatives, focuses on developmental assets in the form of opportunities and resources that can enable positive development. The NYP goals and objectives align with the PYD perspective and take cognisance of developmental assets (DA) to achieve its goals. In line with Benson (2007), DA are the resources youth possess and those available in their contexts that can enhance their participation and contribution in the present and future.

Exploring the DA of Nigerian youth could unveil the significant role of NYP at this crucial time when the Nigerian society is faced with insurgencies, fuel scarcity, kidnapping and other social problems. The current chapter examined how DA are perceived and experienced by two categories of youth, one in institutionalised residential centres (IRC), examined as youth in orphanages or correctional homes and the other in institutionalised non-residential centres (INRC) – that is, youth attending secondary schools. The chapter is structured as follows. First, we present some information on the Nigerian context along with the national youth policy in Nigeria. Second, we provide a theoretical description of DA and briefly review DA in the African context together with the empirical evidence of their role in positive youth outcomes. We then empirically explore the DA of youth in the two Nigerian centres and discuss how the demographics (gender and age) of youth are associated with their experiences of the DA. We finally conclude with a discussion on the implications for social justice.

## The Nigerian Context and the National Youth Policy

Situated on the western coast of Africa, Nigeria gained independence from Britain in 1960. It is the seventh most populous country in the world, and a heterogenous society with three major ethnic groups, with another reflecting a conglomerate of 250 minor ethnic groups. Nigeria's population is currently estimated to be 223 800 000, of which 63% are below 30 years old (United Nations Population Fund, 2023). Like other African countries, Nigeria is a collectivistic culture where patriarchal systems encourage communal society (Adeboye, 2015). Over the years, oil, gas, and different natural resources have been harnessed to meet the social and basic needs of the citizens (Ministry of Foreign Affairs, 2022). The country's GDP has steadily

increased from 2005 to 2015, albeit with some fluctuations (National Bureau of Statistics, 2023). Both inflation and population growth have affected the society negatively, resulting in lack of social security, unemployment, religious insurgencies, crime and insecurity, high density of slums, and ritual killings, among others (Africanews, 2022; Sorunmu, 2019). In fact, among the youth these challenges have become a push factor for engaging in risk behaviours (Akpor & Thupayagaale-Tshweneagae, 2019; Federal Ministry of Youths and Sports Development, 2019).

Recognising its democratic constitution, the 1999 Nigerian constitution affirmed a just country with unconditional basic income, education, equal distribution of basic and material resources for the common good of the citizens, and a fair distribution of wealth across social classes. However, in the Federal Republic of Nigeria, inequality due to the abuse of democracy and social injustice in the economy, in addition to exclusion, has remained a threat to national development (Aluko et al., 2022; Osi, 2020). In common with Onalu and Okoye (2022), Osi (2020) emphasised that corruption, reflected in economic maladministration, poor infrastructure, insecurity, and the violation of human rights, has led to the underdevelopment of Nigeria. The World Bank Group (2022) reported that Nigeria is in a critical state due to the deterioration of the economic situation. Approximately 63% of the nation's population, accounting for 133 million Nigerians, are multidimensionally poor due to lack of income and basic amenities (Nigeria Poverty Map, 2023). The political economy of the nation favours the rich over the poor, thereby hindering social justice (Aluko et al., 2022; Ucheaga, 2022). Thus, Nigeria can be depicted as a broken society with a broken economy due to the inequality gap between the poor and the rich (Indrawati, 2016). These inequalities, along with the poor social and economic conditions of the country in which youth grow up can negatively impact their development as well as their present and future roles in societal development.

The Nigerian youth population is estimated to be over 60% of the total population, forming one of the largest proportions of the global youth population (United Nations, 2019). This group of individuals can contribute immensely to the development of the country if empowered with opportunities and resources that can release their full potentials. Youth are regarded as the hope for the development of any nation. However, the instability in the Nigerian economy, evident in poverty and inequality, has predisposed

many youth to unpleasant experiences such as unemployment, low-quality education, and death. In fact, Obadare (2022) observed that most of the youth live in extreme poverty, slum areas with high rates of crime, and disadvantaged communities.

Youth are framed not only by their personality but also by their social and cultural contexts (Petrova & Schwartz, 2017; Ungar, 2007). The NYP, which currently targets the empowerment of 15–29-year-olds, is a declaration committed to promoting the fundamental rights, health, social economic and political well-being of youth. Accordingly, as youth have the responsibility to engage in positive lifestyles, the government and societies have the obligations to ensure that youth reach their goals through the creation of equal opportunities. The youth policy targets three groups of youth: low-risk, especially vulnerable, and most at-risk youth (Federal Ministry of Youth and Sports Development, 2019).

In line with the Nigerian youth policy, this chapter focuses on low-risk youth, classified as youth in institutionalised non-residential centres (INRC), attending schools, and especially vulnerable youth in institutionalized residential centres (IRC), who reside in government orphanages or correctional homes. The most at-risk youth are those involved in violence and risk behaviours such as crime, substance use, and armed conflicts. Youth in IRC can also be sometimes classified as most-at-risk. In the NYP, two of the five strategies that address the specificity of these youths are: (1) the empowerment of youth through quality education, capacity-building, and skills development for independent economic development, and (2) equitable access to educational opportunities and partnership building and collaboration through sports (Federal Ministry of Youth and Sports Development, 2019). Thus, it is expected that the youth would have access to resources that provide education, empowerment skills and other initiatives. However, the situational analysis as of 2019 revealed that many youths have not benefitted from these initiatives and programmes (Federal Ministry of Youth and Sports Development, 2019). Moreover, the correctional institutions in Nigeria face a human right crisis and are poorly managed due to overcrowding of youth in need of social welfare services (Atilola et al., 2019). Osi (2020) thus noted the need for a redistribution of resources, control, and power structures as well as a re-examination of the social justice system in Nigeria.

## Theoretical Account and Empirical Evidence on Developmental Assets and Positive Youth Outcomes in the African Context

Benson (2007) identified eight asset categories – Commitment to learning, Positive values, Social competencies, Positive identity, Support, Empowerment, Boundaries & expectations, and Constructive use of time that are essential for positive youth development. Accordingly, the assets are building blocks of development, provided by asset-building communities and asset-building societies that can empower youth for the future. PYD as a paradigm shift emphasises the strengths, resources and opportunities that can facilitate positive outcomes as well as stimulate holistic development (Benson, 2007; Dimitrova et al., 2021; Lerner et al., 2005; Saleeby, 1996). In particular, DA focus on social-emotional strengths, values, commitments, as well as experiences with relationships and opportunities in youth's external contexts that can support them to become successful adults (Benson & Scales, 2018). These internal and external assets are both necessary for positive youth development (Benson, 2007; Benson et al., 2011; Dost-Gozkan & Wiium, 2021; Scales et al., 2012).

Internal assets, such as Commitment to learning (e.g., school engagement, achievement motivation, bonding to school), Positive values (e.g., equality and social justice), Social competencies (e.g., planning and decision skills, cultural competence, and resistance skills) and Positive identity (e.g., personal power and sense of purpose) are skills, values, and attitudes that youth gradually acquire through self-regulation and psychological functioning (Benson, 2007). External assets are the influence of the social system through interaction and relationships, and include Support (e.g., caring school climate, family support, and other adult relationships), Empowerment (e.g., community values youth and youth service to others) Boundaries & expectations (e.g., family boundaries and school boundaries), and Constructive use of time (e.g., engaging in creative activities and youth programmes) (Benson, 2007). In the African context, research on these assets is scarce.

Among the few studies, Dessalegnn (2021) examined DA and their impact on academic achievement among 375 Ethiopian youth at three universities and found that the students only experienced Support, when considering the external assets. The other external assets were limited or inadequate, while internal assets were highly experienced. Results on gender differences indicated that males had higher scores on Empowerment and Boundaries

& expectations compared to females. Internal assets like Commitment to learning and Positive identity as well as external assets, such as Support and Boundaries & expectations were found to be positively associated with students' academic achievement. In another study in the Ethiopian context, Desie (2020) examined the association between developmental assets and thriving outcomes among 636 youth attending secondary and college preparatory schools in Addis Ababa and found that participants were more likely to report internal assets than external assets. Girls reported higher DA than boys, while participants living with parents scored higher on the assets relative to those not living with parents. When analysed as composite variables, both internal and external assets were significantly related to thriving indicators like school success and leadership skills.

Furthermore, in a cross-sectional study in Ghana, Wiium (2017) investigated the experiences of internal and external assets with thriving indicators among 483 youth. Over 70% of the youth reported each of the internal assets, while for external assets, participants reported less Support and Constructive use of time. There was no gender or age difference in DA. Scores on Commitment to learning, Positive identity, and Positive values increased with the number of thriving indicators reported by the youth. In another African study involving youth in Tanzania, Drescher et al. (2018) explored the DA of two groups of youth: vulnerable (e.g., street-connected youth, youth that were orphaned, youth with disabilities) and non-vulnerable (i.e., youth that engaged in extracurricular activities and attended school). The youth ($N$ = 1241) were sampled from 11 regions of Tanzania. The scores on the various DA were above average although some youth reported very little experience of assets like Constructive use of time and Boundaries & expectations. In addition, developmental assets were found to be associated with self-efficacy reported by the youth and vulnerability status.

While research on developmental assets and their role in the African contexts is relatively few compared to those done in the American and other Western contexts, the findings are consistent; youth in different settings report the experience of developmental assets although the number of assets experienced may differ depending on the conduciveness of their settings. Moreover, as has been observed in the Western contexts, the presence of developmental assets tends to be related to indicators of thriving and youth contribution (Desie, 2020; Dessalegnn, 2021; Wiium, 2017).

### The Present Chapter

Even though earlier studies indicate the presence of DA among African youth, the reporting on these assets has often been inadequate. O'Connor et al. (2014) emphasised the need to prioritise those assets that are lacking in youth contexts. Benson (2007) and Wiium et al. (2019) argued that asset-building community (ABC) and asset-building society (ABS) are determining factors for youth's experience of DA. In line with Benson (2007), ABC demands that both responsible individuals and the community design programmes that can provide youth with resources and opportunities for growth while ABS is achieved through societal norms and policies that are geared towards building youth capacities. One of the key areas of Nigeria's national youth policy is to empower youth, especially the vulnerable. Jones (2011) acknowledged that there is still a huge gap between the national policy and social assistance for vulnerable groups, with great inconsistency between the federal, state, and local government (Marsden & Guyer-Miller, 2011). The limited research available on youth in residential centres in general has revealed that these youth receive less support and are less informed (Courtney et al., 2011; Stein & Verweijen-Slamnescu, 2012). In the present chapter, we explore the DA among youth in institutionalised residential centres and those in institutionalised non-residential centres to assess the ABC and ABS of these groups of youth in the Nigerian context. We also investigate how demographics such as gender and age are associated with the report of the assets in both centres. Findings from these investigations can uncover the conditions of the youth as well as any unequal distribution of opportunities and resources. Ultimately, any inequality and social injustice can be addressed by the youth policy, a move that can lead to national development as well as the achievement of global developmental goals.

## Method

### Participants and Procedure

This study employed a cross-sectional survey research design to collect data from 609 youth in two institutionalised centres in Abeokuta metropolis, Ogun State, Nigeria. In institutionalised non-residential centres (INRC), 487 participants were randomly selected from ten schools while 122 participants

were purposively selected from two institutionalised residential centres (IRC). The age range of participants was 13–27 years with a mean age of 19.10 and 16.52 years in IRC and INRC, respectively. Of the participants in IRC and INRC, 94% and 67%, respectively, were males. About 71% of the participants in IRC were emerging adults while 79% were classified as children in INRC. In IRC, 79% and 70% of the participants reported that the highest level of education of their father and mother was lower than post-secondary education, while the corresponding percentages reported by youth in INRC were 80% and 76%. Christianity was the dominant religion among the participants in the two institutions.

Data were collected during participants' free periods in the study areas of INRC and during the morning hours with participants in IRC before they started their daily routines. An English questionnaire comprising demographics and items on DA was used in the data collection. With the use of paper and pen, participants spent an average of 35 minutes completing the questionnaire. The data were collected over a period of four weeks. Before the collection of data, participants were informed of the purpose of the study and verbal consent was sought from all of them. Research assistants were recruited from a university for survey administration. Participants were given snacks, juice, and a book as incentives. Ethical clearance was obtained from the Federal University of Agriculture Abeokuta, Nigeria and for the data collection to commence, permission was sought from Ogun State Ministry of Education, Science and Technology and Ministry of Women Affairs and Social Development.

## Measures

### *Developmental assets*

The developmental assets were measured with the Developmental Assets Profile (DAP) (Benson, 2007; Scales, 2011; Search Institute, 2016). The DAP comprised 58 items grouped into two major categories (internal and external) and eight subcategories. Internal assets reflect four asset categories: Commitment to learning (7 items; e.g., do homework, eager to do well in school); Positive values (11 items; e.g., place importance on helping others, say no to tobacco and other drugs); Social competencies (8 items; e.g., plan and make good choices, sensitive to other people's needs and feelings); and Positive identity (6 items; e.g., feel good about oneself, thinking about one's purpose in life). External assets

also consist of four asset categories. The youth were asked how they experienced Support from family, neighbourhood, and school with 7 items (e.g., ask parents for advice, seek support from other adults). Empowerment has 6 items indicating various means of empowering youth, at family, school, and neighbourhood levels (e.g., engaging youths in useful roles, feeling valued and appreciated). Expectations & boundaries consist of 9 items (e.g., has department/school that give clear rules, teachers that urges to develop and achieve more). Creative use of time consists of 4 items (e.g., involvement in creative things, spending quality time at home doing things together). Participants responded on a four-point Likert-type scale (Not at all or rarely – 1, somewhat or sometimes – 2, very or often – 3, and extremely or almost always – 4), with high scores, indicating that more assets were experienced.

### *Demographics*

The demographic of participants were measured as gender (i.e., male or female); age (measured at interval level by obtaining actual age, which was then recoded into children (13–17 years) and emerging adulthood (18–29 years)); parent educational level (initially as five response categories (i.e., no education, primary school, secondary school, technical or vocational school and university education) but recoded to four levels – no education, primary, secondary and post-secondary); and religion (Christianity, Islam and others).

## Data Analyses

Descriptive analysis was run on each of the items that were used to assess the demographics and DA. A composite score for each of the DA was computed and used in further analyses. T-test analyses was run to determine gender and age differences in the DA. All analyses were conducted using the Statistical Product and Service Solutions (SPSS statistical program).

# Results

## Developmental Assets

The descriptive statistics of the eight categories of DA are presented in Table 6.1. Here, the mean (*M*), standard deviation (*SD*), skewness and kurtosis

for each asset category are described for youth in the institutionalised residential centres (IRC) and those in the institutionalised non-residential centres (INRC). In both IRC and INRC, all the DA measured had mean scores above 2 (i.e., the asset in question has somewhat or sometimes been experienced). Specifically, in IRC, mean scores of the external assets ranged from 2.62 to 2.96; the highest being on Empowerment, and the lowest on Constructive use of time. For INRC, mean scores of the external assets ranged from 2.98 to 3.25; here again, the highest being on Empowerment, and the lowest on Constructive use of time. Cronbach's alpha for the external asset categories ranged from .66 to .87, except for Constructive use of time (in IRC) that had an alpha value of .54 (Table 6.1).

For the internal assets, mean scores for participants in IRC ranged from 3.10 to 3.38, with the highest mean score on Commitment to learning and the lowest on Social competencies. The corresponding mean scores of participants in INRC ranged from 3.34 to 3.44, with the highest mean score on Commitment to learning and the lowest on Positive values and Social competencies (Table 6.1). Cronbach's alpha for the four internal assets categories ranged from .81 to .93. Cronbach alphas in the current study are comparable to those observed by Wiium (2017) in Ghanaian youth (.60s–.80s).

## Developmental Assets by Gender and Age

An independent samples t-test was run to determine gender and age differences in DA scores among youth in each of the centres (Tables 6.2 and 6.3). As seen in Table 6.2, for youth in IRC, significant gender differences were observed in all eight DA except for Empowerment, with males scoring higher on the asset categories compared to females. For youth in INRC, gender differences were observed in only three asset categories, all of them, internal assets (Commitment to learning, Positive values and Social competencies) with females reporting more of the assets than their male counterparts.

Results in Table 6.3 revealed that in IRC, a significant age difference ($p$ <.05) was observed in four out of the eight asset categories – Support, Boundaries & expectations, Commitment to learning, and Positive identity; with emerging adults reporting more of the assets relative to children. In INRC, a significant age difference ($p$ <.05) was observed in three external assets (Support, Empowerment and Boundaries & Expectations) and three internal assets

(Commitment to learning, Social competencies and Positive identity), with children reporting more of the assets compared to emerging adults.

**Table 6.1** *Mean Scores of the Eight Categories of Developmental Assets among Nigerian Youth in Institutionalised Centres.*

| **Youth in Institutionalised Residential Centre (*n =122*)** | **Mean** | **S.D.** | **α** | **Skewness** | | **Kurtosis** | |
|---|---|---|---|---|---|---|---|
| | | | | **Statistics** | **S.E.** | **Statistics** | **S.E.** |
| *External Assets* | | | | | | | |
| **Support** | 2.81 | .63 | .66 | -.42 | .22 | -.13 | .44 |
| **Empowerment** | 2.96 | .69 | .67 | -.57 | .22 | -.37 | .44 |
| **Expectations & boundaries** | 2.94 | .74 | .83 | -.57 | .22 | -.49 | .44 |
| **Constructive use of time** | 2.62 | .82 | .54 | .03 | .22 | -.89 | .44 |
| *Internal Assets* | | | | | | | |
| **Commitment to learning** | 3.38 | .78 | .93 | -1.23 | .22 | .56 | .44 |
| **Positive values** | 3.11 | .74 | .86 | -.61 | .22 | -.76 | .44 |
| **Social competencies** | 3.10 | .79 | .87 | -.69 | .22 | -.54 | .44 |
| **Positive identity** | 3.25 | .71 | .81 | -.76 | .22 | -.54 | .44 |
| **Youth in institutionalised non-residential Centre (*n =487*)** | **Mean** | **S.D.** | **α** | **Skewness** | | **Kurtosis** | |
| | | | | **Statistics** | **S.E.** | **Statistics** | **S.E.** |
| *External Assets* | | | | | | | |
| **Support** | 3.11 | .79 | .85 | -.84 | .11 | -.04 | .22 |
| **Empowerment** | 3.25 | .79 | .86 | -.98 | .11 | .18 | .22 |
| **Boundaries & Expectations** | 3.21 | .75 | .87 | -.96 | .11 | .18 | .22 |
| **Constructive use of time** | 2.98 | .76 | .67 | -.45 | .11 | -.39 | .22 |
| *Internal Assets* | | | | | | | |
| **Commitment to learning** | 3.44 | .73 | .92 | -1.44 | .11 | 1.57 | .22 |
| **Positive values** | 3.34 | .73 | .93 | -1.14 | .11 | .66 | .22 |
| **Social competencies** | 3.34 | .71 | .88 | -1.04 | .11 | .38 | .22 |
| **Positive identity** | 3.42 | .73 | .88 | -1.34 | .11 | 1.20 | .22 |

*Note.* S.D. – Standard deviation; S.E. – Standard error; α – Cronbach's alpha

## Discussion

The aim of the present chapter was to explore the experiences of developmental assets among Nigerian youth in institutionalised residential centres and institutionalised non-residential centres. We also explored gender and age differences in youth's report of the developmental assets. The findings revealed that participants in both contexts experienced most of the DA to some extent, as indicated by mean scores above 2 (range 1–4).

**Table 6.2** *Gender Differences in Developmental Assets among Nigerian Youth in Institutionalised Centres.*

| **Institutionalised residential centre** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Variables | Males ($n$ =115) | | Females ($n$ = 7) | | Mean Difference | 95% CI | *df** | *t* | *p* | Cohen's *d* |
| | *M* | *SD* | *M* | *SD* | | | | | | |
| Support | 2.86 | 0.60 | 2.04 | 0.56 | 0.82 | 0.35, 1.28 | 118 | 3.50 | .001 | 1.36 |
| Empowerment | 2.99 | 0.70 | 2.55 | 0.47 | 0.44 | 0.93, 0.97 | 118 | 1.63 | .11 | 0.64 |
| Expectations & Boundaries | 3.00 | 0.71 | 1.90 | 0.53 | 1.10 | 0.56, 1.64 | 118 | 4.04 | .001 | 1.57 |
| Constructive use of time | 2.67 | 0.82 | 1.86 | 0.69 | 0.81 | 0.19, 1.44 | 118 | 2.57 | .01 | 1.00 |
| Commitment to learning | 3.43 | 0.75 | 2.58 | 0.82 | 0.85 | 0.27, 1.43 | 119 | 2.89 | .01 | 1.12 |
| Positive values | 3.16 | 0.73 | 2.42 | 0.46 | 0.74 | 0.19, 1.23 | 119 | 2.63 | .01 | 1.02 |
| Social Competencies | 3.15 | 0.77 | 2.27 | 0.66 | 0.88 | 0.29, 1.47 | 119 | 2.97 | .00 | 1.16 |
| Positive identity | 3.28 | 0.72 | 2.77 | 0.51 | 0.51 | -0.35, 1.05 | 119 | 1.85 | .03 | 0.72 |
| **Institutionalised non-residential centre** | | | | | | | | | | |
| Variables | Males ($n$ =325) | | Females ($n$ =162) | | Mean Difference | 95% CI | *df** | *t (488)* | *p* | Cohen's *d* |
| | *M* | *SD* | *M* | *SD* | | | | | | |
| Support | 3.06 | 0.80 | 3.20 | 0.76 | -0.14 | -0.29, 0.01 | 484 | - 1.87 | .06 | 0.18 |
| Empowerment | 3.22 | 0.79 | 3.33 | 0.79 | -0.11 | -0.26, 0.04 | 483 | -1.45 | .15 | 0.14 |
| Expectations & Boundaries | 3.18 | 0.76 | 3.26 | 0.72 | -0.80 | -0.22, 0.61 | 484 | -1.12 | .26 | 0.11 |
| Constructive use of time | 3.02 | 0.76 | 2.91 | 0.77 | 0.11 | -0.33, 0.26 | 477 | 1.51 | .13 | 0.15 |
| Commitment to learning | 3.39 | 0.73 | 3.56 | 0.72 | -0.17 | -0.31, -0.30 | 482 | -2.39 | .02 | 0.23 |
| Positive values | 3.28 | 0.75 | 3.46 | 0.69 | -0.18 | -0.32, -0.41 | 482 | -2.61 | .01 | 0.25 |
| Social Competencies | 3.29 | 0.73 | 3.46 | 0.65 | -0.17 | -0.31, -0.41 | 481 | -2.66 | .01 | 0.25 |
| Positive identity | 3.38 | 0.75 | 3.50 | 0.69 | -0.12 | -0.26, 0.13 | 482 | -1.73 | .08 | 0.17 |

*Note.* *Different degrees of freedom due to uneven missing cases on the asset categories.

**Table 6.3** *Age Differences in Measures of Developmental Assets among Nigerian Youth in Institutionalised Centres.*

| Variables | Institutionalised Residential Centre | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Children ($n$ = 35; 13–17 years) | | Emerging adults ($n$ = 87; 18–27 years) | | Mean Difference | 95% IC | $df$* | t | p | Cohen's d |
| | M | SD | M | SD | | | | | | |
| Support | 2.52 | 0.60 | 2.93 | 0.60 | -0.410 | -0.64, -.17 | 118 | 3.35 | .00 | 0.67 |
| Empowerment | 2.83 | 0.71 | 3.01 | 0.68 | -0.18 | -0.46, 0.09 | 118 | 1.32 | .19 | 0.27 |
| Expectations & Boundaries | 2.67 | 0.79 | 3.05 | 0.70 | -0.38 | -0.67, -0.09 | 118 | - 2.63 | .01 | 0.53 |
| Constructive use of time | 2.43 | 0.80 | 2.70 | 0.83 | -0.27 | -0.60, 0.06 | 118 | - 1.64 | .10 | 0.33 |
| Commitment to learning | 3.14 | 0.88 | 3.47 | 0.72 | 0.53 | -0.66, 0.00 | 119 | - 1.98 | .05 | 0.43 |
| Positive values | 2.97 | 0.90 | 3.17 | 0.66 | -0.20 | -0.53, 0.14 | 119 | - 1.17 | .25 | 0. 27 |
| Social Competencies | 2.91 | 0.85 | 3.17 | 0.75 | -0.26 | -0.57, 0.05 | 119 | - 1.65 | .10 | 0. 33 |
| Positive identity | 3.02 | 0.69 | 3.35 | 0.70 | -0.33 | -0.61, -0.06 | 119 | - 2.40 | .02 | 0.48 |
| | Institutionalised Non-Residential centre | | | | | | | | | |
| | Children ($n$ = 384; 13–17 years) | | Emerging Adults ($n$ = 103; 18–27 years) | | Mean Difference | 95% IC | $df$* | t | p | Cohen's d |
| | M | SD | M | SD | | | | | | |
| Support | 3.16 | 0.75 | 2.92 | 0.88 | 0.24 | 0.07, 0.41 | 485 | 2.75 | .00 | 0.31 |
| Empowerment | 3.30 | 0.77 | 3.08 | 0.86 | 0.22 | 0.05, 0.39 | 484 | 2.55 | .01 | 0.28 |
| Expectations & Boundaries | 3.26 | 0.70 | 3.02 | 0.88 | 0.24 | 0.08, 0.40 | 485 | 2.56 | .00 | 0.32 |
| Constructive use of time | 3.02 | 0.73 | 2.86 | 0.87 | 0.16 | -0.01, 0.32 | 478 | 1.86 | .06 | 0.21 |
| Commitment to learning | 3.48 | 0.73 | 3.31 | 0.75 | 0.17 | 0.01, 0.33 | 483 | 2.03 | .04 | 0.23 |
| Positive values | 3.37 | 0.72 | 3.22 | 0.78 | 0.15 | -0.02, 0.32 | 483 | 1.77 | .08 | 0.21 |
| Social Competencies | 3.39 | 0.70 | 3.18 | 0.81 | 0.21 | 0.04, 0.38 | 482 | 2.39 | .01 | 0.30 |
| Positive identity | 3.47 | 0.69 | 3.23 | 0.84 | 0.23 | 0.06, 0.41 | 483 | 2.60 | .01 | 0.32 |

*Note.* *Different degrees of freedom due to uneven missing cases on the asset categories.

This alludes to the fact that DA are universal (Benson, 2007). For the external asset categories, the highest mean score was registered for Empowerment,

followed by Expectations & boundaries, then Support, and finally, Constructive use of time. For internal assets, the most experienced asset category was Commitment to learning, Positive identity, Positive values, and Social competencies, in that order. This was true for both residential and non-residential centres. Thus, Empowerment and Commitment to learning were the most experienced external and internal assets, respectively, in both IRN and INRC. Our findings are contrary to Desie's (2020) observations that suggested that Ethiopian participants scored below average on these two asset categories.

Empowerment of youth in both IRC and INRC contexts implies that communities in the Nigerian context values youth, engage them in the community as well as provide them with safety. These empowerment skills appear to be provided within the educational system. Like youth in INRC, youth in IRC have access to education and can attend school. In addition, youth in IRC are engaged in empowerment programmes, such as workshops, seminars, and religious activities. Moreover, the experience of Commitment to learning is an indication that youth have achievement motivation for academic success (Search Institute, 2016).

The least experienced of all the assets in both centres was Constructive use of time (an external asset category). This observation was also noted by Scales (2011) in various international samples and by Wiium (2017) in Ghanaian youth. While youth have some access to other external assets, access to creative activities was limited. Youth in both INRC and IRC experienced little recreational activities, although the former had a bit more access to these assets than the latter. Sporting and attending religious programmes are the common social activity of youth in Nigeria. Thus, there is a need to promote more recreational activities like music, theatre, and other creative activities unique to the Nigerian context in schools; activities that can boost the morale of youth as well as promote positive development.

Our findings indicated that participants experienced more internal assets than external assets. This finding was also reported among Ethiopian youth by Desie (2020) and Dessalegnn (2021). Furthermore, youth in INRC scored higher on the internal assets relative to youth in IRC, findings that are also reflected in those of Drescher et al. (2018) who found that developmental assets in Tanzania youth were related to vulnerability status. In addition, Desie (2020) observed among Ethiopian youth that those living with parents were more likely to report the assets, especially internal assets compared to those

in other living arrangements. Thus, our findings suggest that youth in INRC (youth in secondary schools) appear to have an advantage over those in IRC (youth in orphanages or correctional homes) when it comes to their exposure to asset-building community resources. Zakariyya et al. (2018) observed this lack of resources and opportunities in borstal homes where adequate care is lacking and youth are usually confined to a closed institution. This could indicate that a fair system is not in operation across the two contexts, as assets were usually minimal in IRC. That external assets were least experienced in both IRC and INRC could also imply that as observed in other African contexts (Desie, 2020; Dessalegnn, 2021), the asset-building community and asset-building society in the Nigerian context do not adequately nurture these assets and thus, should be simulated to provide the resources and opportunities that the youth, especially those at risk or in vulnerable conditions, need to develop their full potential.

The present chapter also examined gender differences in the DA of participants in the two centres. In IRC, gender differences were observed in seven assets, where males were more likely to report all the internal (Commitment to learning, Positive values, Social competencies and Positive identity) and three external assets (Support, Boundaries & expectations, and Constructive use of time) compared to their female counterparts. That youth living in orphanage and correctional homes, and males, in particular, can engage in Positive values, implies that youth believe in themselves and have values for equality and social justice (Search Institute, 2016). It is also reassuring that youth living in confined conditions in IRC have a positive view of the future as indicated by their scores on Positive identity. In INRC, no gender difference was observed in the external assets, a finding that is consistent with those found by Wiium (2017) in Ghanaian youth. However, gender differences were observed in three internal asset categories, where females scored higher on Commitment to learning, Positive values and Social competencies. Despite the encouraging findings of the presence of DA among the youth, the overall findings in favour of males in the Nigerian context appear to reflect African cultural practices and gender socialisation that have often discriminated against the female gender, limiting their opportunities and aspirations (Dako-Gyeke & Owusu, 2013).

Concerning age differences, it was interesting to observe that in IRC, emerging adults were more likely to experience both external (Support, and Expectation & boundaries) and internal assets (Commitment to learning

and Positive identity) compared to children, while the opposite was true in INRC. Here, children were more likely to experience the external (Support, Empowerment and Boundaries & expectations) and internal assets (Commitment to learning, Social competencies and Positive identity) compared to emerging adults. Although the current findings suggest that age determined the experience of the assets to some extent, the role of age in DA is not clear. Indeed, in earlier studies, the findings on age have also been mixed. The finding that younger youth tend to experience more assets compared to older youth in INRC has also been found in Western youth samples (e.g., Nag Delgado et al., 2021), while no such difference was found in the Ghanaian study by Wiium (2017). However, in our study, for the youth in INRC, attending school appeared to be associated with their experiences of DA, especially for children, while older youth appeared to get more access to these resources and opportunities in IRC.

## Limitations

Despite the significant findings of the present chapter, there are several limitations worth noting. The present study is a quantitative study that adopted tools developed in the United States without consideration of the Nigerian context. It is therefore possible that despite the youth report of the developmental assets, some of the items (like Constructive use of time that had low Cronbach's alpha) might not sufficiently address the specificity of the Nigerian situation experienced by the youth, especially youth in IRC. Thus, there is the need to develop an adapted version of the instrument that is functional for the Nigerian context. In addition, the cross-sectional nature of our study prevents any causal inference of the findings. Future studies using longitudinal designs may be more appropriate to determine the causal relations among the variables. Furthermore, the use of self-report data could have biased the responses of the youth. Including objective data from teachers and the management of the institutions may present more reliable findings.

Again, the different sample sizes and sampling procedures used might have produced samples that did not represent the target groups in both institutionalised and non-institutionalised centres, as well as the different genders. Future research may consider similar sampling procedures and more representative samples selected from more than the one metropolis used in

the current study. More complex analysis could also be conducted to account for third variables like engagement in risk behaviours and socio-economic status that may have some implications for the report of the developmental assets. Finally, the majority of the studies on PYD have been carried out with adolescent samples, although recent studies have also included emerging adults like is done in our study. However, while adolescents and emerging adults may differ in age, their developmental needs appear to be similar, thus, justifying the inclusion of emerging adults in PYD studies like ours.

## Implications for Social Justice

The current chapter has relevant implications for social justice in Nigeria. While youth in both IRC and INRC experienced several of the developmental assets, the mean scores of youth in INRC were consistently higher. This might suggest inequality and an unfair distribution of available resources across the two contexts. Logically, it may be easier to allocate resources to INRC youth who may be perceived as a national asset rather than to IRC youth who may be seen as a liability. However, despite their challenges, an investment in effective asset-building community and asset-building society for IRC youth can likely change their status from a liability to a national asset. Moreover, the goal of the Nigerian youth policy to promote equitable access to educational opportunities and partnership building and collaboration through sports (Federal Ministry of Youth and Sports Development, 2019) can be met through equal distribution of the opportunities and resources.

The current findings also indicated some form of inequality across gender, where in general males appeared to experience the assets more than females. Indeed, even on the national and regional levels, a gender gap appears to persist in many African countries, with males having more access to rights, resources and economic opportunities compared to females (World Economic Forum, 2023). To ensure that all the youth can be engaged to promote national development, policies like Nigerian youth policy would have to address injustices and inequalities that appeared to be reflected in the gender differences found in the report of the assets. This is even more so as the youth form such a large proportion of the Nigerian total population and are the backbone of the country.

## Conclusions

Findings in this chapter extent the universality of the developmental assets proposed by Peter Benson and the Search Institute and the generalization of the Developmental Asset Profile to the Nigerian context. Two groups of youth, low-risk and at-risk or youth in vulnerable conditions, were found to have experienced several of the assets to some extent. As in earlier studies, internal assets were experienced more than external assets. We also found that youth in IRC (i.e., in orphanages or correctional homes) were less likely to report the assets compared to those in INRC (i.e., youth attending school). In addition, the general findings indicated that females were less likely to experience the assets compared to their male counterparts. These results may indicate a form of social injustice and inequalities with regards to the distribution of the available resources and opportunities to Nigerian youth. While the Nigerian youth policy should support an asset-building community and society that nurtures both internal and external assets, measures can be taken to ensure social justice and equal distribution of the resources and opportunities. This will not only help the country to successfully engage the youth in national development, but it can also help the country to meet its global developmental goals.

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Chapter 7

# Lack of Important Developmental Assets Makes Youth More Susceptible to Worrying about Their Future

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**Abstract:** The present study adopts a positive youth development approach, and particularly Benson's developmental assets framework, to investigate the relationship between developmental assets and worries about future education, employment, loneliness, and social status among youths in different educational stages. In addition, we investigate differences in these relationships between high-school and university students. Data were collected using a convenience sample of high-school ($N$ = 424; 233 girls; $M_{age}$ = 16.8, $SD$ = 1.21) and university students ($N$ = 304; 216 girls; $M_{age}$ = 20.7, $SD$ = 1.27) in Croatia. Presence of higher levels of developmental assets was significantly related to lower levels of future worries in youth. The internal asset *positive identity* was significantly associated with worries about the future, especially among high school students. The internal developmental assets *commitment to learning*, and *social competencies* showed differential associations with different worries in high school and university students. Out of the external developmental assets, only *support* was statistically significantly associated with worries, particularly with worrying about academic achievement and loneliness. Results also indicate that gender explains a small proportion of variance in worries, with girls reporting higher levels of future worries, as well as higher levels of developmental assets. The findings suggest that a lack of important developmental assets can make youths more susceptible to worrying, and that intervention strategies to reduce worries may be more successful when focusing on internal assets rather than external assets.

*Keywords:* Positive youth development, developmental assets, worry, education level, gender

## Introduction

Youth is a developmental period filled with challenging experiences, such as the transition from middle school to high school and from high school to higher education and work-life (Salmela-Aro et al., 2010); simultaneously, youths need to learn to manage norms and expectations from family, peers, school, and others in their environments. This can lead youths to worry about their future, which may impact their academic performance (Keogh et al., 2004; Owens et al., 2012; Wells, 2002), mood (McLaughlin et al., 2007; Borkovec et al., 1983), mental health (Brown et al., 2006; Visla et al., 2022), and engagement in risk behaviors (Arbel et al., 2018). Borkovec and colleagues (1983) define worry as a chain of relatively uncontrollable, negatively affect-laden thoughts and images about uncertain future events that have possible negative outcomes. Considering the devastating consequences of excessive or prolonged worrying, it is important to investigate what youths worry about, what factors affect worrying, and what resources can lessen worrying. Some evidence suggests that the most common worries youths have concern academic achievement, social relations, and appearance, and the most common coping strategies are support from family and peers, and distraction (de Matos et al., 2013).

Girls tend to worry more than boys (McLean et al., 2021; Robichaud et al., 2003; for an additional overview see Cartwright-Hatton, 2006), and older youths worry more than younger youths (Brown et al., 2006; Vesla et al., 2022). Prior research has suggested an association between increased age, cognitive development, and heightened worry (Muris et al., 2002). Moving through educational stages, students become more aware of the choices and responsibilities they have. When moving from high school to higher education, many students leave home and start living on their own or with peers and may therefore take temporary jobs. This might make future worries about academic achievement, a potential culprit for future employment and economic status, more salient. High school students who want to continue their education might also worry about their academic achievement, as well as about being lonely or getting into bad company due to not being included in supportive or beneficial peer groups in school or other contexts.

## Developmental Assets and Worry

To investigate the resources that youths have, we used a positive youth development (PYD) perspective that focuses on youths' strengths and opportunities. More specifically, we looked at Benson's Developmental Assets (DAs) Framework (2007). DAs refer to resources in youths and their environments that contribute to PYD. Within this framework are 40 DAs that are grouped into four external and four internal DA categories. External DAs are resources in different aspects of youths' environments and contexts of life, including relationships, supports, and opportunities, and are grouped into the following categories: 1. *Support* (Youth being surrounded by people who love, care for, appreciate, and accept them), 2. *Empowerment* (Youth feeling valued and valuable, through feeling safe and respected.), 3. *Expectations and boundaries* (Youth having clear rules, consistent consequences for breaking rules, and encouragement to do their best), and 4. *Constructive use of time* (Youth having opportunities to learn and develop new skills and interests with other youths and adults). Internal DAs are youths' personal resources, which include their values, skills, and commitments and are grouped into the following four categories: 1. *Commitment to learning* (Youth having a sense of the lasting importance of learning and believing in their abilities), 2. *Positive values* (Youth having strong values or principles to guide them in making healthy life choices.), 3. *Social competencies* (Youth having the skills needed for effective interactions with others, making difficult decisions, and coping with new situations), and 4. *Positive identity* (Youth believing in their self-worth and feeling in control over the things that happen to them) (Leffert et al., 1998).

The DA category *support* may be closely related to the degree of worry in youths, as Brown and colleagues (2006) found that positive parental contact can reduce worry in youths, and Duchesne and colleagues (2009) found a negative relationship between youths' attachment to their mother and worry during their transition from primary school to secondary school. Social support from parents and others is also related to good or improved mental health in youth (Camara et al., 2017) which is linked to less worry (Brown et al., 2006; Visla et al., 2022). This indicates that external DAs, particularly the *support* category, may be negatively related to worry. Feeling supported by parents is often accompanied by feelings of being respected, which can make youths feel empowered. The DA category *empowerment* also includes feeling safe in the neighborhood, at school, and at home, which can also reduce worrying in

youth. According to Cupid and colleagues (2021), youths who report feeling unsafe in their environments tend to worry more, indicating a possible correlation between the DAs in the category *empowerment* and worry. Furthermore, feeling that the family and teachers believe in youths' competencies through clear expectations can also reduce how much youths worry about their future. Saw and colleagues (2011) found that youths who feel like they are living up to their parents' expectations worry less. This shows that the DA category *expectations and boundaries* might also be related to worry.

The DA categories *support*, *empowerment*, and *expectations and boundaries* conceptually overlap in part with the concept of autonomy support from the self-determination theory, and research has shown that autonomy support is positively associated with adolescents' mental well-being through adolescents' internal resources, referred to as identity capital (Oliviera et al, 2014). Tikkanen (2016) found a relationship between identity capital and future worry. Identity capital conceptually overlaps with the internal DA category *positive identity*, which indicates that *positive identity* might also have a strong relationship with worry. Identity capital refers to the tangible and intangible resources that provide the individual with a developmental advantage in society (Côté, 1996). Tangible identity capital includes socially visible resources such as financial capital, education, and the family's socioeconomic status. Intangible identity capital includes personality traits like a sense of purpose, self-esteem, internal locus of control, and self-efficacy (Côté, 1996, 1997), which overlap with the internal DA category *positive identity*. Besides *positive identity*, other internal DAs are also conceptually close to identity capital and are therefore potential predictors of future worry. For example, Ergene (2011) found a relationship between worrying about test performance and study habits, which is similar to DAs in the category *commitment to learning*. The assumption that *commitment to learning* is negatively related to worrying is also based on previous research that found a relationship between school connectedness and a positive view of life and the future (Crespo et al., 2013). Romppanen et al. (2021) have shown significant longitudinal relationships between adolescent *social competence* and internalizing symptoms in young adulthood. Furthermore, Gomez-Baya et al. (2022) investigated the relationship between DAs and anxiety symptoms in university students in Spain and found that anxiety symptoms were negatively related to *positive identity*, but positively related to *positive values* in female students.

Although the relationship between youths' DAs and future worry has not, to our knowledge, been investigated in the past, research on similar concepts such as identity capital, parental support, study habits, feelings of safety, and parents' expectations suggest that these variables might be associated. Finding ways to reduce and prevent worry in youth can improve developmental outcomes, and DAs may contribute to this. This study examines possible associations between DAs and worries in youth, and how these associations may differ across genders and educational stages (high school vs. university). Specifically, we formulated the following research questions:

1. Are youths' reports of internal and external DAs associated with self-reported degrees of worry?
2. Are internal and external DAs and degree of worry related to youths' gender and educational stage?
3. Do associations between DAs and worry differ across educational stages?
4. Are different DAs associated with different domains of worry?

According to previous research, higher levels of support from family and friends are related to youths' identity capital, namely their self-efficacy, sense of purpose, self-esteem, and internal locus of control (Brown et al, 2006; Oliviera et al, 2014; Tikkanen, 2016), which overlap with internal DAs, particularly *positive identity*. Previous research has also indicated that worrying in youth might be associated with the DA categories *positive identity* (e.g. Tikkanen, 2016), *commitment to learning* (Crespo et al., 2013), *social competencies* (Romppanen et al., 2021), *positive values* (Gomez-Baya et al., 2022), *support* (Brown et al., 2006), *empowerment* (Cupid et al., 2021), and *expectations and boundaries* (Saw et al., 2011). Therefore, we expect to find negative associations between DAs and worry (hypothesis 1). Furthermore, in line with previous research (McLean et al., 2021; Robichaud et al., 2003; for an additional overview see Cartwright-Hatton, 2006), we expect to find higher degrees of worry in university than in high school students (hypothesis 2). Lastly, because older youths tend to have fewer DAs (Benson, 1990) and worry more than younger youths (Brown et al., 2006; Visla et al., 2022), but are also in a developmental stage closer to adulthood with its related responsibilities, we expect that different DAs will affect the degree and domain of worry of university students compared to high school students (hypothesis 3).

Since previous studies have found gender differences in DAs, as well as that girls worry more than boys (e.g., Gomez-Baya et al., 2022), we will control for gender in the regression analyses. The fourth research question regarding DAs being differentially related to different domains of worry is exploratory and no specific hypotheses are formulated.

## Methods

The data presented here are part of a larger study conducted within the "Cross-National Project on PYD" (Wiium & Dimitrova, 2019). This project aims to investigate to what degree DAs are available to youths and whether these DAs are associated with multiple indicators of PYD, risk behaviors, and academic achievement (Wiium & Dimitrova, 2019). The study was approved by the Ethics Committee of the Faculty of Humanities and Social Sciences in Osijek (class: 602-04/18-01/29, number: 2158-83-02-18-2) and the Norwegian Centre for Research Data (NSD, now SIKT; approval number 51708 / 3 / IJJ).

### Sample and Procedure

Youths aged 15–27 ($N$ = 728; 449 girls) participated in the study ($M_{age}$ = 18.4, $SD$ = 2.29). A total of 424 participants were enrolled in high school (233 girls; $M_{age}$ = 16.8, $SD$ = 1.21) and 304 in university (216 girls; $M_{age}$ = 20.7, $SD$ = 1.27). There was a higher proportion of girls in the university sample compared to the high school sample. Participants were selected through convenience sampling by sending invitations to join the study to different schools and faculties in East Croatia. Five public high schools as well as four faculties from one university agreed to participate. The participants were informed that participation was anonymous and voluntary and that they could quit at any time without facing consequences. Information about the purpose and potential benefits and downsides of the study was provided and consent was collected before beginning the questionnaires. The participants filled out the questionnaire on paper during a 45-minute-long class under the supervision of one of the members of the research team and with a responsible teacher in the vicinity.

## Measures

The questionnaire contained sociodemographic variables, such as gender, as well as validated questionnaires that measure DAs, and worries. These scales were part of a larger questionnaire that contained scales related to the overall topic of PYD. The questions were translated from the original English version using back translation by independent translators, and were pilot-tested by 30 Croatian university students who gave verbal feedback about their understanding to ensure correct translation and understanding of the Croatian version of the questionnaire.

The questions about worry were developed by Tikkanen (2016) for the GOETE (Governance of Educational Trajectories in Europe) research project. The worry scale consisted of questions where students had to indicate how often they worry about the following situations happening to them in the future: 1) *inability to find employment*, 2) *doing badly at school or further education*, 3) *getting into bad company*, 4) *being lonely*, and 5) *being poor*, all on a five-point Likert scale containing the options *1 = "Never or almost never", 2 = "Rarely", 3 = "Sometimes", 4 = "Often"*, and *5 = "Always"*. In the study by Tikkanen (2016) on 14- and 15-year-old students from urban schools in Finland, the five-factor structure has been validated using confirmatory factor analysis, and Cronbach's α of the five-item scale was .78. A sixth question addressing worry about climate change was added to the original worry scale, but has been excluded from this analysis because excluding the item about climate change increased the internal consistency of the scale from Cronbach's α of .70 to .74.

The 58 questions concerning DAs were items from DA Profile (DAP), based on Benson's DAs (Search Institute, 2016). These items are divided into four subscales measuring internal DAs: *commitment to learning* (α =.72), *positive values* (α =.77), *social competencies* (α =.66), and *positive identity* (α =.80), and four subscales relating to external DAs: *support* (α =.77), *empowerment* (α =.65), *expectations and boundaries* (α =.74), and *constructive use of time* (α =.46). The participants reported how much they had experienced each DA in the past six months on a four-point Likert scale containing the options *1 = "Not at all or rarely", 2 = "Somewhat or sometimes", 3 = "Very or often", and 4 = "Extremely or almost always"*. The subscale *constructive use of time* has shown low reliability across diverse samples (Scales, 2011; Wiium et al., 2019). That was attributed to a wide variety of behaviors that constitute the subscale,

which makes low internal consistency unsurprising. Despite the low internal consistency in previous studies, this subscale has been kept in the overall DA scale because of its theoretical background within the DA framework.

### Statistical Analyses

The data were analyzed using IBM® SPSS® Statistics (Version 25.0; IBM Corp., 2017). We report means, standard deviations, ranges, and a bivariate Pearson correlation analysis on variables of interest in our sample at the descriptive level. To control for possible effects of confounding variables and investigate the relationship between DA categories classified as independent variables and worry classified as the dependent variable, we used multiple hierarchical regression analyses, with separate analyses for each of the five domains of worry in addition to one for the total scale on the worry scale. Gender was coded with the values 1 = boy and 2 = girl, and educational stage was coded 1 = high school and 2 = university.

## Results

### Descriptive Statistics

Table 7.1 shows the descriptive statistics for age, gender, DAs, and worry, including skewness and kurtosis as indicators for distribution normality. On average, youths reported low levels of worry, although the large intervals observed via standard deviations indicate some variability in the sample. In general, at the descriptive level, the youths worried most about *inability to find employment* and least about *getting into bad company*. University students worried most about *inability to find employment* while youths in high school worried most about *doing badly at school or further education*.

Before performing further analyses on our dependent variable, we calculated intraclass correlation coefficient (ICC) to determine if there was substantial clustering of observations on the level of schools and faculties that would call for using multilevel analyses. The ICC was 0.002, showing that a very small proportion of variation (0.2%) in worry scores lies between schools and faculties.

## Correlation Analysis for the Whole Sample

We implemented a correlation analysis on the variables *gender, educational stage,* DAs, and a total score for worry on the whole sample (Table 7.2). All correlations between DAs and overall worry were negative, indicating that higher levels of DAs are associated with lower degrees of worry. *Positive identity* was the only DA category that had a moderate correlation with worry. The other significant correlations were small.

Gender was positively correlated with worry, meaning that girls reported higher levels of worry than boys. This showed that there is a need need to control for gender in the regression analyses. Gender was significantly related to DAs commitment to learning, positive values, social competencies, and expectations and boundaries, with girls reporting higher scores than boys. Gender was also related to positive identity, with boys reporting significantly higher scores than girls. Educational stage had a low but significant correlation with DAs *commitment to learning*, *support*, and *empowerment*, with youths in university reporting slightly higher levels of these DAs than youths in high school.

## Regression Analysis for the Whole Sample

The hierarchical regression analysis for the total sample (Table 7.3) showed differential associations between each DA category and each domain of worry as well as with the total score on the worry scale. In model 1 the analysis controlled for the effects of *gender* and *educational stage*, which explained 3% of the variance in total score on the worry scale. Model 2 showed that DAs explained an additional 20% of the variance in the total score of the worry scale.

Out of the predictor variables included in the regression analysis with total score in worry as an outcome, *positive identity* and *gender* were the only ones that were statistically significantly associated with our outcome.

In separate regression analyses for each domain of worry, regression coefficient for *positive identity* was statistically significant. In addition, *social competencies* were significantly associated with worry about *inability to find employment*. Higher level of *commitment to learning* was significantly associated with lower levels of worry about *doing badly at school or further education.* Worrying about *being poor* was significantly associated with *commitment to learning*, *support*, and *empowerment*.

**Table 7.1** *Descriptive Statistics for Gender, Age, DAs, and Worry.*

| | | | High school ($n$ = 424) | | | | University ($n$ = 304) | | | Whole sample ($n$ = 728) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *M (SD)* | Achieved range | Skew-ness | Kurtosis | *M (SD)* | Achieved range | Skew-ness | Kurtosis | *M (SD)* | Achieved range | Skew-ness | Kurtosis |
| Age | 16.78 (1.21) | 15–19 | -0.37 | -1.23 | 20.70 (1.27) | 19–27 | 1.65 | 4.17 | 18.41 (2.29) | 15–27 | 0.32 | -0.28 |
| Gender | 1.55 (0.5) | 1–2 | -0.21 | -1.97 | 1.71 (0.45) | 1–2 | -0.93 | -1.14 | 1.62 (0.49) | 1–2 | -0.49 | -1.77 |
| *Internal DA* | | | | | | | | | | | | |
| Commitment to learning | 4.52 (1.53) | 0–7 | -0.46 | -0.14 | 5.27 (1.33) | 0–7 | -0.94 | 1.30 | 4.83 (1.50) | 0–7 | -0.65 | 0.19 |
| Positive values | 8.42 (2) | 1–11 | -0.78 | 0.37 | 8.41 (1.72) | 2–11 | -0.54 | 0.05 | 8.42 (1.89) | 1–11 | -0.71 | 0.34 |
| Social compe-tencies | 6.21 (1.65) | 1–8 | -0.90 | 0.24 | 6.48 (1.45) | 2–8 | -0.78 | -0.15 | 6.32 (1.57) | 1–8 | -0.89 | 0.22 |
| Positive identity | 4.51 (1.62) | 0–6 | -1.10 | 0.45 | 4.50 (1.58) | 0–6 | -1.06 | 0.48 | 4.51 (1.6) | 0–6 | -1.08 | 0.45 |
| *External DA* | | | | | | | | | | | | |
| Support | 5.49 (1.38) | 0–7 | -1.14 | 1.38 | 5.75 (1.23) | 0–7 | -1.27 | 2.20 | 5.60 (1.33) | 0–7 | -1.20 | 1.69 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Empowerment | 5.10 (1.12) | 1–6 | -1.23 | 0.87 | 5.35 (1) | 0–6 | -1.82 | 3.78 | 5.20 (1.08) | 0–6 | -1.44 | 1.75 |
| Expectations and boundaries | 6.67 (1.79) | 2–9 | -0.50 | -0.53 | 6.98 (1.74) | 1–9 | -0.74 | -0.15 | 6.80 (1.77) | 1–9 | -0.59 | -0.41 |
| Constructive use of time | 1.89 (1.1) | 0–4 | 0.20 | -0.65 | 1.69 (1.04) | 0–4 | 0.44 | -0.51 | 1.81 (1.08) | 0–4 | 0.29 | -0.62 |
| Worry (overall) | 11.75 (3.98) | 5–25 | 0.30 | -0.15 | 11.72 (3.54) | 5–25 | 0.48 | 0.48 | 11.73 (3.8) | 5–25 | 0.36 | 0.08 |
| Inability to find employment | 2.73 (1.17) | 1–5 | 0.15 | -0.74 | 3.02 (1.13) | 1–5 | -0.12 | -0.66 | 2.85 (1.16) | 1–5 | 0.03 | -0.75 |
| Doing badly in school or further education | 2.79 (1.17) | 1–5 | 0.11 | -0.84 | 2.63 (1.05) | 1–5 | 0.31 | -0.37 | 2.72 (1.13) | 1–5 | 0.2 | -0.68 |
| Getting into bad company | 1.77 (0.94) | 1–5 | 1.37 | 1.80 | 1.52 (0.74) | 1–5 | 1.63 | 3.03 | 1.66 (0.87) | 1–5 | 1.51 | 2.41 |
| Being lonely | 2.42 (1.22) | 1–5 | 0.47 | -0.80 | 2.38 (1.11) | 1–5 | 0.54 | -0.34 | 2.40 (1.18) | 1–5 | 0.50 | -0.63 |
| Being poor | 2.07 (1.07) | 1–5 | 0.82 | -0.02 | 2.17 (1.01) | 1–5 | 0.84 | 0.50 | 2.11 (1.04) | 1–5 | 0.82 | 0.15 |

Note. DA – Developmental Assets; *M* – Mean; *SD* – Standard Deviation.

**Table 7.2** *Correlations Between Variables for the Whole Sample.*

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Gender | - | | | | | | | | | |
| 2. | Educational stage | .16** | - | | | | | | | | |
| 3. | Commitment to learning | .24** | .25** | - | | | | | | | |
| 4. | Positive values | .13** | -.00 | .46** | - | | | | | | |
| 5. | Social competencies | .14** | .09* | .47** | .56** | - | | | | | |
| 6. | Positive identity | -.16** | -.00 | .24** | .31** | .32** | - | | | | |
| 7. | Support | .08* | .10** | .32** | .31** | .32** | .37** | - | | | |
| 8 | Empowerment | .09* | .11** | .41** | .33** | .36** | .37** | .51** | - | | |
| 9. | Expectations and boundaries | .13** | .09* | .40** | .40** | .42** | .33** | .58** | .39** | - | |
| 10. | Constructive use of time | -.04 | -.09* | .27** | .39** | .30** | .26** | .28** | .27** | .27** | - |
| 11. | Worry (overall) | .18** | -.00 | -.07 | -.10** | -.07* | -.45** | -.21** | -.21** | -.14** | -.12** |

*Note*. *$p$ <.05; **$p$ <.01

Gender was coded as 1 (boy) and 2 (girl), and educational stage as 1 (high school) and 2 (university). Correlations between gender and other variables, and between educational stage and other variables are point-biserial correlations ($r_{pb}$).

After the DAs were included in the regression analyses, the regression coefficients for gender were significant only for worry about *inability to find employment* and worry about *being lonely*, as well as overall worry. The direction of the coefficients showed that girls worry more than boys.

After the DAs were included in the regression analyses, *educational stage* was significantly associated with worry about *inability to find employment*, with university students reporting higher degrees of worry than high school students. Educational stage was also related to worry about *getting into bad company*, with high school students reporting higher degrees of worry than university students.

## Regression Analyses for the Two Subsamples According to Educational Stage

We used hierarchical regression analyses on each of the two subsamples to explore if different DAs affect worrying in high school compared to university students (see Table 7.4). Model 2, which included all DA categories, explained 24% of the variance in overall worry among youths in high school and 26%

among youths in university. DAs alone explained 19% of the variance in worry among high school and 24% among university students.

*Positive identity* was significantly associated with overall worry for youths both in high school and university. *Social competencies* was significantly associated with overall worry for youths in high school, while *commitment to learning* was significantly associated with overall worry among youths in university. The only external DA category that was significantly associated with overall worry was *support*, and only among university students.

*Positive identity* was significantly associated with worry about *doing badly at school or further education* for high school students and worry about *inability to find employment* among university students.

Besides *positive identity*, significant associations with worry about *inability to find employment* were found for the DA categories *commitment to learning* and *expectations and boundaries* among high school students, and *social competencies* among university students. Significant associations with worry about *doing badly at school or further education* were found for the DA categories *commitment to learning* and *social competencies* among high school students and *support* among university students.

Besides *positive identity*, the DA category *social competencies* was significantly associated with worry about *getting into bad company* for youths in high school, while *commitment to learning* was significantly associated with worry about *being poor* for youths in university. Among university students, the DA categories *support*, *constructive use of time*, and *positive identity* were significantly associated with worry about *being lonely*.

When DAs were included in the analyses, *gender* was significantly associated with overall worry, worry about *inability to find employment*, and worry about *being lonely* for youths in high school, and for youths in university gender was only significantly associated with worry about *inability to find employment*. In both subsamples, it was the female gender that was associated with higher levels of worry.

**Table 7.3** *Results of Hierarchical Regression Analyses for the Whole Sample with Overall Worry and Different Domains of Worry as Outcomes.*

| | Worry 1 | | Worry 2 | | Worry 3 | | Worry 4 | | Worry 5 | | Overall worry | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *B (SE)* | *β* | *B (SE)* | *β* | *B (SE)* | *β* | *B (SE)* | *β* | *B (SE)* | *β* | *B (SE)* | *β* |
| 1. | | | | | | | | | | | | |
| Gender | .53*** (.09) | .22*** | .27** (.09) | .11** | -.03 (.07) | -.01 | .49*** (.09) | .2*** | .21* (.08) | .1* | 1.47*** (.29) | .19*** |
| Educational stage | .2* (.09) | .08* | -.2* (.09) | -.09* | -.24*** (.07) | -.14*** | -.12 (.09) | -.05 | .07 (.08) | .03 | -.28 (.29) | -.03 |
| | $R^2$ = .06*** | | $R^2$ = .02** | | $R^2$ = .02** | | $R^2$ = .04*** | | $R^2$ = .01* | | $R^2$ = .04*** | |
| 2. | | | | | | | | | | | | |
| Gender | .36*** (.09) | .15*** | .17 (.09) | .07 | -.06 (.07) | -.04 | .33*** (.09) | .14*** | .09 (.08) | .04 | .87** (.28) | .11** |
| Educational stage | .17* (.09) | .07* | -.12 (.08) | -.05 | -.22** (.07) | -.12** | -.1 (.08) | -.04 | .07 (.08) | .03 | -.19 (.27) | -.03 |
| Commitment to learning | .04 (.04) | .05 | -.08* (.03) | -.11* | -.02 (.03) | -.04 | .07* (.03) | .09* | .04 (.03) | .06 | .06 (.11) | .02 |
| Positive values | -.03 (.03) | -.05 | .01 (.03) | .01 | -.01 (.02) | -.02 | .05 (.03) | .08 | -.01 (.03) | -.01 | .01 (.09) | .01 |
| Social competencies | .09** (.03) | .12** | .06 (.03) | .08 | .02 (.03) | .04 | -.01 (.03) | -.01 | .02 (.03) | .02 | .18 (.1) | .08 |
| Positive identity | -.23*** (.03) | -.31*** | -.24*** (.03) | -.34*** | -.08*** (.02) | -.15*** | -.24*** (.03) | -.32*** | -.21*** (.03) | -.32*** | -.99*** (.09) | -.42*** |
| Support | -.01 (.04) | -.01 | -.05 (.04) | -.05 | .00 (.03) | .01 | -.11** (.04) | -.12** | -.06 (.04) | -.07 | -.21 (.13) | -.07 |
| Empowerment | .00 (.05) | .00 | -.05 (.05) | -.05 | -.07 (.04) | -.09 | -.11* (.05) | -.1* | -.01 (.04) | -.01 | -.24 (.15) | -.07 |
| Expectations and boundaries | .01 (.03) | .02 | .02 (.03) | .04 | .03 (.02) | .07 | .01 (.03) | .01 | -.03 (.03) | -.05 | .05 (.09) | .02 |
| Constructive use of time | .00 (.04) | .00 | .03 (.04) | .03 | .03 (.03) | .03 | -.07 (.04) | -.06 | -.01 (.04) | -.01 | -.03 (.13) | -.01 |
| | $R^2$ = .15*** | | $R^2$ = .15*** | | $R^2$ = .05** | | $R^2$ = .21*** | | $R^2$ = .14*** | | $R^2$ = .23*** | |
| | $\Delta R^2$ = .09*** | | $\Delta R^2$ = .14*** | | $\Delta R^2$ = .03** | | $\Delta R^2$ = .17*** | | $\Delta R^2$ = .13*** | | $\Delta R^2$ = .2*** | |

*Note.* *$p$<.05 **$p$<.01 ***$p$<.001

Worry1 = Inability to find employment, Worry2 = Doing badly at school or further education, Worry3 = Getting into bad company, Worry4 = Being lonely, Worry5 = Being poor

Gender was coded as 1 (boy) and 2 (girl), and educational stage as 1 (high school) and 2 (university).

**Table 7.4** *Results of Hierarchical Regression Analyses for Different Domains of Worry as Outcomes with the two Subsamples According to Educational Stage.*

| | Worry1 | | | | Worry2 | | | | Worry3 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High School | | University | | High School | | University | | High School | | University | |
| | *B (SE)* | *β* | *B (SE)* | *β* | *B (SE)* | *β* | *B (SE)* | *β* | *B (SE)* | *β* | *B (SE)* | *β* |
| 1. | | | | | | | | | | | | |
| Gender | .47*** (.11) | .20*** | .62*** (.14) | .25*** | .31** (.11) | .13** | .19 (.13) | .08 | .05 (.09) | .03 | -.15 (.09) | -.09 |
| | $R^2$ =**.04**** | | $R^2$ = **.06**** | | $R^2$ = **.02**** | | $R^2$ = **.01** | | $R^2$ = **.00** | | $R^2$ = **.01** | |
| 2. | | | | | | | | | | | | |
| Gender | .3* (.12) | .13* | .47** (.14) | .19** | .18 (.12) | .08 | .16 (.13) | .07 | .03 (.1) | .01 | -.16 (.1) | -.1 |
| Commitment to learning | -.02* (.04) | -.02 | .14* (.06) | .17* | -.12** (.04) | -.15** | -.03 (.05) | -.03 | -.06 (.04) | -.09 | .02 (.04) | .03 |
| Positive values | -.01 (.04) | -.01 | -.06 (.04) | .09 | .01 (.04) | -.01 | .00 (.04) | .00 | -.04 (.03) | -.09 | .02 (.03) | .04 |
| Social competencies | .12** (.04) | 17** | .03 (.05) | .04 | .09* (.04) | .13* | .02 (.05) | .02 | .08* (.04) | .13* | -.04 (.04) | -.08 |
| Positive identity | -.24*** (.04) | -.33* ** | -.24*** (.04) | -.33* ** | -.28*** (.04) | -.38* ** | -.19*** (.04) | -.29* ** | -.09** (.03) | -.16** | -.07* (.03) | -.15* |
| Support | .01 (.05) | .01 | -.08 (.07) | -.09 | .00 (.05) | .00 | -.13* (.07) | -.15* | .03 (.04) | .04 | -.04 (.05) | -.07 |
| Empowerment | -.01 (.06) | -.01 | .05 (.08) | .05 | .00 (.06) | .00 | -.13 (.07) | -.12 | -.04 (.05) | -.05 | -.1 (.05) | -.14 |
| Boundaries and expectations | -.05 (.04) | -.07 | .1* (.05) | .16* | .00 (.04) | -.01 | .07 (.04) | .12 | .04 (.03) | .07 | .04 (.03) | .09 |
| Constructive use of time | .01 (.06) | .01 | -.01 (.07) | -.01 | .09 (.06) | .08 | -.04 (.06) | -.04 | .04 (.05) | .05 | -.01 (.05) | -.01 |
| | $R^2$ = **.14**** | | $R^2$ = **.17**** | | $R^2$ = **.16**** | | $R^2$ = **.18**** | | $R^2$ = **.04*** | | $R^2$ = **.08**** | |
| | **Δ**$R^2$ = **.1**** | | **Δ**$R^2$ = **.11**** | | **Δ**$R^2$ = **.14**** | | **Δ**$R^2$ = **.17**** | | **Δ**$R^2$ = **.04*** | | **Δ**$R^2$ = **.07**** | |

| | Worry4 | | | | Worry5 | | | | Worry (overall) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High School | | University | | High School | | University | | High School | | University | |
| | *B (SE)* | *β* | *B (SE)* | *β* | *B (SE)* | *β* | *B (SE)* | *β* | *B (SE)* | *β* | *B (SE)* | *β* |
| 1. | | | | | | | | | | | | |
| Gender | .68*** (.12) | .28*** | .17 (.14) | .07 | .3** (.1) | .14** | .06 (.13) | .03 | 1.82*** (.38) | .23*** | .88* (.45) | .11* |
| | $R^2$ =**.08**** | | $R^2$ = **.01** | | $R^2$ = **.02**** | | $R^2$ = **.00** | | $R^2$ =**.05**** | | $R^2$ = **.01** | |
| 2. | | | | | | | | | | | | |
| Gender | .45*** (.12) | .18*** | .16 (.13) | .07 | .15 (.11) | .07 | .04 (.12) | .02 | 1.09** (.38) | .14** | .67 (.41) | .09 |
| Commitment to learning | .04 (.04) | .06 | .09 (.05) | .11 | -.02 (.04) | -.03 | .13* (.05) | .17* | -.16 (.14) | -.06 | .36* (.16) | .13* |
| Positive values | .04 (.04) | .06 | .05 (.04) | .07 | -.02 (.03) | -.05 | .00 (.04) | -.01 | -.03 (.12) | -.02 | .01 (.13) | .00 |
| Social competencies | .02 (.04) | .02 | -.03 (.05) | -.04 | .06 (.04) | .09 | -.03 (.05) | -.05 | .36* (.14) | .15* | -.06 (.15) | -.02 |
| Positive identity | -.26*** (.04) | -.34*** | -.2*** (.04) | -.29* ** | -.23*** (.04) | -.35*** | -.19*** (.04) | -.29*** | -1.1*** (.13) | -.45*** | -.88*** (.13) | -.4*** |
| Support | -.09 (.05) | -.1 | -.13* (.07) | -.15* | -.05 (.05) | -.06 | -.06 (.06) | -.08 | -.09 (.16) | -.03 | -.45* (.21) | -.15* |
| Empowerment | -.11 (.06) | -.1 | -.11 (.07) | -.1 | .05 (.05) | .05 | -.09 (.07) | -.08 | -.1 (.19) | -.03 | -.37 (.23) | -.11 |
| Boundaries and expectations | .04 (.04) | .05 | -.03 (.05) | -.04 | -.01 (.04) | -.02 | -.04 (.04) | -.07 | .01 (.12) | .00 | .15 (.14) | .07 |
| Constructive use of time | -.03 (.06) | -.02 | -.13* (.06) | -.12* | .02 (.05) | .02 | -.05 (.06) | -.05 | .11 (.18) | .03 | -.23 (.19) | -.07 |
| | $R^2$ = **.22**** | | $R^2$ = **.22**** | | $R^2$ = **.14**** | | $R^2$ = **.17**** | | $R^2$ = **.24**** | | $R^2$ = **.26**** | |
| | **Δ$R^2$ = .15**** | | **Δ$R^2$ = .21**** | | **Δ$R^2$ = .12**** | | **Δ$R^2$ = .16**** | | **Δ$R^2$ = .19**** | | **Δ$R^2$ = .24**** | |

*Note.* *$p$<.05 **$p$<.01 ***$p$<.001.

Gender was coded as 1 (boy) and 2 (girl).

Worry1 = Inability to find employment, Worry2 = Doing badly at school or further education, Worry3 = Getting into bad company, Worry4 = Being lonely, Worry5 = Being poor

## Discussion

This study aimed to examine the relationship between youths' DAs and worry, and how these associations differ according to gender and educational stage. Our research questions were: 1. Are youths' reports of internal and external DAs associated with self-reported degrees of worry about the future?; 2. Are internal and external DAs and degree of worry related to gender and educational stage?; 3. Do the expected associations between DAs and worry differ across educational stages?; and 4. Are different DAs associated with different domains of worry?

### DAs and Worry

The regression analysis showed that the DAs explained 20% of the variance in overall worry, indicating that higher levels of DAs are associated with lower degree of worry. The findings support our first hypothesis, that DAs are negatively associated with worry. This finding is in line with previous research on adolescent worry (Brown et al., 2006), and shows the importance of DAs for youths' mental health.

### Internal DAs and Worry

The *DA positive identity* was consistently associated with overall worry, and separate domains of worry across all analyses. That is of no surprise, as positive identity includes *positive view of personal future*, which refers to the same aspects of worry as do the items in the worry scale, namely concerns about negative outcomes in the future (Borkovec et al., 1983). In addition, other *positive identity* components overlap with concepts that have previously shown to be associated with worry, such as the intangible aspect of identity capital (Tikkanen, 2016).

After controlling for the effects of gender and other DAs, *positive identity* and *social competencies* were significantly associated with overall worry among youths in high school. More specifically, a higher level of *social competencies* was associated with higher worry about *inability to find employment*, *doing badly at school or further education*, and *getting into bad company*, as well as overall worry. A possible explanation for this unexpected positive relationship

is that *social competencies* involve skills in planning and decision-making (Search Institute, 2016), and youths who are better at planning and evaluating their options are more concerned about their future education and career and thus feel more pressure to perform well in these domains.

We assumed that higher levels of *commitment to learning* would be related to less worry, based on previous research findings about the relationship between school attachment and a positive view of life and the future (Crespo et al., 2013). A higher level of *commitment to learning* was associated with less worry about *doing badly at school or further education* for youths in high school, but for youths in university, it was associated with more overall worry, as well as worry about *inability to find employment* and worry about *being poor*. This might be explained by the conceptual overlap between the DA category *commitment to learning* and *achievement motivation*, which along with motivation to succeed may also include worry about failing in education, future employment, and financial income. Since this study is cross-sectional, further research is necessary to draw conclusions regarding directionality of the findings. It is also possible that high school students have a higher commitment to learning as a way of coping with their worry about doing badly in school and being poor.

## External DAs and Worry

In the regression analyses, *positive identity* was the only DA category that had a significant relation to all domains of worry. Regression coefficients for external DA categories were smaller than coefficients for the internal DA category *positive identity* and were largely statistically insignificant.

*Support* was significantly associated with worry about *being lonely* and worry about *doing badly in school or further education*, as well as overall worry for youths in university, but it did not have significant relations with any of the worry domains among youths in high school. Based on previous research on similar concepts (Arbel et al., 2018; Brown et al., 2006; Camara et al., 2017; Duchesne et al., 2009) we had expected *support* to have a stronger relationship with worry. Perception of receiving support may affect the development of internal DAs, such as *positive identity*, so it is possible that the effects of *support* on the degree of worry is mediated by internal DAs. Future research should further investigate these effects. Furthermore, *support* might have had

a stronger relationship with worry among youths in university because this subsample had a greater proportion of girls, who tend to seek and receive support more often than boys in stressful situations (Camara et al., 2017).

The external DA category *empowerment* was also related to less worry about *being lonely* for the whole sample, but the coefficient was low, and it was further reduced and became statistically non-significant among both high school and university students. This may indicate that making youths feel safe and respected has a lower impact on decreasing the degree of worry about *being lonely* than measures aimed at increasing the DA categories *positive identity* and *support*.

## Gender Differences in DAs and Worry

Investigating gender differences in DAs and worry was not the focus of this study, but we have accounted for these differences due to previous research that found gender differences in these or similar variables (Gomez-Baya et al., 2022). Before controlling for gender in the regression analyses, we first tested if such relationships between gender and DAs, and between gender and worry, exist in our sample. In line with previous studies (McLean et al., 2021; Robichaud et al., 2003; for an additional overview see Cartwright-Hatton, 2006), we found that girls worry more than boys. Girls generally experience higher levels of DAs than boys with slightly higher levels of the internal DA categories *commitment to learning*, *positive values*, and *social competencies*, and the external DA category *expectations and boundaries*. However, boys reported higher levels of *positive identity*. If we consider that *positive identity* includes aspects of concept of self-esteem, this result is in line with previous findings stating that boys score higher on self-esteem than girls (Bachman et al., 2011).

Despite scoring higher on most DAs, girls experience more worry. This further supports the importance of *positive identity* in relation to worry. Additionally, the DAs girls experience more of may have negative side effects. For example, *commitment to learning* can make youths motivated to do well in school, but also cause worry about not achieving high results. *Positive values* includes a desire to help others, promote equality, and reduce hunger and poverty, while *social competencies* includes empathy. These DAs may cause worry about others' well-being. *Expectations and boundaries* includes experiencing

high expectations from others, which can create worry about falling short and not living up to these expectations. The gender differences we found may be influenced by the fact that adolescent boys tend to avoid expressing their feelings (Bem, 1974; Chaplin & Aldao, 2013), and that appearing worried can be seen as less masculine (Cheryan & Markus, 2020; Stavosky & Borkovec, 1987).

## Limitations

Because of the cross-sectional design of this study, it is not possible to draw causal conclusions about the impact of DAs on worry. In the future, it can be beneficial to study potential changes in levels of worry for youths who participate in programs that increase DAs. Since this study analyzed categories of DAs in relation to worry, it is not certain which of the DAs within each category are most influential. Further research may benefit from analyzing each of the 40 DAs, in order to specify the exact DAs that are associated with worry. Additionally, the data is based on questionnaires which may be influenced by self-report bias. To generalize the findings to a wider population, the study should be replicated with youths from other geographic areas and cultures.

## Implications for Policy and Practice

Our results indicate that implementing initiatives to increase youths' *positive identity* may lead to less worry, but it is important to keep in mind that targeting the youths and people in their closest environments with such interventions is not always enough. Not all people have the necessary resources available to them, due to structural injustices in society (Dost-Gözkan et al., 2021). The part of identity capital that does not overlap with the DA category *positive identity*, tangible identity capital, includes socially visible resources, such as financial capital, education, and the family's socioeconomic status (Côté, 1997). Youths who have limited access to such resources due to social injustice tend to have less beneficial developmental outcomes (Fisher et al., 2012). To achieve positive development, these youths and the people in their close environments need to have more individual resources (Fisher et al., 2012), since initiatives that are supposed to increase DAs are less effective unless the structural injustice is also addressed.

Preventing and decreasing worry for youths can positively affect their well-being and health and should be a priority when creating youth policies. DAs are related to lower levels of worry, and along with the DA framework's adaptability to initiatives and policies, it has the potential to impact the lives of youths through policy changes and programs that aim to nourish PYD. Creators of youth policies and programs should consider demographic differences including gender and educational stage, and aim to encourage structural changes for their initiatives to decrease worry for a more diverse population of youth.

## Conclusion

Having a *positive identity*, which involves believing in their self-worth and feeling that they have a purpose and control over the things that happen to them, may make youths worry less about different domains of their future lives, including social, financial, and academic outcomes. Additionally, different DAs are related to different domains of worry. Which DAs are related to worry in each of these aspects of youths' lives, as well as what youths worry about, varies based on educational stage. The findings indicate that youths in university will benefit more than youths in high school from initiatives that aim to decrease worry by increasing levels of DAs.

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Chapter 8

# Life Skill Training in Technical and Vocational Education Training High Schools in Iran: A Multi-method Qualitative Approach Based on Entropy

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**Abstract:** The current study sought to determine to what extent Technical and Vocational Education and Training (TVET) textbooks in Iran incorporate the 10 basic life skills recommended by the World Health Organization (WHO) and how this varies across the three dimensions of competency (knowledge, skill, and attitude). This investigation examined the content of textbooks in TVET of Iran based on the 10 basic life skills recommended by the WHO (i.e., problem-solving, critical thinking, effective communication skills, decision-making, creative thinking, interpersonal relationship skills, self-awareness building skills, empathy, coping with stress and coping with emotions). Employing a multi-method approach, the current research utilized documentary research to extract themes, the Delphi method to prioritize the themes, and content analysis through Shannon's entropy method to examine the themes about life skills. The qualitative step involved documentary analysis and the Delphi method, where experts reviewed frameworks and selected the WHO framework for analysis. The quantitative step involved using Shannon's entropy method for data analysis to measure the amount of uncertainty or randomness in the data. The Delphi method was employed to gather expert opinions and reach a consensus on the current implementation of life skills in the textbooks. Shannon's entropy measure was used as an information index weight in ranking methods considering its ability to quantify uncertainty and probability. The results showed that at the level of knowledge, the highest degree of attention was paid to problem-solving (16.9%), while coping with stress and self-awareness received the least attention (2.8%). Problem-solving (17.3%), again, received the most attention at the skill level, while coping with stress received the least (3.4%). The most emphasis was allocated to critical thinking (16.1%) at the attitude level, whereas coping with stress, self-awareness, and empathy received the least (6%). The level of knowledge was determined to have included more examples of life skills than the other two levels. In general, it can be argued that intraindividual skills such as self-awareness and coping with emotions have received less attention in textbooks. However, regulatory, and personal skills, which are characterized as problem-solving and critical thinking, have received more attention. In addition, the caveat that life skills with higher frequency in the TVET textbooks may not always have larger information index and importance degrees, should be kept in mind. The obtained results can be employed by curricula planners to rectify and revise the imbalance between various life skills as manifested in the TVET curricula.

*Keywords:* WHO life skills, technical and vocational education training, qualitative approach, high school curricula, non-technical competencies, Iran

## Introduction

Individuals start to take their lives seriously during the years of adolescence and early adulthood, and it is typically the time to learn more about life skills. Teenagers and young people who are preparing to enter society face a number of hazards; yet, if they have acquired decent life skills, they may navigate through this phase without/with-fewer mishaps. Otherwise, they may suffer from a range of interpersonal/intrapersonal problems that will have an enduring impact on their lives (Jones & Lavallee, 2009). Positive Youth Development (PYD) is a crucial approach to youth development, particularly during adolescence (Blyth, 2006; Bonell et al., 2016; Gavin et al., 2010; Ma, 2012). PYD emerged in the 1980s as a critique of the "deficiency models of adolescence," which focused on addressing negative behaviors rather than promoting healthy development (Lerner, 2004, 2006). While it can be leveraged for resource investing, it is also associated with a decrease in psychosocial disorders, which calls for efficient management. PYD emphasizes the strengths and assets of youth, and its goal is (I) to promote cognitive, social, emotional, and behavioral competence, self-efficacy, belonging, spirituality, and empowerment (Bowers et al., 2010; Catalano et al., 2002). (II) Help young people access essential developmental assets (Catalano et al., 2004), allowing them to flourish, contribute to their environment, and reduce the likelihood of engaging in risk behaviors (Ciocanel et al., 2017; Wiium et al., 2019). The potential rewards of funding PYD initiatives are substantial, and multiple countries have made considerable expenditures (Catalano et al., 2002, 2019; Zhu & Shek, 2020). PYD has been studied extensively over the past 35 years, and a large body of literature explores its various aspects, including contextual factors, social environments, and its effects on social outcomes. The growing interest of international organizations in PYD research reaffirms its importance in global youth development. Various reliable tools and models have been designed and utilized to investigate and measure PYD comprehensively. Several models of PYD have been proposed, such as Benson's model of external and internal developmental assets (Benson, 2007), Lerner's 5Cs/6Cs model (Lerner, 2009), Catalano's 15 PYD constructs (Catalano et al., 2003) and social-emotional learning models (SEL). These models emphasize a similar path while using slightly different properties. Over the past 35 years, a large body of literature has investigated various aspects and dimensions of the PYD

(Mansfield et al., 2020; Qi et al., 2020), including its link to contextual factors and social outcomes such as academic achievements, social and/or life skills, and reduction in violence and substance use (Duncan & Raudenbush, 1999; Wiium et al., 2019). Various valid and reliable tools have been designed and translated to measure PYD in different contexts (Klein et al., 2006; Shek & Ma, 2014; Sieng et al., 2018). Additionally, there is growing research focusing on the effects of PYD on social outcomes. Academic achievements (Beck & Wiium, 2019; Chase et al., 2015), social skills (Shek & Ma, 2014), reduction in violence and substance use (Bonell et al., 2016) are among the most frequently studied outcomes. PYD has become an important approach in promoting youth well-being globally, and many countries and international organizations have invested in PYD programs to help young people flourish and contribute to their environment.

## I. The Emergence of Life Skills Training (LST)

For many years, it was believed that one should experience life and gradually learn how to live, but the complexity of life characteristic of today's industrial, high-tech, and rapidly changing world has made it vital to learn life skills in the form of formal and informal education and through curricula (Botvin, 1996; Prajapati et al., 2017). The discourse upon life skills training (LST) emerged gradually in the 1970s, and it is believed that the movement originated as a result of Botvin and colleagues' studies (1996; 1980, 1984, 1990, 1995), claiming the potential effects of LST on controlling risk behaviors among youth to some extent (Mandel et al., 2006; Nasheeda et al., 2019).

## II. Definition and Benefits of Life Skills Training

The basic theory of the LST and the concept of self-empowerment is the idea that skills can be acquired, adjusted, and improved and that it is possible to support individuals in their progress by helping them overcome life's obstacles (Brownell et al., 1996). A life skill is defined as an individual's ability to conduct adaptive and positive behavior in order to cope with challenges and necessities of daily life. Hence, the LST can be defined as learning the abilities that lead to mental health improvement, human relationship enrichment, healthy behavior development in society, risk-taking reduction, and

resilience mechanism (Botvin, 1985; Sisselman-Borgia, 2021; Yadav & Iqbal, 2009). According to Rani and Neeraj (2020), through instruction and practical application in daily life, students can learn these skills. Students who have acquired life skills are better able to think creatively and solve problems in real-world situations, regulate their behavior, make wise decisions, and develop positive values (Prajapati et al., 2017). It also teaches students how to interact socially, build friendships, and understand how their actions and behaviors affect others (Scheibe & Barrett, 2017).

## III. Effectiveness of Life Skills Training

The LST is an effective approach in primary prevention due to its interactive and activity-based nature, and it uses the problem-solving approach (Caplan et al., 1992; Hawkins & Weis, 2017; Hooman et al., 2013). The LST, which is considered an effective intervention strategy to enhance positive social and psychological health among teenagers, plays an important role in all aspects, including strengthening coping strategies, self-confidence, and emotional intelligence (Prajapati et al., 2017).

### Teaching Life Skills in Education

Regarding LST, multiple questions about the life skills that can be taught to students, at what age, and in what training programs have come to light. Different researchers have provided varying responses to this query. There is ample evidence showing that life skills can be effectively taught to students in the elementary (Bwayo, 2014; Gim, 2021), secondary (Wei et al., 2022), and even at the university levels (Gupta, 2021). According to Prajapati et al. (2017), a socially effective education system must respond quickly and effectively to the challenge of inculcating life skills. Although "education" is essential, education that helps people to live better is more crucial. Life skills training is thought to reduce the discrepancy between fundamental ability and functionality. It improves a person's capacity to respond to the requirements of contemporary society and aids in handling problems in a way that makes desirable behavior practicable. Youth may tackle life challenges by receiving life skill training via the life skill education (Prajapati et al., 2017). Up until now, numerous curricula programs have attempted to instill life skills,

and the results have been encouraging. For instance, the Positive Adolescents Life Skills (PALS) training program has demonstrated the potential to lower risk-taking behaviors in impoverished, urban, and minority adolescent populations (Tuttle et al., 2006). The LST is helpful in various areas, such as dealing with drug abuse (Darharaj et al., 2023; Pyrkosch et al., 2022), improving skill-related training (Auapisithwong et al., 2022), helping intellectually disabled students (Bouck, 2010), reducing risk behaviors (Caldwell et al., 2004), improving self-esteem and anxiety behaviors (Ebrahem et al., 2022), empowering individuals (Dixon, 2016), preventing suicide (LaFromboise & Lewis, 2008; Laghaei et al., 2023), improving the academic performance of teenage students (Sánchez-Hernando et al., 2021), and improving sports activities (Goudas, 2022). The LST has also been proven to be effective in the fields of sports psychology (Pierce et al., 2017), education (Prajapati et al., 2017), entrepreneurship (Jones & Iredale, 2006), employability (Ibarraran et al., 2014), job retention (Tabvuma et al., 2015) and many other fields.

Reviewing the extant literature, there is no doubt that the LST should be a part of the general course of formal education (Zollinger et al., 2003). Additionally, econometric, and psychological studies in developed countries show that non-cognitive skills (i.e., communicative, interpersonal, social, and motivational skills) can have an impact on education and the labor market in developed countries (Initiative, 2013). The LST can fill the gap between the potential and actual condition, strengthen people's ability to meet the demands of the current society and help them deal with various issues ahead (Sharma, 2022). The teaching of life skills through the curricula amounts to the development of social, emotional, and thinking skills in students since such skills are important requirements for a desirable citizen who is supposed to cope well with future challenges (Prajapati et al., 2017). The United Nations Children's Fund (UNICEF), United Nations Educational, Scientific and Cultural Organization (UNESCO), and World Health Organization (WHO) have identified 10 core strategies and techniques concerning life skills: problem-solving, critical thinking, effective communication skills, decision-making, creative thinking, interpersonal relationship skills, self-awareness building skills, empathy, and coping with stress and coping with emotions (Kellerman, 2007). In formal educational systems, curriculum planning, and program development are usually under the influence of governmental regulations and policy-making (e.g., Fundamental Reform Document of Education in Iran)

(Sarlak et al., 2020), national priorities and requirements of citizen education (Zahabioun et al., 2013). The LST is usually planned in the form of lessons that are somehow related to social activities (Botvin & Griffin, 2014; Patton et al., 1997). The LST programs have several beneficial advantages on various elements of school, career, and life outcomes, despite being significant in and of themselves. As mentioned above, the LST programs, which tackle the risk and protective variables linked to risk behaviors commencement and teach skills related to building resilience and boosting social and personal competency, are effective primary prevention programs for teenage risk behaviors such as drug use (Botvin & Griffin, 2004), suicidal behavior (LaFromboise & Lewis, 2008), cognition of risk of sexual behavior (Lou et al., 2008) and HIV prevention (Yankah & Aggleton, 2008). This evidence is particularly important for policymaking because the LST programs are costly, close to one-third to one-half of the cost of a full vocational course (Ibarraran et al., 2014). More research is also needed to understand the mechanisms through which the LST can be improved (Initiative, 2013). The results of the LST and the improvement of tools to measure life skills make it even more necessary to analyze the relevant programs. As Botvin (1985) emphasizes, the LST is usually carried out at school to improve mental health, so its role and status in the school curricula are important and worthy of attention.

In Technical and Vocational Education Training (TVET), students aged 15–18 are usually exposed to some subjects on the curriculum aimed at preparing them to enter the labor market. Part of the content of this curriculum is often dedicated to the life skills (Lee, 2017). Yet the content can be taught through other means, such as holding various LST-based lectures, designing and developing a curriculum based on life skills with a practical perspective, holding discussions and meetings about creating awareness and understanding life skills, participation of teachers in life skills workshops, and organizing exhibitions on issues relating to life skills (Saravanakumar, 2020). These activities, along with the formal curriculum, can lead to the development and improvement of students' life skills. Non-technical curricula usually place emphasis on the development of individual abilities, helping students learn how to deal with life difficulties (Butterwick & Benjamin, 2006). The LST can be either general or focused on specific issues, such as regulating emotions or preventing drug use. Whatever the purpose is, the LST centers around an interdisciplinary perspective (Ellis

& Stuen, 1998), so the combination of technical and non-technical skills can positively influence the effectiveness of such programs.

## Life Skill Training and Positive Youth Development: Challenges and Opportunities

The term positive youth development (PYD) refers to a development strategy that builds on a person's strengths and recognizes life skills as desirable assets that help youth become contributing members of society (Camiré & Santos, 2019). The PYD idea, which places emphasis on fostering young people's capabilities, is based on the relational developmental systems theory (Geldhof et al., 2013). A fundamental principle of the PYD approach is that favorable developmental trajectories accumulate in environments where adolescents may engage in activities that enhance their life skills, healthy and durable adult-youth relationships, and chances to take part in meaningful group activities (Damon, 2004; Lerner et al., 2009; Neely & Holt, 2011). A review of studies conducted on the LST among youth indicates several points. First, the LST is more effective for those who are somehow exposed to social harm, especially teenagers, young people, and women (Prajapati et al., 2017). Second, a set of social and emotional skills, as well as cognitive abilities, such as critical thinking, are important for successful training. Third, the method of the LST is of the utmost importance as well. Fourth, the LST not only empowers teenagers in the face of issues and problems but also improves their mental resilience and emotional characteristics (Schram & Morash, 2002).

Furthermore, the LST can be difficult due to the need to make extensive changes, the difficulty of measuring its effectiveness, and unpredictable challenges (Schmidt, 2022). Therefore, in some cases, adolescent problems may escalate into a national issue for countries (Yankah & Aggleton, 2008). The dearth of the LST in formal education and school settings has been reported to have a detrimental impact on the majority of societal institutions (Coley & Dwivedi, 2004). WHO's analysis shows that social life skill education has relatively improved in the last three decades, yet it is still considered to be one of the challenges for formal and informal educational systems (Bharath & Kumar, 2008). Nasheeda et al. (2019) showed that the LST programs in developed countries are regular and in line with extensive, long-term plans

and have meticulous evaluation mechanisms. In less developed countries, however, the LST programs are irregular and mainly based on short-term goals, often lacking an evaluation system. The experience of youth training programs shows that life skills, as an important complement to increase the effectiveness of vocational skills, have a direct impact on non-cognitive, behavioral, and occupational outcomes (Initiative, 2013).

## Educational System and Prior Research on Life Skills Training in Iran

There are two educational levels in Iran's public educational system: elementary and secondary. Each level is divided into two sub-levels, each of which is made up of three school years. Lower secondary (middle school) and upper secondary (high school) are sub-levels of the secondary level. For their final three years of high school, students in the public education system may choose to enroll in either the TVET or Theoretical majors (Figure 8.1).

The curricula deal with life skills at both elementary and secondary levels. Concerning the TVET, a series of courses, namely "non-technical competencies," are offered (Naveedy et al., 2018) – in addition to the set of skills and technical courses that encompass some elements of the LST, which are necessary for the LST (Downing, 2001). The LST is essential for graduates of the public educational system. It thus becomes necessary to incorporate the LST into the official curricula in TVET in order to fulfill the civic and citizenship education (Kennedy, 2012) and improve professional qualifications.

The courses on non-technical competencies in Iran's TVET include 1) Work Environment Requirements (10$^{th}$ grade), 2) Production Management (11$^{th}$ grade), 3) Application of Modern Technologies (11$^{th}$ grade), 4) Innovation and Entrepreneurship Workshop (11$^{th}$ grade), and 5) Professional Ethics (12$^{th}$ grade) – which is a total of three hours out of 40 hours of weekly training at the three-year TVET (see Figure 8.2). These courses, following a competency-based approach and offered in the form of modules, cover human, moral, social, cultural, and axiological skills with a special focus on the life skills (Nasir et al., 2011), which direct the career path and professional future of students (Ghahari et al., 2020). The multidimensional issue of life skills has been examined by several studies, including the effect of the LST on the mental health of secondary-level students (Irannezhad, 2017), the comparison of the LST in Iran's and India's curricula (Ghasemian &

Kumar, 2015), improvement of self-confidence among secondary-school students (Morowatisharifabad et al., 2019), and the effectiveness of the LST on improving students' learning (Kazemi et al., 2014; Vernosfaderani, 2013).

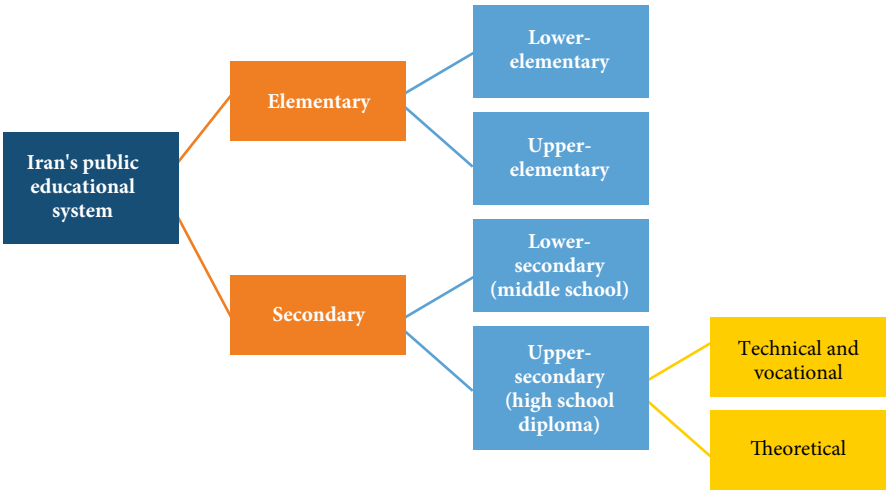


**Figure 8.1** *The Structure of Iran's Public Educational System.*

Given the necessity of the LST in the official curricula, this research seeks to answer the following question: What is the extent of integration of the 10 core life skills proposed by WHO in the TVET textbooks of Iran, and how does this differ in relation to the three competency dimensions of knowledge, skill, and attitude?

## Method

It is suggested that multi-method research can be used to study phenomena in order to have comprehensive and more convincing results than single method (Chamberlain et al., 2011; Davis et al., 2011; Johnson et al., 2007). As multi-method research uses both quantitative and qualitative approaches, the current study uses a qualitative research method – documentary analysis – to extract the contents, the Delphi method to prioritize them, and quantitative

content analysis through Shannon's entropy method (Knappertsbusch et al., 2021). Therefore, in terms of theoretical framework, data acquisition, data analysis, and result interpretation, this study utilizes a multi-method qualitative approach. Notably, it is preferable to point out that some scientists have categorized the application of Shannon's entropy in the content analysis as a quantitative method (e.g., Brochet et al., 2022). With quantitative content analysis, specific elements of textual, visual, or auditory content are methodically classified and documented in order to be analyzed. To successfully complete a content analysis, one must pay close attention to unitizing (i.e., segmenting the texts for analysis), sampling (i.e., choosing an appropriate group of units to investigate), reliability (i.e., having investigators make codes reliably), and validity (i.e., utilizing a coding scheme that properly represents the specified phenomena) (Coe & Scacco, 2017).

## Procedure

### *Qualitative Step: Documentary Analysis and the Delphi Method*

In selecting the methodological roadmap to establish a framework for the current study, the following steps were followed, given the nature of the research question. First, the documentary analysis paradigm of the empirical literature was used to review and categorize definitions and theories related to LST (Rapley, 2018). Next, the following life skills frameworks were investigated, drawing on global research, to provide a solid theoretical basis: Collaborative for Academic, Social, and Emotional Learning (CASEL, 2020), National Educational Technology Standards (NESTE; International Society for Technology in Education, 2007), The Partnership for 21st Century Skills (Bellanca, 2010; Larson & Miller, 2011), Definition and Selection of Competencies (DeSeCo; Rychen & Salganik, 2002), Assessment and Teaching of 21st Century Skills (ATC21s; Care et al., 2012; DiCerbo, 2014; Griffin & Care, 2014), Measuring What Matters (Schmoker, 2009), New Pedagogies for Deep Learning (Fullan & Langworthy, 2013, 2014; Macpherson, 2017), Education Research Institutes Network in the Asia-Pacific (UNESCO Bangkok, Asia and Pacific Regional Bureau for Education, 2015), and WHO's 10 core life skills. Afterward, these frameworks were presented to a group of experts consisting of two authors of non-technical competencies textbooks for TVET, two teachers of these textbooks, and two experts in LST, who also participated

in the Delphi panel and theme counting sections. Upon agreement among the experts, the WHO framework was selected as the guiding framework for analysis due to its comprehensiveness and wide application in various studies. Therefore, it was chosen for content analysis based on the levels of competency specified in the definition: knowledge, skill, and attitude. According to Parry (1996), "A competency is a cluster of related knowledge, skill, attitude (K, S, A) that affects a major part of one's job (a role or responsibility), that correlates with performance on the job, that can be measured against well-accepted standards, and that can be improved through training and development."

The fourth step involved the extraction of themes to determine the degree of attention given to life skills in TVET. Competency textbooks of TVET (Figure 8.1) were examined to assess the emphasis placed on the 10 WHO life skills components in terms of knowledge, skill, and attitude. Researcher-made checklists, in the form of information extraction sheets, were used to identify and record 10 to 12 themes for each skill. In the fifth step, five selected non-technical competencies textbooks for TVET in the 2021–2022 educational year were chosen for analysis. The titles of these textbooks, printed at the national level within Iran's formal educational system for TVET students, are as follows: Work Environment Requirements, Innovation and Entrepreneurship Workshop, Application of Modern Technologies, Production Management, and Professional Ethics. The analysis of themes related to knowledge, attitude, and skills was conducted on all five textbooks, which collectively spanned a significant 680 pages. The unit of analysis was a textbook page, which includes text, questions, exercises, activities, and assignments (For more details, see the online versions of the textbooks available at www.chap.sch.ir). Therefore, using the Delphi approach, experts (Table 8.1) prioritized the extracted themes (Sillars & Hallowell, 2012).

Given the limitations of available choices, we aimed to provide a thorough selection of relevant textbooks. We established precise inclusion criteria based on the applicability and conformity of the textbooks with our research methodology to ensure a relevant representation. Our goal was to compile a representative sample that accurately reflects how life skills have been incorporated into the curriculum. However, our sample size was constrained by limited availability. Nevertheless, we believe that the included textbooks offer valuable information and an authentic depiction of the TVET landscape.

The final step involved counting the themes. For this task, the experts were divided into two groups of three people each, with each group consisting of an author of non-technical competencies textbooks for TVET, a teacher of these books, and an expert in LST. They independently counted the themes in the task they conducted simultaneously (Oleinik et al., 2014). Scott's π was used as a measure of inter-coder reliability, which adjusts the percentage of agreement based on the number of code categories and their frequency of use. It assumes that the observed patterns of code assignment reflect the "true" distribution of categories and those competent coders identify all units corresponding to a particular category. The formula can be utilized to more than two coders by calculating π for each pair and summing them. The obtained correlation coefficient among the counted frequencies was 0.83. The text analysis unit consisted of assignments, tables, and photographs, and data extraction was conducted using a census.

To address our finite (secondary) research aim, "How can we improve the implementation of life skills in non-technical competencies textbooks for TVET in Iran?" we employed the Delphi Method, which involves a series of steps to gather expert opinions and reach a consensus (Jamali et al., 2014). In the first step, we identified a panel of experts in the field of TVET and life skills education in Iran. We reached out to experts through professional networks and universities, inviting them to participate in the study. The second step involved developing a questionnaire based on the 10 basic life skills recommended by the WHO and relevant literature on life skills education in TVET. The questionnaire aimed to elicit the experts' opinions on the current implementation of life skills in non-technical competencies textbooks for TVET in Iran, as well as potential strategies for improvement. In the third step, we administered the questionnaire to the panel of experts and collected their responses. The responses were analyzed using descriptive statistics to identify areas of consensus and disagreement. In the fourth step, we provided the experts with feedback on their individual responses and the overall group responses. We asked them to reconsider their initial responses in light of the group's feedback and provide revised responses.

### *Delphi Method*

Originally, the term "Delphi" was used to describe a research method created by the Rand Corporation in the 1950s (e.g., Dalkey & Helmer, 1963).

According to Rausch (1979), the classical Delphi is a platform for gathering facts. In classical Delphi research, a sizable panel of objective experts (the panel) utilizes data to reach an agreement in their assessments or predictions of future occurrences. The method often involves iterative feedback and ensures panelists' anonymity (Duffield, 1988). Feedback can take the form of quantitative group responses, such as measures of variance and central tendency, or it may include individual panelist comments. The terms "true" agreement and majority rules are used to define consensus in Delphi surveys. After establishing consensus on the subject matter, further discussion focuses on the conceptualization of the study (Williams & Webb, 1994).

The Delphi method is a distinct form of qualitative research that aims to achieve agreement or convergence of views from a group of professionals. This approach differs from other qualitative methods, such as focus groups or interviews, as it does not involve direct face-to-face communication between participants and moderators. Instead, the Delphi method employs a series of surveys or questionnaires that participants complete, providing anonymous feedback and evaluations on a specific subject or issue. Experts prefer the Delphi method over other research techniques because it enables the collection of expert opinions from a wide range of perspectives. The use of anonymity in the Delphi method also helps to prevent the influence of dominant or authoritative members from swaying the group's opinion. Moreover, the Delphi method offers a well-structured process for achieving agreement, which is particularly valuable in fields where expert opinions play a critical role in decision-making, such as healthcare and policymaking.

In summary, the Delphi method is a unique qualitative research technique that involves a panel of experts providing anonymous feedback and ratings on a specific topic to achieve consensus or convergence of opinions. It is preferred over other methods due to its ability to gather opinions from a geographically dispersed panel and provide a structured process for reaching a consensus.

### *Quantitative Step: Shannon's Entropy*

In content analysis, there are several methods for data analysis based on the percentage frequency of categories. To process the data, the present research employed Shannon's entropy method (Ellerman, 2013). One hundred and nine age-appropriate themes that were more verbally and semantically

connected to the pupils' cognitive capacity were selected. After determining the unit of analysis (pages: text, questions, pictures, and assignments) and extracting the data (through counting), the study used Shannon's entropy method to process the data in Excel 2019 software. At this stage, a content analysis table was developed, with textbooks listed in the first column and ten life skills tabulated in the second to eleventh columns. The second row in each table contains the themes related to each skill, which were prioritized at the end of the Delphi panel steps. Entropy is a concept that has been widely used as an information index in various fields of study. According to Shannon's theory of information, entropy measures the amount of uncertainty or randomness in a system. In the context of information theory, entropy is used to quantify the amount of information contained in a message or signal. The higher the entropy, the more uncertain and unpredictable the message is. Entropy has also been applied in statistical mechanics to describe the disorder or randomness of a physical system. In this context, entropy is used as a measure of the number of possible arrangements or configurations that a system can take on. So, entropy serves as an important tool for understanding and quantifying information and disorder in various systems.

Shannon's entropy formula is a fundamental concept in information theory that measures the amount of uncertainty or randomness in a discrete stochastic system. The formula was introduced by Claude Shannon in his seminal paper "A Mathematical Theory of Communication" (Shannon, 1948). The formula is expressed as , where  is the entropy of the system,  is the probability of occurrence of each possible outcome , and  is the base -2 logarithm.

The entropy formula has numerous applications in various fields, such as cryptography, data compression, and machine learning. In cryptography, it is used to measure the strength of encryption algorithms and to design secure communication protocols. In data compression, it is used to minimize the amount of information needed to represent a message or signal. In machine learning, it is used to evaluate the quality of probabilistic models and to estimate the amount of information gained from observing data.

Several books and papers have been written on Shannon's entropy formula and its applications. One notable book is "Elements of Information Theory" (Cover & Thomas, 2006), which provides a comprehensive introduction to information theory and its applications. In conclusion, Shannon's entropy

formula is a powerful tool for measuring uncertainty and randomness in discrete stochastic systems. Understanding this concept can lead to significant advancements in these areas and beyond.

In other words, the entropy of the S (random variable or a set of outcomes) is equal to:

$$H(S) = \sum_{i=1}^{n} P_i \log_{\left(\frac{1}{P_i}\right)} = -\sum_{i=1}^{n} P_i \log\left(P_i\right)$$

Entropy for random variable (X) can also be defined using the specified probability as follows:

$$H(X) = -k\int x dF(x)$$

Note that in the discrete state, the integral is the same as the sum.

The following are some reasons why Shannon's entropy measure can be used as an information index weight in ranking methods:

1. It provides a quantitative measure of the amount of uncertainty or randomness in a set of data. This makes it useful for ranking methods that require the identification of important or relevant information from a large pool of data (Cover & Thomas, 2012).
2. It is based on the concept of probability, which allows for the calculation of the likelihood of an event occurring. This makes it useful for ranking methods that involve probabilistic models or algorithms (Manning et al., 2008).
3. It is easy to compute and interpret, making it accessible to researchers and practitioners who may not have extensive knowledge of advanced mathematical concepts (Shannon & Weaver, 1949).
4. It has been shown to be effective in various applications such as text classification (Yang & Pedersen, 1997), web page ranking (Brin & Page, 1998), and image retrieval (Swain & Ballard, 1991).

In conclusion, Shannon's entropy measure can be used as an information index weight in ranking methods due to its ability to quantify uncertainty and probability while being easy to compute and interpret.

# Results

## Delphi Panel

Table 8.1 shows the experts on the Delphi panel and their characteristics.

**Table 8.1** *The Participants on the Delphi Panel and their Characteristics*

| No. | Professional Title | Number | Service Location | Degree and Work Experience |
|---|---|---|---|---|
| 1 | Curriculum planning expert | 1 | Organization for Educational Research and Planning | M.A. More than 15 years |
| 2 | Professor of educational sciences | 1 | Allameh Tabatabaei University | Ph.D. More than 15 years |
| 3 | LST expert | 1 | Ministry of Science, Research and Technology/Ministry of Health and Medical Education/ State Welfare Organization of Iran | Ph.D. More than 15 years |
| 4 | Teacher of courses on non-technical competencies at TVET | 3 | Directorate of Education of Tehran Province | M.A. Teaching experience at TVET |

*Note.* M.A.=Master of Art, Ph.D.= Doctor of Philosophy, TVET= Technical and Vocational Education Training

Figure 8.1 is already cited in several places; cited first time on page 191.

After theme extraction and categorization according to the theoretical and empirical literature, eight themes were prioritized on the first round of the Delphi panel, which were later reduced to five themes on the second panel. On the third panel, at least three themes were finally agreed upon for each skill. In other words, the three rounds of the Delphi panel, which is recommended by other studies such as Hallowell and Gambatese, (2010) and Jamali et al., (2014), resulted in the identification of three to five main themes regarding each of the 10 skills at each level (i.e., knowledge, skill, and attitude) (see Tables 2, 3, and 4). The steps taken in the Delphi process are summarized in Figure 8.2 (Jamali et al., 2014).

**Table 8.2** *Content Analysis of Life Skills Themes at the Level of Knowledge*

| Criteria<br>Textbooks | Self-Awareness | Critical Thinking | Creative Thinking | Decision-Making | Problem-Solving | Effective Communication | Interpersonal Relationship Skills | Empathy | Coping with Stress | Coping with Emotions |
|---|---|---|---|---|---|---|---|---|---|---|
| Themes (the level of knowledge) | Naming personal weaknesses and strengths, understanding the need for personal improvement, expressing self-control skills, recognizing tolerance thresholds, and identifying individual preferences | Defining critical thinking, stating the role of critical thinking in continuous improvement of performance, naming the benefits of using critical thinking, and describing similar effective work experiences | Connecting old and new phenomena, describing governing patterns and relationships, and identifying new processes and methods | Explaining the process of individual decision-making, defining basic principles and methods for decision-making, understating goals and limitations, and understanding information | Defining the problems ahead; identifying problems, contradictions, complaints, and shortcomings; and identifying possible solutions | Explaining the rules and principles of negotiation, expressing conflicts, describing concerns and complaints, and identifying environmental requirements | Explaining the themes of group dynamics, describing hierarchies in human systems, and describing an effective negotiation | Explaining the necessity of voluntary and enthusiastic help to others. Expressing the importance of creating a friendly relationship with others, workers, and customers; and identifying others' emotional state | Identifying individual and environmental stressful factors and situations, identifying individual responsibilities and duties, reducing expectations, identifying rules and regulations, and expressing stress-reducing solutions | Naming the strategies to control emotions and identifying external and internal causes of emotions |
| Work Environment Requirements | 2 | 4 | 8 | 12 | 4 | 3 | 7 | 3 | 2 | 2 |
| | 20% | 9% | 17% | 21% | 7% | 8% | 22% | 16% | 20% | 6% |
| Innovation and Entrepreneurship Workshop | 4 | 15 | 15 | 20 | 20 | 15 | 15 | 4 | 4 | 1 |
| | 40% | 33% | 31% | 35% | 33% | 39% | 47% | 21% | 40% | 3% |
| Production Management | 2 | 6 | 1 | 5 | 5 | 6 | 5 | 2 | 1 | 5 |
| | 20% | 13% | 2% | 9% | 8% | 16% | 16% | 11% | 10% | 16% |
| Application of Modern Technologies | 1 | 15 | 20 | 5 | 11 | 4 | 4 | 2 | 1 | 1 |
| | 10% | 33% | 42% | 9% | 18% | 11% | 13% | 11% | 10% | 3% |
| Professional Ethics | 1 | 5 | 4 | 15 | 20 | 10 | 1 | 8 | 2 | 22 |
| | 10% | 11% | 8% | 26% | 33% | 26% | 3% | 42% | 20% | 71% |
| **Total** | **10**<br>**2.8%** | **45**<br>**12.6%** | **48**<br>**13.5%** | **57**<br>**16%** | **60**<br>**16.9%** | **38**<br>**10.7%** | **32**<br>**9%** | **19**<br>**5%** | **10**<br>**2.8%** | **31**<br>**8.7%** |

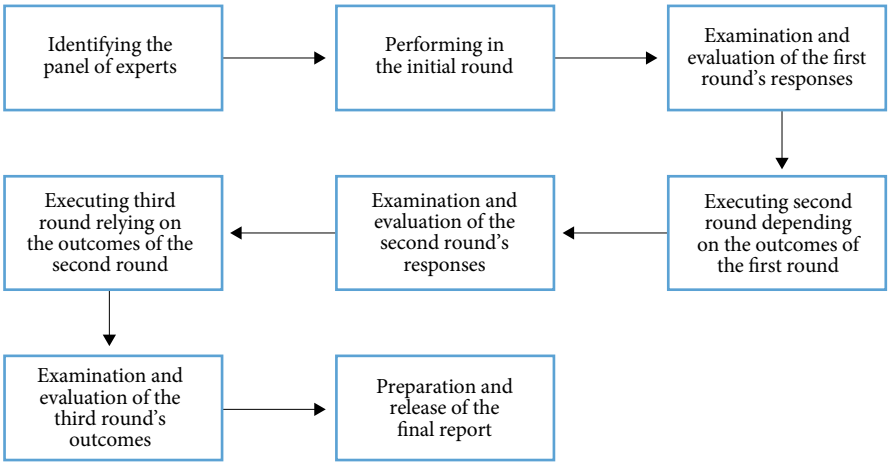


**Figure 8.2** *Steps of the Delphi Method*

As depicted in Table 8.2, the examination of the themes at the level of knowledge revealed that out of a total of 355 frequencies, the problem-solving skills have the highest frequency (60 instances, 16.9%) and the lowest frequency (i.e., 10 instances, 2.8%) is observed equally for coping with stress and self-awareness. The frequency of the rest of the skills was as follows: critical thinking (45 instances, 12.6%), creative thinking (48 instances, 13.5%), decision-making (57 instances, 16%), effective communication (38 instances, 10.7%), interpersonal relationship skills (32 instances, 9%), empathy (19 instances, 5%), and coping with emotions (31 instances, 8.7%).

Regarding skill level, the content analysis of non-technical competencies textbooks identified life skills themes and their corresponding frequencies, which are presented in Table 8.3.

As evident in Table 8.3, the examination of the themes at the level of skill revealed that out of a total of 237 frequencies, problem-solving, and decision-making have the highest frequency, with 41 instances (17.3%) and 37 instances (15.6%), respectively. The lowest frequency (i.e., 8 instances, 3%) is observed in coping with stress. Self-awareness (11 instances, 4.6%) and interpersonal relationship skills (15 instances, 6.3%) also received lower ranks. The frequencies of other skills are as follows: critical thinking (31 instances, 13%), creative thinking (25 instances, 10.5%), effective communication (30 instances, 12.6%), empathy (21 instances, 8.8%), and coping with emotions (18 instances, 11.8%).

**Table 8.3** *Content Analysis of Life Skills Themes at the Level of Skill.*

| Criteria<br>Textbooks | Self-awareness | Critical thinking | Creative thinking | Decision-making | Problem solving | Effective communication | Interpersonal relationship skills | Empathy | Coping with stress | Coping with emotions |
|---|---|---|---|---|---|---|---|---|---|---|
| Themes (the level of skill) | Analyzing individual actions and reactions, criticizing a set of ethical behaviors and decisions in the workplace, and comparing ethical and functional behaviors | Analyzing different situations, problems, and experiences; sympathizing with people; and predicting situations based on reasoning | Generating creative solutions, applying creative solutions to new situations, and combining solutions with the aim of improving efficiency | Analyzing situations and information, predicting risks, prioritizing goals, and gathering different viewpoints | Analyzing data, analyzing reasons and possible causes, planning operations, and comparing the probability of success of different solutions | Modifying behavior in accordance with environmental requirements, empathizing with others, and gaining awareness of non-verbal communication | Promoting group dynamics, describing hierarchies in human systems, and describing an effective negotiation | Interpreting communication and conversations, identifying verbal communication, and using effective verbal communication | Avoiding stressful situations, positively confronting the stressful phenomenon, and reasoning for making decisions in adverse situations | Controlling emotions, making decisions and taking right measures in the face of emotions, and properly implementing steps to control emotions |
| Work Environment Requirements | 2 | 2 | 4 | 4 | 5 | 2 | 1 | 4 | 1 | 4 |
| | 18% | 6% | 16% | 11% | 12% | 7% | 7% | 19% | 13% | 22% |
| Innovation and Entrepreneurship Workshop | 3 | 11 | 8 | 14 | 20 | 10 | 6 | 6 | 2 | 6 |
| | 27% | 35% | 32% | 38% | 49% | 33% | 40% | 29% | 25% | 33% |
| Production Management | 1 | 2 | 1 | 5 | 5 | 6 | 5 | 5 | 1 | 2 |
| | 9% | 6% | 4% | 14% | 12% | 20% | 33% | 24% | 13% | 11% |
| Application of Modern Technologies | 2 | 12 | 10 | 5 | 5 | 2 | 2 | 2 | 1 | 1 |
| | 18% | 39% | 40% | 14% | 12% | 7% | 13% | 10% | 13% | 6% |
| Professional Ethics | 3 | 4 | 2 | 9 | 6 | 10 | 1 | 4 | 3 | 5 |
| | 27% | 13% | 8% | 24% | 15% | 33% | 7% | 19% | 38% | 28% |
| **Total** | **11**<br>**4.6%** | **31**<br>**13%** | **25**<br>**10.5%** | **37**<br>**15.6%** | **41**<br>**17.29%** | **30**<br>**12.6%** | **15**<br>**6.3%** | **21**<br>**8.8%** | **8**<br>**3%** | **18**<br>**11.8%** |

**Table 8.4** *Content Analysis of Life Skills Themes at the Level of Attitude.*

| Criteria<br>Textbooks | Self-Awareness | Critical Thinking | Creative Thinking | Decision-Making | Problem Solving | Effective Communication | Interpersonal Relationship Skills | Empathy | Coping With Stress | Coping With Emotions |
|---|---|---|---|---|---|---|---|---|---|---|
| Themes (the level of attitude) | Dealing responsibly with activities, judging decision-making and performance behaviors, showing care and social responsibilities, and convincing people to act according to professional ethics | Evaluating and judging others' critical thinking skills, inferring new patterns in critical thinking methods, and provoking questions and creating new perspectives in others | Applying and creating appropriate technologies to improve processes and results, creating new and creative applications for technologies along with observing the ethics of technology, and changing a disadvantageous situation into a useful one | Evaluating multiple solutions, predicting outputs and results based on previous experiences and knowledge, judging goals and results, distinguishing useful and non-useful activities, and categorizing goals | Evaluating solutions, evaluating operational plans, judging the effectiveness and efficiency of solutions, and generating righteous solutions | Evaluating Basic issues, evaluating the consequences of negotiation, distinguishing between facts and inferences, valuing different opinions, and believing in and being committed to social development | Living within the framework of civil laws and principles; managing the conflict between rights and interests; using non-verbal communication appropriately; using mathematical symbols, techniques, and formulas to gain inspiration to convey concepts; convincing people to reject unhelpful proposals; and gaining trust | Creating individual goals and ideals and adhering to them, creating new values for oneself and the group, exercising active activism in realms of life, performing voluntary activities along with understanding individual and collective interests, and possessing the ability to postpone individual interests for the sake of group interests | Creating an effective action with conflicting positions in individual and group dimensions, managing one's fear and hope and that of others, evaluating and predicting stressful situations for oneself and others | Believing in preventing tensions and crises, correctly predicting the consequences of actions, being patient until reaching the desired result, and convincing others to be patient |
| Work Environment Requirements | 2 | 5 | 3 | 2 | 1 | 1 | 1 | 1 | 4 | 1 |
| | 25% | 24% | 15% | 20% | 6% | 9% | 7% | 13% | 50% | 17% |
| Innovation and Entrepreneurship Workshop | 2 | 9 | 5 | 6 | 9 | 4 | 7 | 3 | 1 | 6 |
| | 25% | 43% | 25% | 40% | 53% | 36% | 50% | 38% | 13% | 17% |
| Production Management | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 |
| | 25% | 5% | 5% | 10% | 6% | 18% | 7% | 13% | 13% | 17% |
| Application of Modern Technologies | 1 | 4 | 7 | 1 | 2 | 1 | 4 | 2 | 1 | 2 |
| | 13% | 19% | 35% | 10% | 12% | 9% | 29% | 25% | 13% | 33% |
| Professional Ethics | 1 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 |
| | 13% | 10% | 20% | 20% | 24% | 27% | 7% | 13% | 13% | 17% |
| **Total** | **8**<br>**6%** | **21**<br>**16.1%** | **20**<br>**15.4%** | **12**<br>**9.2%** | **17**<br>**13%** | **11**<br>**8.5%** | **14**<br>**11%** | **8**<br>**6%** | **8**<br>**6%** | **11**<br>**8.4%** |

Considering attitude level, the content analysis of non-technical competencies textbooks led to the identification of life skills themes and their frequencies of occurrence (see Table 8.4).

As shown in Table 8.4, the examination of the themes at the level of attitude showed 130 frequencies, which is lower than the total frequency at the levels of knowledge (355) and skill (237). Concerning the level of attitude, critical thinking (21 instances, 16.1%) and creative thinking (20 instances, 15.4%) have the highest frequency, and the lowest frequency is observed in coping with stress, empathy, and self-awareness, with a frequency of 8 (6%). The frequencies of other life skills at the level of attitude are as follows: coping with emotions (11 instances, 8.4%), decision-making (12 instances, 9.2%), problem-solving (17 instances, 13%), effective communication (11 instances, 8.5%), and interpersonal relationship skills (14 instances, 11%). Moreover, the results showed that life skills do not have a normal distribution. For example, the total frequency of the themes about coping with stress, self-awareness, and empathy is equal to 103, and the total frequency of the themes related to problem-solving, decision-making, and critical thinking is 319.

In Table 8.5, we utilized Shannon's entropy method to convert the frequency data of the 10 skills in the textbooks into two key measures: the importance coefficient (Ej) and the information index (Wj). This transformation enables us to make more informed assessments regarding the level of attention given to these skills in relation to the three themes. By examining the table, we observe that while there is a linear correlation between the importance coefficients and the information indexes, there is no direct association between the frequencies and these two measures. Consequently, it is important to highlight that the frequency of skills in textbooks does not accurately reflect the extent of attention they receive. The information index serves as a better indicator of attention and is not linearly dependent on the frequency.

The present research aimed to answer the following research question: To what degree do the TVET textbooks in Iran incorporate the 10 essential life skills recommended by WHO, and how do the levels of attention vary among the dimensions of knowledge, skill, and attitude? To answer the research question, the study analyzed the components of the LST in the non-technical competencies textbooks for the technical and vocational branch of the upper secondary level (high school) in Iran. The extracted themes from the content analysis of life skills at the levels of knowledge, skill, and attitude are presented in Table 8.6. In accordance with Shannon's method, a category with a larger information index betokens a greater degree of importance (Wj). A normalized weighted ranking of knowledge, skill, and attitude is provided in Table 8.6 by Shannon's entropy for each of the life skills.

**Table 8.5** *The Distribution of Frequency of Life Skills Themes at the Levels of Knowledge, Skill, and Attitude.*

| | Self-awareness | Critical thinking | Creative thinking | Decision-making | Problem solving | Effective communication | Interpersonal relationships skills | Empathy | Coping with stress | Coping with emotions |
|---|---|---|---|---|---|---|---|---|---|---|
| **Knowledge** | **10** | **45** | **48** | **57** | **60** | **38** | **32** | **19** | **10** | **31** |
| $E_j$ | .91 | .91 | .82 | .91 | .89 | .90 | .84 | .91 | .91 | .58 |
| $W_j$ | .11 | .11 | .09 | .11 | .10 | .10 | .10 | .11 | .11 | .07 |
| **Skill** | **11** | **31** | **25** | **37** | **41** | **30** | **15** | **21** | **8** | **18** |
| $E_j$ | .96 | .84 | .84 | .93 | .87 | .88 | .89 | .82 | .52 | .80 |
| $W_j$ | .11 | .10 | .10 | .11 | .10 | .11 | .11 | .10 | .06 | .10 |
| **Attitude** | **8** | **21** | **20** | **10** | **17** | **11** | **14** | **8** | **8** | **6** |
| $E_j$ | .97 | .86 | .91 | .91 | .78 | .91 | .79 | .93 | .86 | .97 |
| $W_j$ | .11 | .09 | .10 | .10 | .09 | .10 | .09 | .10 | .10 | .11 |

*Note.* $E_i$ = entropy, $W_i$= weighted index

**Table 8.6** *Comparison of Frequency Rankings, Entropy (Information Index), and Normalized Weight (Importance Coefficient) of Each Skill at Different Levels.*

| | | Self-Awareness | Critical Thinking | Creative Thinking | Decision-Making | Problem Solving | Effective Communication | Interpersonal Relationship skills | Empathy | Coping with Stress | Coping with Emotions |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Knowledge | Frequency | 10 | 45 | 48 | 57 | 60 | 38 | 32 | 19 | 10 | 31 |
| | Frequency rank | 9 | 4 | 3 | 2 | 1 | 5 | 6 | 8 | 9 | 7 |
| | Entropy and normalized weighted rank (information index and importance coefficient) | 2 | 4 | 9 | 1 | 7 | 6 | 8 | 5 | 2 | 10 |
| Skill | Frequency | 11 | 31 | 25 | 37 | 41 | 30 | 15 | 21 | 8 | 18 |
| | Frequency rank | 9 | 3 | 5 | 2 | 1 | 4 | 8 | 6 | 10 | 7 |
| | Entropy and normalized weight ed rank (information index and importance coefficient) | 1 | 7 | 6 | 2 | 5 | 4 | 3 | 8 | 10 | 9 |
| Attitude | Frequency | 8 | 21 | 20 | 10 | 17 | 11 | 14 | 8 | 8 | 6 |
| | Frequency rank | 7 | 1 | 2 | 6 | 3 | 5 | 4 | 7 | 7 | 10 |
| | Entropy and normalized weighted rank (information index and importance coefficient) | 2 | 7 | 5 | 4 | 10 | 6 | 9 | 3 | 8 | 1 |

## Discussion

In the last two decades, the LST has found its way into the curriculum and become a sine qua non of formal educational systems and programs (Gim, 2021). Empirical evidence shows that the LST is of utmost importance in a secondary school as it coincides with the teenage years (Wurdinger & Rudolph, 2009), and it can help students pass this stage of life with fewer crises (Botvin & Griffin, 2004). Accordingly, formal and informal educational systems have tried to teach students the required life skills, in addition to various subjects, through the school curriculum (Bouck, 2010; Chiang et al., 2017; Fagan & Mihalic, 2003; Visser, 2005). The purpose of the current study was to analyze the content and gauge how much emphasis is placed on the 10 fundamental life skills suggested by WHO in the TVET curriculum of Iran and how much this varies in terms of knowledge, skill, and attitude. Five textbooks taught in the 9$^{th}$, 10$^{th}$, and 11$^{th}$ grades were analyzed in terms of their content to determine the degree of attention paid to life skills. The 10 basic life skills outlined by WHO served as the foundation for the content analysis's topics. First, the themes were categorized by documentary method, and then the Delphi method was used to extract and prioritize the themes relating to each skill. Third, the content of the books was classified into three levels, including knowledge, skill, and attitude, with an eye on the themes relating to each skill. Finally, the degree of attention paid to each skill was counted by experts and analyzed through the entropy method.

The content analysis results showed that all five textbooks analyzed contain the themes about life skills manifested, in one way or another, at three levels of knowledge, skill, and attitude. The knowledge level has the highest frequency of life skill themes compared to the other two levels. This finding is consistent with the knowledge-oriented curriculum approach in which the educational contents are subject-based and aim to teach students specific knowledge (Krauss & Suandi, 2008; Sundby & Karseth, 2022). In Iran, the dominant approach is *curriculum as content* (Sattari, 2010), which is a traditional attitude in curricula design and development (Coşkun & Aslan, 2021). It is like placing the wagon before the horse in the curriculum as content approach. The emphasis is on what to teach, with little attention given to why we are teaching it or the fact that knowledge is the objective, and disciplines are only different paths to get there. It is like planning a road trip without a specific goal in mind—you could cover a lot of land, but where are you actually going?

(Priestly et al., 2021). Therefore, it is expected that curriculum designers and book authors devote special attention to the transfer of subjective knowledge through the textbooks because, at the level of knowledge, the course materials and subjects are more concrete, understandable, measurable, and compatible with the structure of textbooks. It is thus more likely that planners and authors direct special attention to the level of knowledge, which is called a knowledge-rich curriculum (Sherrington, 2018). Therefore, it is expected that more attention will be given to the level of knowledge. It is also important to note that Bloom's classification of knowledge levels (Armstrong, 2016) has been studied and applied more in the curricula design; it is more useful in the development of textbooks as its indicators are more accurate than the levels of skill and attitude (Olimat, 2015; Zorluoglu & Kizilaslan, 2019). Bloom and colleagues presented their system for classifying educational goals in 1956 under the brand Bloom's Taxonomy (Krathwohl, 2002). The taxonomy is divided into six main categories: knowledge, comprehension, application, analysis, synthesis, and evaluation. These categories range from simple to complicated and from concrete to abstract. The framework is typically known by its six basic categories, although each category also contains subclasses. A team of cognitive psychologists, curricular theorists, educational investigators, and experts in testing and assessment modified Bloom's Taxonomy in 2001 in a form that was more dynamic and goal-oriented (Forehand, 2005). The updated taxonomy describes the cognitive processes by which intellectuals come into contact and interact with knowledge by labeling categories and subcategories with verbs and gerunds. The use of Bloom's Taxonomy in education has a number of advantages. It provides learning objectives and goals, which aid in clarifying goals for teachers and students alike. Teachers can better prepare and provide efficient education, create reliable evaluation assignments and techniques, and make sure that instruction and assessment are in line with the objectives by using organized objectives.

According to a thorough examination of non-technical competencies textbook content, Iran's proposed curriculum appears to place the most significant attention on problem-solving, decision-making, and creative thinking. Yet decision-making, self-awareness, and coping with stress have the highest importance coefficient. In this sense, determining the degree of attention given to life skills at the level of knowledge in Iranian textbooks requires the

consideration of instances of decision-making, self-awareness, and coping with stress, as presented in the textbooks.

At the level of attitude, problem-solving, decision-making, and critical thinking are the most frequent skills, thus getting the most attention. However, self-awareness, decision-making, and interpersonal relationship skills have the highest importance coefficient. If we consider attitude as having three dimensions (actions, beliefs, and feelings; Pickens, 2005), life skills should strengthen these three dimensions in students. In this sense, determining the degree of attention given to life skills at the level of attitude in Iranian textbooks requires the consideration of instances of self-awareness, decision-making, and interpersonal relationship skills as presented in the textbooks.

Critical thinking, creative thinking, and problem-solving are the most frequent at the level of skill, thus getting the most attention. However, coping with emotions, self-awareness, and empathy are the skills with the highest importance coefficient per se. Thus, determining the degree of attention given to life skills at the level of skill in Iranian textbooks requires the consideration of instances of coping with emotions, self-awareness, and empathy, as presented in the textbooks.

Moreover, the lowest frequency at the level of knowledge is observed in coping with stress, self-awareness, and empathy. At the skill level, coping with stress, self-awareness, and interpersonal relationship skills have the lowest frequency. At the level of attitude, coping with emotions, coping with stress, empathy, and self-awareness are the least frequent. The high frequency of problem-solving, creative thinking, critical thinking, and decision-making can be attributed to the nature of the TVET (Jabarullah & Iqbal Hussain, 2019), the dominance of the content (Syomwene, 2020), or the implicit intention of curriculum planners to develop technological skills and increase the mental abilities among the students in a developing country like Iran (Vajargah et al., 2009). For example, on page 35 of the textbook Innovation and Entrepreneurship Workshop, there is a practical activity asking students to visit the website of an official database of intellectual property registration and the database of inventions, use several keywords to search for inventions, find out the context of the idea generation in the inventor's mind, and predict the final price of the product as well as the success of the idea in the market. Combining the detailed search and examination of a situation and strengthening the student's ability to use knowledge and information interactively, this activity takes the

learner beyond the level of knowledge and guides her/him towards the level of skill and the formation of attitude concerning problem-solving.

The reason behind more emphasis put on the level of knowledge can be discussed from another perspective. In Iran, the curriculum planning system operates in a centralized manner, meaning that a uniform curriculum is developed and implemented across the entire country. Despite the very high cultural diversity in Iran (Azimi, 2021), the content of textbooks tries to promote a kind of uniformity and inculcate the idea of all under one coordinated system, of all being a single nation. This focus has led to the development of an expansive structure called the Textbook Compilation Office, which works on different levels from elementary to upper secondary.

Furthermore, the lower frequency of and less attention given to coping with emotions, coping with stress, empathy, and self-awareness can be interpreted from several perspectives. First, in the centralized system, curriculum planning, course design, material development, and even program evaluation are carried out in a centralized manner. In such a system, LST is a part of the national curriculum. The premise that students have already learned self-awareness, stress control, and emotion regulation in other subjects (Iqbal et al., 2017) can thus be a reason behind the primary focus of the technical and vocational branch on the repetition of critical thinking, creativity, problem-solving, and decision-making (Ghombavani, 2016). There are two important views. According to the first view, life skills constitute a holistic paradigm by which learning can help people live a better life (Velasco et al., 2021). The second view upholds the idea that each life skill has its own use, so it is possible to put more emphasis on particular skills in the curriculum of different courses and in line with the purpose of the educational program and course (Nyaberi, 2010). The second account touches upon the fact that the provision of a labor force is one of the tasks of the educational system in most developing countries. In this context, LST can facilitate the post-graduation employment of individuals (Ibarraran et al., 2014). Therefore, the need to prepare individuals for professional and specialized jobs itself reinforces the importance of life skills, such as decision-making, creative thinking, and subject-based thinking, in technical and vocational education and training. Although this way of thinking is supported by many, it can lead to a disregard for psychological aspects and self-awareness because the latter seem less aligned with macro-scale missions and goals.

In this study, looking at themes at the knowledge level does not indicate that skills are excluded. Instead, knowledge serves as the basis for the acquisition of sophisticated abilities. A well-known educational framework, Bloom's Taxonomy, divides educational objectives into six broad categories, with knowledge as the essential one. It is generally acknowledged that gaining information is essential for developing higher-level cognitive abilities. In order to emphasize the significance of knowledge as a prerequisite for the learning and application of skills, our study concentrated on the frequency of life skill themes at various levels. By highlighting the importance of knowledge, we highlight the importance of a curriculum that emphasizes the development of a strong knowledge basis for the acquisition of a variety of abilities. The potential emergence of culturally pertinent themes that may not be covered by existing frameworks like the World Health Organization (WHO) we used in this study should also be noted. This could be regarded as a limitation of our study since we mainly used the pre-existing categories that these frameworks offered for our analysis. It would be beneficial to investigate other themes that emerge from the texts in future studies while taking into account the cultural context and local perspectives.

## Conclusions

The results of this research showed that the textbooks for TVET in Iran pay more attention to the components of the level of knowledge. It should be considered that two other levels, namely skill and attitude, play an important role in training competent people. Since focusing on skills is secondary to focusing on them in the curriculum's objectives (Piri & Sahraei, 2022), it is recommended that curriculum planners establish a balance between the components of knowledge, skill, and attitude in the development of the curriculum and content for TVET courses. It is also suggested that more instances of life skills that have an individual dimension be included in the textbooks. The present research used the WHO framework encompassing 10 core life skills. Future studies can use other relevant frameworks. Any use of the results of this research should consider the limitations inherent in the multi-method research, such as the nature of data collected, the content examined, and the opinions of experts who participated in the study. Also, as PYD places more emphasis on encouraging positive outcomes than it does

on merely lowering risk behaviors, a crucial part of PYD is life skills education, which equips young people with the knowledge and abilities they need to successfully traverse adolescence and make the transition to adulthood. Integrating life skills instruction into TVET textbooks can significantly enhance the growth of pupils. Implementing life skills education has been demonstrated to promote social competence, self-efficacy, and self-esteem while decreasing risk-taking behaviors, including drug use and unprotected sex (Botvin & Griffin, 2004; Lou et al., 2008). For students in TVET to pursue their current and future life goals, integrating PYD and life skills education can be extremely beneficial. PYD can assist students in reaching their short- and long-term goals by using a strengths-based approach and giving them the resources to overcome obstacles. Additionally, life skills instruction can assist students in developing the abilities they need to pursue their ideal career paths and successfully enter adulthood. Overall, PYD and life skills education promotion in schools can have a significant positive impact on youth success in the developmental trajectory.

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Chapter 9

# Positive Youth Development in Norwegian Upper Secondary: The Impact of Sex, Socio-economic Status, and Immigrant Background on the Developmental Trajectories of Academic Initiative, Academic Self-efficacy, and Grade Point Average

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**Abstract:** The positive youth development (PYD) and social justice perspectives assume that it is important to consider challenges related to equity and inequality in education to understand academic processes and outcomes of the increasingly diverse student population. Students' socioeconomic status, parents' educational level, sex, and immigrant background impact on students' motivation, learning, grades, and development. Norway is considered to have robust conditions for PYD and fair allocation of resources because of the country's active and supportive welfare state model. Equity, equal opportunities, and inclusion are consistently cited as the goal of schooling in the country. This chapter investigates how sex, socioeconomic status, and immigrant background relate to the developmental trajectories of academic initiative, academic self-efficacy, and grade point average (GPA) throughout upper secondary education in Norway. The authors used data from 1508 general education students attending 16 schools that participated in the COMPLETE study, a randomised controlled trial aimed to improve the psychosocial environment in upper secondary schools and decrease dropout rates. Results from latent growth curve modelling indicated group differences related to changes over a three year-period (2016–2019) in GPA, but not in academic initiative or self-efficacy. Girls reported greater improvement in GPA than boys, students with a high socioeconomic status had a larger improvement in their GPA than students with a low socioeconomic status, and Norwegian immigrant youth experienced a greater improvement in their GPA compared to their non-immigrant peers. Findings are discussed considering school as a socially equalising actor.

*Keywords:* equity, inequality, education, socio-economic status, sex, immigrant background, academic initiative, academic self-efficacy, GPA, latent growth curve modelling, COMPLETE

## Introduction

Equity and fair allocation of resources are indicators of a just society. Smith and Smith Lee (2020) argue that promoting social justice within developmental science concerns the affirmation of the validity of three points. First, social justice encompasses all individuals being worthy of the right to humanity. Second, acknowledgement and condemnation of oppression is social justice. Third, directly addressing oppression is social justice. Barbarin et al. (2020) point out that recognising the extensive and intricate effects of adversity on marginalised youth is essential to achieve social justice. Because disadvantaged children often become psychosocially competent enough to avoid the detrimental effects of racism, resource insufficiency, and inequality, the study of positive youth development (PYD) and social justice promotion should be linked in developmental science (Barbarin et al., 2020). Indeed, over recent decades, the resource-based perspective on youth development has become widely acknowledged as a fruitful approach to emphasise youth as a period of opportunity and growth (Lerner et al., 2011). The school is widely recognised as one of the most important settings for youth development (OECD, 2021), as children and youth spend half of their awake time there (Rutter, 1979).

There have been major advances in our knowledge of how settings (like schools) shape the development of young people into successful young adults (Ginner Hau et al., 2021; Larsen, 2016). We now know that the PYD and success of young people are determined by the balance between the settings in which they develop (here: schools) and the strengths and vulnerabilities they bring to those settings (Larsen, 2016; Larsen & Holsen, 2021). To better understand academic processes and outcomes in adolescence, it is important to explicitly study the diversity in the adolescent population within an equity perspective in education. This chapter will therefore shed light on how sex, socioeconomic status (SES), and immigrant background relate to the developmental trajectories of academic initiative, academic self-efficacy, and grade point average (GPA) throughout upper secondary education in Norway. While the school context is our primary concern in this chapter, given the economic, social, and political dimensions related to equity and inequality in youth development, we acknowledge that challenges related to equity are unlikely to be understood and solved within the school and classroom alone (Braathe & Otterstad, 2014).

Nevertheless, in Norway schools are considered one of the most important arenas for levelling out social inequality, educating for democracy (Frønes, Pettersen, et al., 2020; Ministry of Education, 2006) and securing equity and social justice (Frønes, Pettersen, et al., 2020). Yet, we still find that schools are reproducing inequalities, and figures show a clear correlation between parents' educational level and children's education (Dahl et al., 2014; Statistics Norway, 2022c). International comparisons show that quite a few other countries have been more successful than Norway in achieving social equalisation in their educational systems (Frønes, Pettersen, et al., 2020; Haahr et al., 2005; Ministry of Education, 2006). Thus, there is room for improvement. Regardless, Norway is still among the countries reporting the lowest impact of socioeconomic factors on student performance (Frønes, Pettersen, et al., 2020; OECD, 2019). Educational inequalities in Norway have further decreased in recent years, and students with the least-educated parents have been shown to be able to catch up with other students' performance in several areas (Statistics Norway, 2022c).

## The Norwegian Setting

Norway is a unitary state in Scandinavia with well-established welfare services and benefit systems, characterised by a social democratic welfare state model (van Kersbergen & Metliaas, 2020). Compared to other countries, Norway should therefore have robust conditions for PYD, owing to its fundamental welfare state model. In addition, the country has been at the forefront of recognising international conventions on humanitarianism, solidarity, equal rights and opportunities, and justice (Aadnesen & Hærem, 2005).

The Norwegian school system is mandatory, free of charge for all children and youth from grades 1 to 10, and is mandated to secure equal rights for every child, independent of social class, gender, age, religion, and ethnicity. Since 1994, all students have been granted free entry to upper secondary schools (grades 11–13), and about 98 per cent of all youth in Norway begin upper secondary school either on an academic track or a vocational track directly after mandatory schooling (Utdanningsforbundet, 2019). Furthermore, higher education is free in state-owned universities and colleges. These core values are partially based on the UNESCO's Salamanca Declaration, the UN Convention on the Rights of the Child (CRC) and the UN Convention on the Rights of

Persons with Disabilities (CRPD). The CRC was incorporated into Norwegian law by the 1999 Human Rights Act, and some core principles of CRC are made part of Norwegian constitutional law by the amendment of Section 104 into the constitution (Søvig, 2019). While the CRPD was ratified in Norway in 2013, it has not yet been incorporated into Norwegian law.

To promote school as a socially equalising actor, the former Norwegian Minister of Education (1990–1995) and sociologist Gudmund Hernes (1974) launched four differentiated concepts (or perceptions) of equality. These four equality concepts function as guidelines for the unified school policy in the country. This policy has primarily focused on mandatory elementary education (grades 1–10) (Møller & Skedsmo, 2013) but has also comprised upper secondary school in recent decades.

Hernes (1974) distinguishes between formal equality, resource equality, competence equality, and results equality. Formal equality means that all have formal rights to enter education. In addition, the students should be granted free entry, which corresponds to resource equality. The third concept, competence equality, means that it is the competence of the students that decides how far in the educational system a student reaches, beyond mandatory school, and thus how many years of educational and financial support the student receives. However, results equality is the only kind of equality that truly promotes equalisation, according to Hernes (1974). Results equality is about compensation for differences in the students' social backgrounds. This implies that to achieve equality, one must treat with inequality. Hernes argues: "Equality in results is ensured by inequality in the resources directed towards each student" (translated by Carlsen, 2009, p. 349; originally in Hernes, 1974, p. 249). Thus, results equality corresponds to equity, because equity takes into consideration how well the requirements of individual needs are met (Frønes, Pettersen, et al., 2020).

Rawls (1971) argues in a similar vein that for people to have the same chances in life, in some contexts (here: school), one must distribute differently. According to Rawls, opportunities to acquire cultural knowledge and skills should not depend upon one's social class, so the school system, whether public or private, should be designed to even out class barriers (Rawls, 1971, p. 73). Rawls claims that justice cannot be achieved by absolute or strict equality (meaning sameness in treatment; Frønes, Pettersen, et al., 2020) but by fairness, i.e., the fair distribution of social goods. Fairness in the educational

system is achieved when the individual student has access to the education they need and makes the least advantaged students better off than they would be under strict equality (without making it significantly worse for others). Fair allocation of resources is an indicator of a just society, according to Rawls's (1971) theory of justice.

Between the late 1930s and the 1990s, the egalitarian ideology and main goals of equality, community, prosperity, solidarity, and welfare were, in a way, taken for granted in Norway, as the social democratic country was striving for social justice as well as equity (Braathe & Otterstad, 2014, p. 1194). Although these egalitarian ideals are still prominent in the governing political instruments of the school, discourses of competition and inequality during the 1990s and the following decades, with new neo-liberal and conservative policies, challenged solidarity and equality (Braathe & Otterstad, 2014). Ideas connected to new public management (NPM) were introduced and interpreted in the Norwegian education sector and sped up after Norway was listed with mediocre results in the Program for International Student Assessment (PISA) in 2001 (Møller & Skedsmo, 2013). However, at present, educational equity and equality receive renewed emphasis in educational policies, which can be related to increased social inequality and student diversity due to migration, especially in the last decade (Frønes, Pettersen, et al., 2020). Equity, equal opportunities, and inclusion are consistently cited as the goal of schooling in Norway (Frønes, Pettersen, et al., 2020). These ideals are reinforced in the 2020 National curriculum for primary, lower secondary and upper secondary education. Educational policy documents today reflect an understanding of "equity through diversity"; however, no specification is given as to how equity is understood and can be achieved (Frønes, Pettersen, et al., 2020, p. 14). At the same time, it seems that educational policies in today's Norway may be more inclined towards a performance-oriented and economically efficient educational system that might challenge the image of an egalitarian system (Frønes, Pettersen, et al., 2020).

In Norway at present, the completion rates in upper secondary education are clearly related to students' gender in that the completion rates of boys are 76.2% compared to the 84.7% completion rates of girls (completion within five/six years) (Statistics Norway, 2022a). About half of the students are enrolled in a general study programme (which refers to study preparation courses for higher education). In these general study programmes, the completion rates

are 89.4% for all students. The completion rates for boys are 86.3% compared to 91.8% for girls. Among students on the vocational programs the completion rates are 70%. Boys on the vocational programs have a completion rate of only 67.7% compared to that 73.5%. for girls. Moreover, the choice of study program differs between genders. Boys attend the vocational programs to a higher degree than girls (boys 59%). The choice of program is furthermore related to parents' educational level. Almost half of the vocational students have parents with only upper secondary education, while the equivalent for the students on the general program is over one in four. The completion rates are lowest for boys attending the vocational programs, having parents with only primary school education (Statistics Norway, 2022a; 2022c; 2014).

### Differences in Academic Initiative, Self-efficacy, and Grade Point Average Based on Sex, Socioeconomic Status, and Immigrant Background – the PYD Perspective.

The PYD perspective is focused on the strengths and resources of individuals and how they can be promoted through positive interaction with the context (Lerner et al., 2015). One central objective of PYD approaches is fostering self-determination and self-efficacy as important adolescent resources (Catalano et al., 2004). Under school-related PYD models, this can translate into fostering academic initiative and academic self-efficacy as important individual resources for academic achievement. The promotion of these school-related constructs across the adolescent period can be considered important for an overall PYD. However, as the PYD perspective emphasises, contextual aspects may play significant roles in academic trajectories. Hence, to understand variations in academic outcomes, there have been increasing research efforts studying sociodemographic predictors of favourable academic outcomes, such as academic initiative, self-efficacy, and achievements.

Even though nearly all students in Norway attend upper secondary school, there still are major differences in achievements depending on background characteristics. The completion rates of students in upper secondary education are about 80.4% (Statistics Norway, 2022a). Completion is clearly related to the students' socioeconomic background, such as parents' educational level, income, as well as student sex (Statistics Norway, 2014, 2022a, 2022c). Because it is not solely the competence of the individual students that determines

how far they reach in the educational system, the aim of competence equality (Hernes, 1974) is not met.

Students with immigrant backgrounds are slightly less likely than others to complete upper secondary education or training; however, many immigrant students do very well in the Norwegian education system (Statistics Norway, 2022a). In Norway, 11.7%, or 115 000 children, belonged to low-income families in 2020 (Statistics Norway, 2022b). Children with an immigrant background make up a total of 18% of all children in the country. Despite constituting a minor proportion of the population, they account for six of ten children belonging to persistently low-income families, and it is in this group that we have seen the greatest increase in low-income in recent years (Statistics Norway, 2022b). It seems, however, that students with an immigrant background and lower socioeconomic status (SES) are a more heterogeneous group than non-immigrant students, making statistical comparisons simply based on SES variables difficult or even inappropriate (Johnsen et al., 2015). Overall, available data suggest that SES is more influential for Norwegian-born compared to immigrants (Johnsen et al., 2015). Johnsen (2021) states that the welfare state system acts as an environmental protective factor that reduces some of the disadvantages associated with low SES and having an immigrant background in Norway. However, this is not the case for the poor non-immigrant children in Norway (Johnsen, 2021). In addition, a tendency for second-generation immigrant students in Norway to partly overcome their disadvantages over time has been documented, although this does not appear to apply to boys from lower-income groups (Frønes, Pettersen, et al., 2020).

Based on international research, Schotte et al. (2022) emphasise that the findings are mixed regarding how well immigrant students adapt to school. Findings indicate that the relationship between parental education and students' school achievement is weaker for immigrant children in Nordic countries than for their non-immigrant peers (Johnsen et al., 2015). Further, immigrant youth from some ethnic minorities in Europe tend to have high educational aspirations, although they perform worse at school and hold lower social status than their non-immigrant peers (Salikutluk, 2016). This is referred to as the immigrants' aspiration paradox in the research literature. For example, Salikutluk (2016) found a gap in educational aims between Turkish immigrant students' and native German students. The higher educational ambitions of Turkish immigrant students, compared to native German

students, were associated with a higher motivation to improve their status. In other words, the immigrant youth is motivated by a desire for upward status mobility to be able to work in better occupations than their parents. A similar aspiration-achievement picture is found among other immigrant groups in the Netherlands, France, Sweden, and Belgium (Salikutluk, 2016).

### *Academic Initiative*

To promote the positive development of youth, it may be particularly important to stimulate their self-determination and ability to take initiative (Larson, 2000). Initiative relates closely to the capacity for agency or autonomous action. The three components of initiative are engagement (focused attention and effort toward a challenging goal), intrinsic motivation (motivation from within), and that this motivation and engagement occur over time (Larson, 2000). From a self-determination perspective, academic initiative is regarded as an expression of autonomous self-regulated learning (Danielsen, 2010; Danielsen et al., 2010; Jeno & Diseth, 2014; Reeve et al., 2008).

Some research indicates that girls experience higher school engagement than boys (Bang et al., 2020). One longitudinal study found that boys and girls started off with similar school engagement in grade 7 but that boys experienced a more rapid decline than girls toward grade 12 (van de Gaer et al., 2009). Similarly, another study showed that boys were more likely to have a less favourable trajectory of engagement compared to girls (Li & Lerner, 2011). Other studies on intrinsic motivation have found similar effects, wherein girls report higher intrinsic motivation than boys across time (D'Lima et al., 2014; Miyamoto et al., 2020).

A Norwegian study found no significant sex differences in academic initiative at age 13, while Norwegian boys at age 15 reported significantly lower levels of academic initiative than 15-year-old girls (Danielsen et al., 2011). Further, the means in academic initiative were significantly lower for 15-year-olds than 13-year-olds in both sexes (Danielsen et al., 2011).

Concerning SES, one study found that intrinsic motivation was consistently higher over time for youths with a high SES compared to others with lower SES (Miyamoto et al., 2020). Moreover, youths from lower-income families were more likely to be members of less favourable trajectory groups of school engagement, such as those with more rapid declines or unstable trajectory developments (Li & Lerner, 2011).

Many Norwegian immigrant students appear to value education more than non-immigrant students and work harder in school than majority children to earn better grades, which Lauglo (1999), Johnsen (2021), and Johnsen et al. (2015) refer to as the "harder drive". European research literature has found a similar pattern of high aspirations among other immigrant groups (Salikutluk, 2016). We interpret the "harder drive" as an expression of school behaviours that the students experience as personally important, goal-directed, and self-determined. Such engaged behaviours are consistent with academic initiative.

### *Academic Self-efficacy*

Research shows differences in academic self-efficacy (i.e., capability beliefs for specific academic tasks such as schoolwork: Bandura, 1977, 1997) across genders, SES, and immigrant background. Boys tend to experience a higher level of academic self-efficacy compared to girls in adolescence (Huang, 2013). Moreover, one longitudinal study showed that boys experience higher academic self-efficacy than girls across time (D'Lima et al., 2014). SES is related to academic self-efficacy, wherein individuals with a higher SES report higher academic self-efficacy compared to individuals with a lower SES (Demanet & Van Houtte, 2019). According to international studies, immigrant students often show similar or even higher levels of school satisfaction and academic self-concept than non-immigrant students (Schotte et al., 2022). School satisfaction is an affective variable which includes students' enjoyment, well-being, and their subjective, cognitive appraisals of the overall positivity of school experiences (Huebner, 1994; Huebner & Gilman, 2006). Further, academic self-concepts may reflect how well the students succeed and experience mastery in the academic domain.

The results of Johnsen et al. (2015) indicated that having an immigrant background in Norway was significantly associated with higher self-perceived school competence in low-income groups. Self-perceived school competence is important for students' adjustment to schooling and may be indicative of good mastery experiences (Danielsen et al., 2009). Students' judgements of their school competence are believed to influence their academic self-efficacy because they represent students' cognitive self-evaluative judgements about their present abilities to accomplish tasks (Harter, 1982). Self-efficacy beliefs are influenced by a self-appraisal of capabilities (Bandura, 1986). Because self-perceived school competence is likely to indicate students' self-perceptions of their capacity to be successful in the academic domain, it may play an

important role in shaping achievement outcomes (Akey, 2006). Johnsen et al. (2015) did not find any significant difference in self-perceived school competence between students born in Norway or "western countries" on the one hand and students born in "non-western" countries. Other findings show that Norwegian youth with immigrant backgrounds from "non-western" countries are characterised by having high educational aspirations (Johnsen et al., 2015).

### *Academic Performance*

Generally, it seems that girls, youth with high SES, and youth belonging to non-immigrant groups achieve better grades than other youth. Although the literature is not entirely consensual, several studies indicate that girls perform above boys academically in a large proportion of subjects across several educational levels (Reilly et al., 2019; Voyer & Voyer, 2014). One meta-analysis indicated that youth with a high SES achieve better grades than others with a low SES (Sirin, 2005). According to international studies, immigrant students reach lower levels of academic achievement than their non-immigrant peers on average (Schotte et al. 2022). The findings of a review by Johnsen et al. (2017, p. 382) revealed that several groups that have immigrant backgrounds in the Nordic countries outperform non-immigrant children with similar or higher SES background, and a significant predictor of this difference was hard work.

## This Study

The literature implies that there are differences in academic self-efficacy, initiative, and performance across sex, SES, and immigrant background. First, although girls seem to be more engaged and intrinsically motivated and perform above boys academically, they tend to have a weaker sense of academic self-efficacy than boys. Second, youth with a high SES seem to experience more favourable academic outcomes than other youth with a low SES; however, the findings are mixed regarding immigrant youth and academic achievement. Immigrant youth in Norway seem to value education and is likely to show high levels of academic initiative and academic self-efficacy. Although cross-sectional group differences in academic outcomes have been identified, there is less empirical knowledge of longitudinal group differences, particularly in the Norwegian context. Understanding developmental trajectories will provide

more specific information on how to facilitate positive academic development for all youth considering sex, SES, and immigrant background.

Against this backdrop, the main aim of this chapter is to study to what extent sex, SES, and immigrant background are related to the developmental trajectories of academic initiative, academic self-efficacy, and GPA during the Norwegian upper secondary school education.

## Methods

### Procedure

This study uses data from the COMPLETE study, a randomised controlled trial aimed to improve the psychosocial environment in upper secondary schools and decrease dropout rates (Larsen et al., 2018). COMPLETE was approved by the Norwegian Centre for Research Data (NSD), and all participants received oral and written information about the study before participating. All students were above age 16 on baseline in this study and actively consented to be part of the study prior to participation. The first data collection in this study took place in March 2017, followed by two measurement occasions with one-year intervals. In other words, T2 and T3 were in March 2018 and 2019, respectively. Sixteen schools were included in the study, of which 11 schools received one of two intervention conditions. Six schools received a single-tier intervention with a universal program (Dream School Programme), and five schools received a multi-tier intervention consisting of the universal (Dream School Programme) and a targeted program (Mental Health Support Team). Five schools were composed the control group (see Larsen et al., 2018 for details on intervention conditions and study design).

### Participants

This study uses data from 1508 general education students from l16 schools. Concerning demographics, 39.3% (n = 592) were boys and 60.7% (n = 916) were girls. The mean age at T1 was 17.00 (*SD* = .91). A total of 70.6% (n = 1065) of the students were Norwegian born with parents of either Norwegian or foreign descent, 5.5% (n = 83) were born outside of Norway with parents of foreign descent, and 23.9% (n = 360) did not reply to the question. A median

split of perceived family wealth indicated that 52.9% (n = 797) thought their family were in a high SES, 22.5% (n = 340) thought their family was in a low SES, and 24.6% (n = 371) did not answer the question.

## Measurements

### *Academic Initiative*

Academic initiative was measured by a brief, Norwegian version of the Youth Experience Survey (YES 2.0) (Hansen & Larson, 2005; Hansen et al., 2003). The adapted scale included five indicators that address important qualities of initiative (Danielsen et al., 2010). The items were modified to refer specifically to the school context. The indicators were "I find out how I can reach my goals in schoolwork", "I concentrate when I am doing schoolwork", "I challenge myself when I am doing schoolwork", "I plan how I shall do homework", and "I set goals for myself when I am doing schoolwork". The participants rated the statements on a scale from 1 = "never" to 4 = "almost always". Previous studies that have employed this brief, adapted Norwegian version of the scale have reported Cronbach's alpha above .84 in adolescent samples (Danielsen et al., 2011; Danielsen et al., 2010). The scale showed acceptable reliability at all time points (T1: $\omega$ = .87, T2: $\omega$ = .88, and T3: $\omega$ = .90).

### *Academic Self-efficacy*

The students' perceived capability to master and perform schoolwork was measured using the academic self-efficacy scale from Patterns of Adaptive Learning Scales (PALS; Midgley et al., 2000). Since the Norwegian translation of "classwork" is more like the notion of doing work related to school in general, the wording of classwork is replaced with schoolwork (i.e., lessons done in class or work assigned at school or to do at home). The instrument consists of five items that were assessed on a Likert scale ranging from 1 "Not at all confident" to 5 "Very confident". The indicators were: "I'm certain I can figure out how to do the most difficult schoolwork", "I can do almost all the schoolwork if I don't give up", "even if the schoolwork is hard, I can learn it", and "I can do even the hardest schoolwork if I try". Previous research indicates a reliable Cronbach's alpha above .78 for the academic self-efficacy subscale of PALS (Midgley et al., 2000). The scale achieved acceptable omega reliability values on all measurement occasions (T1: $\omega$ = .91, T2: $\omega$ = .92, and T3: $\omega$ = .89).

### *Grade Point Average*

The students' GPA measure is calculated as a mean score based on students' final grades for each subject of each year obtained from school-level registry data. All general education program students in upper secondary schools in Norway take mandatory, multidisciplinary subjects such as Norwegian, English, geography, physical education, mathematics, natural science, and social studies. General education students within different fields of study also take subjects related to their specialisations (e.g., "media and communication" or "mathematics and natural sciences"). The grades obtained from the registry data are based on both mandatory and specialisation-specific subjects. In Norway, grades range from 1, which is a failing grade, to the highest grade of 6.

### *Sex*

Information on the participants' sex was obtained from registry data and was coded as 0 (boys) and 1 (girls).

### *Immigrant Background*

The students were asked where they were born and were coded as 0 (non-immigrant, Norwegian-born) and 1 (immigrant, not Norwegian-born, i.e., all participants born outside Norway).

### *SES*

Participants were asked one question regarding their family's wealth, ranging from 1 (not at all well off) to 5 (very well off) (Iversen & Holsen, 2008). We created a dummy variable based on a median split, wherein SES was coded as 0 and high SES was coded as 1.

### *Control Variables*

We created two dummy variables based on the two intervention conditions to reduce the potential for estimation bias. Participants either received an intervention (coded as 1) or not (coded as 0).

## Statistical Analyses

Preliminarily, we performed confirmatory factor analysis and longitudinal measurement invariance tests on the latent constructs of academic initiative

and self-efficacy (see Appendix A for details). Next, we examined sex, immigrant background, and SES differences in academic initiative, academic self-efficacy, and GPA. The following criteria indicated an acceptable model fit: CFI > .90, RMSEA < .08, SRMR < .08 (Byrne, 2012; Hu & Bentler, 1999). When comparing nested and comparison model fit, the following criteria were used: ΔCFI < .010, ΔRMSEA < .015, and ΔSRMR < .030 (Chen, 2007). During structural equation modelling (SEM), M*plus* version 8 (Muthén & Muthén, 1998–2017) and maximum likelihood (ML) estimation were used.

Constraints from the highest level of measurement invariance achieved were kept in place during the latent growth curve analyses. Next, we specified an intercept and a slope for academic self-efficacy, academic initiative, and GPA. The intercept factor loadings were constrained to 1.0, and the slope factor loadings were constrained to 0.0, 1.0, and 2.0, representing the measurement occasion time intervals of one year. The intercepts and slope factors were allowed to covary freely in the parallel growth curve model. Regression coefficients from the control variables (i.e., intervention dummy variables) to the intercepts and slopes of academic self-efficacy, academic initiative, and GPA were added. Last, sex, SES, and immigrant background were included as predictors of the intercepts and slopes of academic initiative, academic self-efficacy, and GPA.

## Results

### Group Differences

Group differences in the study variables are presented in Table 1. We found that girls reported higher academic initiative and GPA at all time points compared to boys and the effect sizes were small. Boys experienced higher academic self-efficacy than girls across time, with small effect sizes on T1 and T2 and negligible effect size on T3. Regarding SES, students with high SES had higher mean levels in all the study variables than students with a low SES, except for academic initiative at T2 and T3. In academic self-efficacy and GPA, the effect sizes were small except for a negligible effect size in GPA at T1. Concerning immigrant background, the results indicated that non-immigrant Norwegian students experienced a lower level of academic initiative and a greater GPA at T1 than students with an immigrant background.

**Table 9.1** *Latent Means, Standard Deviations, and Cohen's d for Sex, Socio-economic Status, and Immigrant Background.*

| | Sex | | | | | Socio-economic status | | | Immigrant Background | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Girls *M* (*SD*) | Boys *M* (*SD*) | *p* | *d* | Low SEP M (SD) | High SEP M (SD) | *p* | *d* | Norwegian-born *M* (*SD*) | Born outside of Norway *M* (*SD*) | *p* | *d* |
| Academic initiative T1 | 2.64 (.69) | 2.48 (.67) | < .001 | –.226 | 2.50 (.69) | 2.61 (.68) | < .01 | –.170 | 2.56 (.69) | 2.79 (.65) | < .01 | –.330 |
| Academic initiative T2 | 2.66 (.71) | 2.44 (.66) | < .001 | –.326 | 2.55 (.72) | 2.60 (.68) | > .05 | –.069 | 2.57 (.70) | 2.73 (.65) | > .05 | –.237 |
| Academic initiative T3 | 2.71 (.75) | 2.55 (.69) | < .001 | –.221 | 2.62 (.72) | 2.66 (.72) | > .05 | –.058 | 2.65 (.72) | 2.78 (.77) | > .05 | –.180 |
| Academic self-efficacy T1 | 3.92 (.80) | 4.12 (.75) | < .001 | .259 | 3.80 (.85) | 4.08 (.74) | < .001 | –.366 | 4.00 (.78) | 4.05 (.71) | > .05 | –.058 |
| Academic self-efficacy T2 | 3.88 (.85) | 4.10 (.79) | < .001 | .258 | 3.85 (.88) | 4.03 (.80) | < .01 | –.218 | 3.97 (.83) | 4.10 (.86) | > .05 | –.158 |
| Academic self-efficacy T3 | 3.65 (.98) | 3.79 (1.04) | < .05 | .140 | 3.56 (1.00) | 3.77 (1.00) | <. 05 | –.206 | 3.71 (1.00) | 3.83 (1.01) | > .05 | –.120 |
| Grade point average T1 | 4.33 (.78) | 4.13 (.78) | < .001 | –.256 | 4.17 (.78) | 4.28 (.78) | < .05 | –.142 | 4.28 (.76) | 3.94 (.86) | < .001 | .437 |
| Grade point average T2 | 4.39 (.73) | 4.13 (.78) | < .001 | –.353 | 4.16 (.78) | 4.35 (.74) | < .001 | –.250 | 4.30 (.75) | 4.18 (.82) | > .05 | .165 |
| Grade point average T3 | 4.41 (.80) | 4.18 (.85) | < .001 | –.284 | 4.21 (.85) | 4.43 (.75) | < .001 | –.273 | 4.38 (.76) | 4.16 (1.03) | > .05 | .284 |

*Note*. *d* = Cohen's *d*. Academic initiative range = 1–4, academic self-efficacy range = 1–5, GPA range = 1–6.

## The Impact of Sex, Socioeconomic Status, and Immigrant Background on the Trajectories of Academic Initiative, Academic Self-efficacy, and GPA

The unconditional latent growth curve estimates of academic initiative, academic self-efficacy, and GPA are presented in Appendix B for space constraints. The intercept and slope variances of academic self-efficacy, academic initiative, and GPA were significant, indicating that students significantly varied in their initial status and growth in these constructs. Academic self-efficacy significantly decreased (-0.090, $p < .001$) while academic initiative and GPA remained stable throughout upper secondary school. The significant and negative covariance between the intercept and slope of academic self-efficacy and academic initiative indicates that students who had higher initial statuses in the constructs experienced, respectively, a more rapid decline or slower increase in the constructs than others.

The adjusted parallel process latent growth curve model with sex, SES, and immigrant background as predictor variables on the intercepts and slopes of academic initiative, academic self-efficacy, and GPA produced acceptable model fit: $\chi^2$ =1804.272, $df$ = 631, $p < .001$, RMSEA = .040, 90% CI [.038, .042], CFI = .942, SRMR = .048. See Table 2 for details. This model included strict and partial strict longitudinal measurement invariance constraints in the academic initiative and academic self-efficacy scales, respectively.

The results show that the regression coefficients from sex to the intercepts of academic initiative, academic self-efficacy, GPA, and the slope of GPA were statistically significant. Specifically, girls had significantly higher academic initiative and GPA and lower academic self-efficacy at the beginning of upper secondary school. Girls experienced a significantly greater improvement in their GPA than boys throughout upper secondary school.

The effects of SES on the intercepts of academic initiative, academic self-efficacy, and GPA and the slope of GPA were statistically significant. Students with a high SES had greater academic initiative, academic self-efficacy, and GPA than students with a low SES in the first grade of upper secondary school. Moreover, youth with a high SES had a significantly greater improvement in their GPA during upper secondary school compared to students with a low SES.

Lastly, the immigrant background regression coefficients to the intercepts of academic initiative and GPA and the slope of GPA were statistically significant. Students with an immigrant background began upper secondary school

with a higher academic initiative than Norway-born students. Moreover, although youth with an immigrant background entered upper secondary school with a lower GPA than non-immigrant adolescents, they experienced a greater improvement in their GPA throughout upper secondary school compared to Norwegian-born students. Finally, and of note, results show intervention condition included in the model as a control variable and this did not have significant effects on any of the estimates.

## Discussion

The main aim of this study was to examine how sex, SES, and immigrant background relate to the developmental trajectories of academic initiative, academic self-efficacy, and GPA throughout upper secondary education in Norway. The results from latent growth curve modelling indicated group differences related to changes over time in GPA, but not in academic initiative or self-efficacy. Girls, students with higher SES, and immigrant students reported greater improvement in GPA than boys, students with a lower SES and non-immigrant students, respectively. The authors are not aware of any other latent growth curve studies that reveal amplified differences in grades during upper secondary school associated with sex and SES in Norway, nor findings of reduced differences in grades over time in favour of the immigrant group. The authors discuss these main results considering other studies, aims of equity, and school, in particular, as a socially equalising actor.

To understand and discuss the findings from the unconditional trajectory analyses, we present a brief overview of the general developmental trajectories found across all participants. However, we refer to Kristensen et al. (2023) for a more comprehensive and detailed discussion of the trajectories.

**Table 9.2** *The Effects of Sex, Socio-economic Status, and Immigrant Background on the Intercepts and Slopes of Academic Initiative, Academic Self-efficacy, and Grade Point Average.*

| Outcome variable | Predictor variable | | | | | | Control variable | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Sex | | Socio-economic status | | Immigrant background | | Intervention condition 1 | | Intervention condition 2 | |
| | B (S.E) | $\beta$ (S.E) | B (S.E) | $\beta$ (S.E) | B (S.E) | $\beta$ (S.E) | B (S.E) | $\beta$ (S.E) | B (S.E) | $\beta$ (S.E) |
| Academic initiative intercept | .141 (.04) *** | .126 (.04) *** | .122 (.04) ** | .104 (.04) ** | .213 (.04) ** | .102 (.04) ** | .103 (.05) | .094 (.05) | .084 (.05) | .075 (.05) |
| Academic initiative slope | .027 (.03) | .077 (.07) | –.020 (.03) | –.051 (.07) | –.060 (.05) | –.089 (.08) | -.003 (.03) | -.009 (.09) | -.015 (.03) | -.041 (.09) |
| Academic self-efficacy intercept | –.199 (.05) *** | –.144 (.03) *** | .260 (.05) *** | .178 (.03) *** | .042 (.09) | .016 (.03) | -.004 (.06) | -.003 (.05) | .022 (.06) | .016 (.05) |
| Academic self-efficacy slope | –.002 (.03) | –.003 (.06) | –.057 (.035) | –.103 (.07) | .024 (.67) | .025 (.07) | .045 (.04) | .087 (.09) | -.057 (.04) | -.108 (.09) |
| Grade point average intercept | .208 (.05) *** | .146 (.03) *** | .131 (.05) ** | .087 (.03) ** | –.330 (.09) *** | –.124 (.03) *** | -.068 (.06) | -.048 (.04) | -.031 (.06) | -.021 (.04) |
| Grade point average slope | .054 (.02) ** | .144 (.06) * | .062 (.02) ** | .155 (.06) ** | .092 (.04) * | .131 (.06) * | -.001 (.03) | -.002 (.07) | -.026 (.03) | -.069 (.07) |

*Note*. B = unstandardised regression coefficient, $\beta$ = standardised regression coefficient, S.E = standard error. Sex coded as 0 = boys, 1 = girls. SES coded as 0 = low, 1 = high. Immigrant background coded as 0 = non-immigrant, 1 = immigrant. *** $p < .001$, ** $p < .01$, * $p < .05$. Estimates are adjusted for intervention condition.

## General Developments and Group Differences in Academic Initiative, Academic Self-efficacy, and GPA

As reported and discussed in more detail by Kristensen et al. (2023), the general trajectories found across all students indicate that academic self-efficacy decreased over time, whereas academic initiative and GPA remained stable. It is possible that fewer mastery experiences, anxiety, and perhaps less social support in upper secondary school relate to decreased academic self-efficacy over time. Pressure to perform, more competition, and extrinsic motivation are likely to increase during secondary school, because good grades become more decisive for students' future opportunities. On the other hand, students in upper secondary school have to some degree chosen their own study program, a choice that is indicative of students' autonomy and academic initiative. The stable academic initiative may reflect that the students experience self-determined and autonomous self-regulated learning, indicating intrinsically motivated, identified or personally important motivation (Deci & Ryan, 2000; Reeve et al, 2008). Academic self-efficacy and academic initiative are two different concepts. For example, academic self-efficacy taps into self-beliefs, which academic initiative does not. Academic initiative can be regarded a simpler and more narrow measure of autonomous, goal directed learning behaviour in the classroom.

### *Sex Differences in Academic Outcomes*

Overall, the findings indicated sex differences in all three dependent variables at all time points. While girls consistently reported higher academic initiative and higher GPA, boys experienced higher academic self-efficacy. Our findings regarding sex differences in academic initiative are consistent with the findings of Danielsen et.al. (2011), who found sex differences in academic initiative for Norwegian 15-year-olds (although not for 13-year-olds). The sex differences in GPA are consistent with much previous work. On average, girls perform better than boys (Reilly et al., 2019; Voyer & Voyer, 2014). This is the case in most participating countries of the PISA surveys, for example, in reading results (Frønes, Rasmusson, et al., 2020). Regarding academic self-efficacy, a number of previous studies show sex differences in favour of boys (D'Lima et al., 2014; Huang, 2013).

### *Socioeconomic Differences in Academic Outcomes*

Students with a high SES had consistently higher mean levels in academic initiative, academic self-efficacy, and GPA than students with a low SES. The findings support other work that education reproduces socioeconomic inequalities in academic performance as reported above. First, youth with a high SES tend to report higher intrinsic motivation (Miyamoto et al., 2020), which is a central component of initiative. High SES also positively relates to high academic self-efficacy (Demanet & Van Houtte, 2019), and youth with a high SES achieve better grades than their peers with a low SES (Sirin, 2005).

### *Immigrant Background Differences in Academic Outcomes*

Students with an immigrant background reported higher levels of academic initiative and academic self-efficacy than non-immigrant students; however, they reported lower GPA at all time points compared to non-immigrant students. Their higher levels of academic initiative and academic self-efficacy were not unexpected because, as elaborated in the introduction section of the chapter, an immigrant background in Norway and other European countries is sometimes associated with self-perceived school competence, academic aspirations, and academic self-concept, as well as the "harder drive" (Lauglo, 1999; Johnsen et al., 2015; Johnsen et al., 2017; Salikutluk, 2016; Schotte et al., 2022). Also, the lower GPA in the immigrant group of our study, on average, is in line with international studies (Schotte et al. 2022; Salikutluk, 2016).

### *Sex and SES in Relation to Improvement in GPA*

Our main findings showed that differences in GPA based on sex and SES were amplified during upper secondary school. Thus, the findings indicate that sex and socioeconomic inequalities in academic achievements are not only reproduced in the Norwegian educational system but are more strongly expressed over time, i.e., during upper secondary school. From an equity perspective, the results are very disturbing and raise several questions, for example, regarding the learning climate in upper secondary school. How are vulnerable boys and students with low SES followed up in this school system? Urke et al. (2023) found a negative relationship over time between students' SES and their perceptions of a caring school climate, suggesting that it requires extra effort from teachers and school staff to ensure low-income students' positive social and academic development. Our findings clearly

indicate that the aims of equity, results equality, and inclusion have not yet been met (Carlsen, 2009; Frønes, Pettersen, et al., 2020; Hernes, 1974; Ministry of Education, 2006; UNESCO, 1994). Inclusion and adapted education are statutory in Norway. Thus, there is a gap between intentions of social equalisation through education at the policy level and our empirical findings.

A possible explanation for the findings on socioeconomic inequality in GPA can be that the welfare state does not work as a protective factor regarding poor majority children in Norway (Johnsen, 2021). There are reasons to be concerned about poor majority children as a marginalised group in the welfare state. According to Eklund Karlsson et al. (2022), one of the explanations for the ineffectiveness of the Nordic welfare states in reducing child social inequalities and poverty is insufficient efforts in implementing proportional universalism, i.e., balancing universal measures with targeted efforts to level out inequalities, particularly at local levels. It could be the case that this impacts low-income students' navigation through the educational system. If the school system (including locally) – which is part of the welfare state system – is not sufficiently concerned with achieving what Hernes (1974) described as results equality, the socioeconomic differences in educational outcomes could still increase, as seen from our study results.

Further, upper secondary school does not have the same historical traditions regarding education for all, inclusion, and equity, as the mandatory grades 1–10 of primary and lower secondary school. Considering increasing social inequalities, also in Norway, and most adolescents enrolling in upper secondary school, coupled with our findings of academic inequalities based on SES, it is pertinent that the upper secondary school system, as a key actor of the welfare state, focuses attention on this challenge.

### *Immigrant Background in Relation to Improvement in GPA*

Our results showed that having an immigrant background was related to a greater GPA improvement during upper secondary school than being born in Norway. Few studies have examined trajectories in GPA based on immigrant background, but several studies have looked at differences in mean grade levels, finding mixed/contradicting results (Schotte et al., 2022; Salikutluk, 2016).

The significant improvement in GPA among immigrant students compared to non-immigrant students in our study must be interpreted in light of the results related to the other studied academic constructs. Immigrant

students had significantly higher initial levels of academic initiative compared to non-immigrant peers. This and the persistent levels of academic initiative could contribute to "taking out" the potential to improve grades across upper secondary school. Further, as mentioned earlier, research shows that some immigrant groups tend to place higher value on academic achievements, the so-called "aspirational cultures" (Strand, 2014), i.e., high aspirations among some immigrant groups (Salikutluk, 2016), which could contribute to immigrant students' persistence in their schoolwork and in turn comparatively better academic improvements as found in this study. In addition, the active and supportive welfare state in Norway may modify social variation in living conditions and influence immigrant children's school achievement (Johnsen et al., 2015, p. 286). Inclusive education and language education for immigrant students constitute important dimensions of the Norwegian welfare state.

In line with evidence from other countries, immigrants in Norway constitute a diverse group of people. The largest groups are immigrants coming from Poland, Lithuania, Sweden, Syria, and Somalia (Steinkellner & Guldbrandsen, 2021). Newly arrived immigrant students often need Norwegian language education. They are either integrated into mainstream classes during their first two years of schooling, or they attend introductory classes for one or two years inside or outside their nearby school before they join mainstream classes with other students of the same age (Rambøll Management Consulting, 2016; Fandrem et al., 2021; Arora et al., 2022). As their language skills improve, the students' ability to understand and perform in school is also likely to improve. The goal is that students reach a level of Norwegian that enables them to use or develop their competence in education, work, and social life in general (Norwegian Government, 2014).

The topic we are addressing in this chapter entails much complexity and could be approached in many ways. For example, previous research has indicated the role of intersectionality in academic achievements, i.e., that belonging to several vulnerable groups is particularly negative for academic achievements (Hsieh et al., 2021). Whereas low SES is quite consistently found to be a risk factor for most school-related aspects, immigrant background and sex are perhaps less straightforward. While oftentimes certain immigrant backgrounds are considered to be a risk factor, research also shows that immigrants in low-income groups do better in school compared to non-immigrants in the same low-income or even higher-income group (Johnsen et al., 2017; Strand,

2014). If the educational system is striving for results equality, attention also needs to be focused on specificities in and between the studied groups.

### Limitations

The measure of immigrant background is a broad/rough measure that does not differentiate between countries or more specified geographic or culturally similar regions. Hence, aspects of culture or language that could be meaningfully related to the outcomes of interest are likely not captured. Further, it does not take into account the length of stay in Norway, which likely could be of importance for the academic outcomes under study. The use of a rather simple measure of immigrant background is a common feature of much of the existing research examining aspects of immigrants' well-being and development (Abebe et al., 2014). Future research should aim for more nuance in measures of immigrant background to more readily be able to tease out explanatory aspects of differences in academic outcomes. Further, the measure of SES is based on a single question, which could pose limitations on validity. However, the question is widely used to capture relative wealth among adolescents (Elgar et al., 2016), and has been found to correlate with other subjective measures of wealth (Quon & McGrath, 2014). Due to the skewed distribution of the data on this variable in our study, it was decided to transform the original question into a median split variable. Although we recognize that this is not an optimal way of measuring relative wealth, we considered it the best solution given the data.

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# Appendix A

## Longitudinal Measurement Invariance of Academic Self-efficacy and Academic Initiative

| | $\chi^2$ | df | RMSEA [90%CI] | CFI | SRMR | ΔRMSEA | ΔCFI | ΔSRMR |
|---|---|---|---|---|---|---|---|---|
| **Academic self-efficacy** | | | | | | | | |
| Configural | 782.718 | 72 | .083 [.078, .088] | .934 | .039 | | | |
| Metric[a] | 810.909 | 80 | .080 [.075, .085] | .932 | .062 | .003 | .007 | .023 |
| Scalar[ab] | 866.409 | 88 | .079 [.074, .084] | .927 | .071 | .001 | .005 | .009 |
| Strict[abc] | 938.882 | 94 | .079 [.075, .084] | .921 | .082 | .000 | .006 | .011 |
| **Academic initiative** | | | | | | | | |
| Configural | 253.779 | 72 | .042 [.037, .048] | .979 | .036 | | | |
| Metric | 271.344 | 82 | .040 [.035, .046] | .978 | .047 | .002 | .001 | .011 |
| Scalar | 342.576 | 92 | .044 [.039, .049] | .971 | .051 | .004 | .007 | .004 |
| Strict | 384.656 | 102 | .044 [.039, .049] | .968 | .050 | .000 | .003 | .001 |

*Note*. a = factor loading constraints on item 3 and item 5 on T3 removed for model fit. b = intercept constraints on item 3 and item 5 on T3 removed for model fit. c = residual error constraints on items 2, 3, 4, and 5 on T3 removed for model fit.

# Appendix B

*Estimates from the Unconditional Latent Growth Curves of Academic Self-efficacy, Academic Initiative, and Grade Point Average*

| | Unstandardised | | Standardised | |
|---|---|---|---|---|
| | **Estimate** | **SE** | **Estimate** | **SE** |
| **Academic self-efficacy** | | | | |
| *Latent means (μ)* | | | | |
| Intercept | 3.994*** | 0.023 | 5.545*** | 0.242 |
| Slope | –0.090*** | 0.016 | –0.286*** | 0.060 |
| *Variance ($\sigma^2$)* | | | | |
| Intercept | 0.519*** | 0.045 | 1.000 | 0.000 |
| Slope | 0.099*** | 0.023 | 1.000 | 0.000 |
| *Covariance (σ)* | | | | |
| Intercept – Slope | –0.128*** | 0.028 | –0.566*** | 0.061 |
| **Academic initiative** | | | | |
| *Latent means (μ)* | | | | |
| Intercept | 2.564*** | 0.019 | 4.675*** | 0.237 |
| Slope | 0.023 | 0.012 | 0.122 | 0.068 |
| *Variance ($\sigma^2$)* | | | | |
| Intercept | 0.301*** | 0.030 | 1.000 | 0.000 |
| Slope | 0.035* | 0.015 | 1.000 | 0.000 |
| *Covariance (σ)* | | | | |
| Intercept – Slope | –0.041** | 0.018 | –0.399*** | 0.097 |
| **Grade point average** | | | | |
| *Latent means (μ)* | | | | |
| Intercept | 4.223*** | 0.021 | 5.921*** | 0.170 |
| Slope | 0.010 | 0.010 | 0.048 | 0.048 |
| *Variance ($\sigma^2$)* | | | | |
| Intercept | 0.509*** | 0.029 | 1.000 | 0.000 |
| Slope | 0.041*** | 0.012 | 1.000 | 0.000 |
| *Covariance (σ)* | | | | |
| Intercept – Slope | –0.003 | 0.014 | –0.023 | 0.096 |

*Note.* *** $p < .001$, ** $p < .01$. All models achieved CFI > .90, RMSEA < .08, and SRMR < .06.

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Commentary

# The Global Study of Positive Youth Development: Implications for Time, Urgency, and Social Justice

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Conducting research about and/or with adolescents opens up the chance to consider time. Some facets of time that can come up are:

1. Adolescence as a developmental period
2. Adolescence as a scientific field with its own history and future
3. How historical events and conditions are important to shaping the development of adolescents and societies alike
4. How experiences and views can be shared and/or differ across generations

Historically, research about adolescence (points A and B above) has leaned towards an overemphasis on documenting what is dysfunctional, maladaptive, and/or dangerous about adolescents, i.e., adolescent storm and stress (Hollenstein & Lougheed, 2013). The tendency towards documenting storm and stress persists to some degree in science and society, even though there are many empirical examples that indicate that a severe, universal, and inevitable storm and stress during adolescence is not typical for many youth (e.g., Dimitrova & Wiium, 2021; Göllner et al., 2017; Hollenstein & Lougheed, 2013). As noted by Russell (2021) in an address to the Society for Research on Adolescence, "… science has the potential to challenge or to reinforce social norms and cultural frameworks for understanding adolescence" (p. 9). Further reflecting on what science can offer, Russell (2021, p. 7) stated, "Sometimes we conduct science for the sake of knowledge itself. But more important in this space of what we need to know are the everyday needs of adolescents as understood from their perspective…or the real-life practice and policy questions that research could address, but that remain unexplored."

Positive youth development (or PYD) is a field of scientific inquiry that 1) is relevant to children, adolescents, and emerging adults, 2) encompasses the development of interventions that have promotive aims, and 3) involves the creation and testing of theories that explain how strengths and resources (what is promotive and beneficial) develop over time within a variety of persons and contexts, and seeks to explain how strengths and problems relate to one another in a diversity of youth and contexts (Dimitrova & Wiium, 2021). The use of a PYD perspective provides a valuable alternative to a storm-and-stress view of adolescence and opens up possibilities for a holistic and simply more realistic view of young people and their lives. Thus, PYD is a fitting perspective given that it has the capacity to encompass what is needed in order to

make the study of adolescence truly global and to ensure that what we learn is relevant and helpful to the world's youth.

## The Importance of Listening to Youth

The digital revolution is playing a pivotal role in amplifying young people's voices on a global scale (Keeley & Little, 2017). Indeed, adolescents and emerging adults are the age groups that are most digitally connected (Keeley & Little, 2017). Adolescents today are able to share their experiences and concerns with a global audience, offering caregivers, researchers and policy makers greater insight into their lives in real time. Moreover, through informal channels such as social media, digital news, online educational resources, and online communities, young people are increasingly aware of what is happening in the world and have access to an unprecedented amount of information with potential to enhance their ability to independently explore the issues affecting their well-being (Keeley & Little, 2017). Thus, it is not surprising that digital tools are increasingly being used by young people to gain knowledge about issues of importance to them as well as to advocate for change locally and globally. To our knowledge, there are no robust comparative studies that concern the size and scope of digital activism among youth globally. However, there is considerable evidence from a number of smaller-scale studies of the different ways in which young people seek out information, resources and opportunities for support, as well as engage in civic activities online (e.g., Cho et al., 2020; Percy-Smith et al., 2023; Stoilova et al., 2021). Listening to the real-world experiences of young people, understanding the rapidly changing contexts in which they live, and engaging them in the research process is central to the development of interventions that are responsive to their needs, culturally sensitive, effective and inclusive.

Take as a case in point, *U-Report*, which is an open-source digital tool that supports young people to navigate the digital landscape and contribute directly to policy change, provides an example of a global platform that has succeeded in bridging research with policy and practice through youth engagement (UNICEF, 2021a). Currently operated in 68 countries by UNICEF and local partners, the platform features anonymous participation and real-time analysis of young people's voices, covering a wide range of topics in a variety of innovative ways (e.g., youth views about and information sharing about risk perception during

the COVID-19 pandemic, mental and physical health, gender-based violence, and climate change; UNICEF, 2021a). The U-Report initiative demonstrates how actively involving young people from diverse cultures and backgrounds in the research process, from problem identification to data collection and analysis, can strengthen the relevance, ownership and impact of interventions (UNICEF, 2021a). As noted by Siry (2015, p. 162), "A central part of participatory approaches to research is that children should be recognised as the experts that they are; as they are experts on their own lives."

## This Volume

As a part of an effort to nuance, emphasise and expand what is known about PYD from a global standpoint, this volume makes clear contributions by reflecting the PYD perspective from different theoretical standpoints (e.g., the Five Cs, developmental assets), as well as offering insights into other indicators of thriving that connect the PYD field to other similar spirited theories and evidence bases such as those that concern: life skills and academic self-efficacy. Some contributions to this volume advance our understanding by making an empirical comparison between different theoretical perspectives (see Manrique-Millones and colleagues' study from Peru); such empirical investigations are much needed to advance the field. Viewed as a whole, the contributions to this volume are varied in terms of the research methods employed including the use of quantitative and/or qualitative methods (see the chapter by Djuarsa and colleagues for a mixed-method study about Indonesian emerging adults).

The volume also presents contributions that vary in the research designs used, including several cross-sectional studies and an experimental study. Other contributions are unique in that they seek to focus particularly on work that will improve PYD measurement cross-nationally and culturally (i.e., a protocol for a systematic review on PYD scales, see the contribution by Asgardabad and colleagues), as well as an innovative curriculum analysis from a life skills standpoint (see the contribution by Yadegarzadeh and colleagues about the curriculum of Iranian vocational high school students). Further, some contributions examine associations between strengths and problems (e.g., the chapter by Stabbetorp and colleagues from Croatia). This variety in subject matter and approaches offers the reader a deeper appreciation of

the many ways in which strengths, resources, and adaptation are reflected in the everyday lives of young people. The empirical contributions in this volume represent the views and life experiences of adolescents and emerging adults living in Croatia, Indonesia, Iran, Nigeria, Norway, Peru, and Spain. In some cases, the researchers involved in carrying out this work belong to multinational research teams, with collaborators from the nations mentioned above as well as Turkey and the United States.

All contributions to this volume emanated from the 1st Conference on Positive Youth Development in a Cross-national Perspective that took place virtually in 2022. PYD is a necessary field of inquiry as it encompasses youth in a holistic light (as noted), attends to their everyday life experiences (for an example see contributions by Vrdoljak and colleagues from Croatia on the 5Cs and intersections with parenting and school climate, as well as Olurin and colleagues' contribution about Nigerian youth in different social care contexts), and is well suited to support the present-day generation of youth as they come of age and become the stewards of the multiple pressing global issues (e.g., climate change, striving for equality in society, managing how we relate to digital life including artificial intelligence). Thus, the principles and potentials of PYD have attracted a diverse array of scholars and students from across the globe who in many cases pursue PYD in their home countries and internationally on the basis of their own scientific interest (i.e., science for the sake of knowledge generation and in response to their own societal contexts).

It is also important to note that all contributors to this 1st conference and this volume were invited to explore how any aspect of social justice[1] could connect with the research that they presented (at the conference and/or in this

1 Although social justice was not defined for contributors to the conference and this volume, we begin our consideration of social justice as it was defined by Russell (2016, p. 6) "…as the ability to realize potential in society…" which is closely aligned with foundational ideas and aims of the PYD field. Social justice and its intersection with science implies several other steps, such as reflecting on one's own position as a person and scientist, and being reflective about equality and inequality as they enter into the different phases of research and the communication of scientific findings; taking the person-context interaction seriously by working to document the conditions that youth grow up in, measuring instead of assuming and overgeneralizing; and asking and partnering with youth and adult youth stakeholders to understand what is urgent from their perspectives (Russell, 2016).

volume), even if social justice was not directly measured or studied as part of their empirical contribution. Scholars were invited to explore the implications of social justice to their research from their own standpoint, and thus the considerations in this volume, in some cases, reflect a concern for how to understand what fairness and equity would look like in contexts of youth development (see contribution from Gomez-Baya and colleagues from Spain about the intersections between the 5Cs, contribution, and pro-environmental behaviour as well as the discussion about schools as a potential equalizer in the contribution by Danielsen and colleagues from Norway), and how to better reflect equity in scientific methods and questions posed – in the life situation of participants who live in nations and cultures that have their own histories of power, injustice, and equality and ways of understanding the confluence and development of personal and social identity. Thus, in the contributions to this volume, there are several thoughtful considerations of what aspects of social justice would look like from the vantage point of the contributors, as well as consideration of how equality and inequality are expressed in the conditions and concerns of youth living in various nations. The contributors in this volume who took up this invitation to explore aspects of social justice clearly add to the global discussion about social justice in significant ways, and importantly take steps to widen the social justice discourse in the field of adolescence to include, but also to go beyond, any one country and its history.

The research in this volume reflects a growing sense of urgency in the field of adolescence. Russell (2016, p. 4) argued that urgency should be added to our decision making about what makes research high quality, and defined urgency "…as issues or conditions that influence adolescents' lives and well-being which demand attention and action". Returning to the topic of time (i.e., points A through D) and considering points C and D (i.e., history's importance to societies and individuals as well as intergenerational relations) represent starting places to identify what is urgent from the perspective of today's youth globally. As an illustration of these possibilities, one can look to the findings of a large-scale, nationally representative survey of youth (15- to 24-year-olds) and older adults (40+) living in 21 nations (approximately 21 000 people in total) conducted by UNICEF (2021b). The 21 nations involved in the study were: Argentina, Bangladesh, Brazil, Cameroon, Ethiopia, France, Germany, India, Indonesia, Japan, Kenya, Lebanon, Mali, Morocco, Nigeria,

Peru, Spain, Ukraine, the United Kingdom, the United States, and Zimbabwe (UNICEF, 2021b).

The main conclusions from the survey results were that although several multiple global challenges (COVID-19, climate, striving for equality and fairness) were taking place and youth were concerned about their mental health, it was also the case that the youth surveyed were more optimistic about the world and its future, were more likely to see themselves as global citizens, were more positive about what it is like to be a child today relative to the older adults who were surveyed (UNICEF, 2021b). Other key themes for the youth surveyed were the need for the world to take "…significant action on equality for LGBTQ+ people – and decision-makers need to listen to children's voices" (UNICEF, 2021b, p. 7). For example, "…71 percent of young people say it is somewhat or very important to treat LGBTQ+ people equally, versus 57 percent of older people" (UNICEF, 2021b, p. 12). Despite the noted generational differences, there was also indications of generational solidarity, in regard to the need to address climate change and the value of education and hard work as key ingredients of personal thriving (UNICEF, 2021b).

Moving from an expansive multi-national survey with about 21 000 people participating, such as the one conducted by UNICEF (2021b), to the perspective of one individual young person, we can dig deeper to understand why social justice is important for many of today's young people. The quote below from Ruairí Holohan's blog indicates why social justice is an urgent concern in his life and where he places his efforts and goals:

> I chose to speak about homophobia and the lack of education in Irish schools about LGBTIQ+ rights because it is a personal issue… As a young gay man, I still fear getting the bus after a certain hour, especially if I am wearing anything too bright, or that would not be worn by the average 'straight lad'. I still get anxious whenever my boyfriend tries to hold my hand in public, because of homophobia… For World Children's Day, I was asked to re-imagine the world post-pandemic. I described a place where I could walk down the street being the person I am when I'm with my friends, in school, performing, because my sexual orientation may be different from others, but that doesn't make me different from other people. I don't want any young person to be the target of hate or disrespect… (Holohan, 2021, November 13, np).

A consideration of social justice in the study of adolescence, including the PYD field, is pressing for a number of reasons, and most plainly because social justice and equality, on a number of grounds, is important to many young people themselves. They have a personal stake in equality because it affects their lives and futures. Today's generation will be faced with existential challenges that impact humanity as a whole and it is vital for today's adult scientists and scholars to invite themselves to consider how youth can be supported and listened to, as a basis to understand where to direct our scientific attention. This means that as scientists, we continue to embrace our existing scientific principles and training that have already taken us so far and yielded so many advances in understanding the world, but we also work to find intersections that make our research relevant and informed by the voices of youth and those charged with their care and well-being.

The present volume moves the PYD field forward by expanding our understanding of youth strengths and/or contextual resources that support youth and emerging adult development as it is experienced in varied parts of the world. A serious consideration of time, social justice, and urgency can also advance the scientific study of adolescence more generally (Russell, 2016) and PYD in particular. The cross-national collaboration on PYD, which this volume is part of, is well positioned to continue to broaden the discourse on these urgent issues from cross-national and cross-cultural perspectives and provide a forum for scientists' engagement in supporting and furthering our understanding of social justice.

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