

**The Pennsylvania State University**

**The Graduate School**

**SELF-DETERMINATION THEORY, EMPATHY, AND A GLOBAL AUDIENCE:**

**UNDERSTANDING THE PERSONAL MOTIVATIONS OF YOUTH AS**

**RESEARCHERS TO APPLY TO THE PROGRAM**

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by

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## ABSTRACT

The spring of 2020 began with an event that would change lives in every corner of the world. The COVID-19 pandemic created a “public health emergency of international concern (World Health Organization, 2020a), and began to alter the social, economic, and political structures in nations big and small. With such change came many challenges and the need for communities to react to structural shifts being implemented in every country. Traditionally, the world’s youth populations are often the population most impacted and most resilient to such changes. Young people aged 14 – 24 years old represent 16% of the worlds’ population (United Nations, 2020), therefore engaging with them during the global pandemic is essential in determining ways to best support this resilient population.

One such programmatic approach to engaging youth is the UNESCO Youth as Researchers program. The program is an international youth-led research program that engages young people in identifying, researching, and addressing youth-focused community action projects. In April of 2020, a UNESCO team initiated a COVID-19 iteration of the program, where young people from across the globe applied to participate in this youth participatory action research program. Why did young people, experiencing social, economic, and political challenges from the pandemic decide to apply to the program? What motivated them? Understanding this can enable future programmers with information on how to design and implement programs that are of interest to youth change makers, particularly in times of intense stress such as the COVID-19 pandemic.

Through analyzing the relationship of self-determination theory’s basic needs of autonomy, relatedness, and competency to Youth as Researcher applicant’s personal motivation, this study aimed to understand the personal motivation of applicants. Furthermore, considering the intense strain and stress associated with the pandemic, this study also explored the relationship of the prosocial behavior of empathy and applicant’s personal motivations. In the winter of 2020 a Feedback Survey was administered to all 5,581 Youth as Researchers applicants from over 90 different countries, aged 18-35 years, assessing applicants’ personal motivation to join the program. In total, this study had response rate of 27% (1,546), representing 73 countries, and while not generalizable to a global youth audience, responses are indicative of a global youth audience. Through descriptive, bivariate, and multivariate analysis, this study demonstrated the importance of programs providing youth choice, the capacity to feel competent and accomplished at tasks, and relevance of creating supportive environments for the perspective taking and empathetic concern domains of empathy when engaging with prospective program participants. Incorporating these elements into programmatic designs can encourage more young people to be intrinsically motivated to participate in youth-led programs creating youth and community level actionable change.

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## **CHAPTER I: INTRODUCTION**

“Look for the helpers. You will always find people who are helping...because if you look for the helpers, you will know that there is hope.” Fred Rogers (Fred Rogers Center, 2021)

In the spring of 2020, the COVID-19 pandemic reached a magnitude that would come to alter the future of individuals and nations in every region of the globe. Dreams that once flourished were placed on hold, friends became masked strangers, and motivation to participate in life was tested. While this futuristic outlook was bleak, it was disputed by communities looking within to determine how to confront the upcoming challenges. In times of crisis, there is an armory of techniques in society’s toolkit which are adept at handling these moments of change, however small or large they might be. Identifying this toolkit starts by looking inward towards what needs people have and how people can connect with others, and then looking outward with society's most resilient population, its youth.

At the individual level, it is accepted in Eastern and Western cultures that humans have innate needs, notably the needs of autonomy, relatedness, and competency (Nalipay et al., 2020). More specifically these are a sense of free will and decision making agency (autonomy), a sense of belonging towards one another (relatedness), and the capacity for developing and expressing one’s capabilities towards a task (competence) as described in self-determination theory (Ryan & Deci, 2000, 2020; Vansteenkiste et al., 2020). Ryan (1995) suggests that these needs are essential to not only having well-adjusted humans, but for humans to be capable to adjusting to life’s changes. Thus, understanding how a population fares towards autonomy, relatedness, and competence, particularly in moments of crisis enables social supports to be able to respond to and sustain the needs of the people.

These three needs are the backbone of human motivation, they exist on a spectrum within all peoples, thus how much of each is needed for any given circumstance may alter in relation to that circumstance. While the cornerstones of self-determination theory are fairly rigid, human response to challenge as seen through prosocial behaviors is not. One such behavior key to managing and thriving within challenges, that of empathy, calls for individuals to relate and understand one another. In times of stress, empathy is essential to community members who are resilient and supportive towards one another (Bloom & Lambie, 2020). It is through this relation that communities are built, and action can unfold in response to stressors. Human connection leading to action is at the heart of empathetic citizens, and in times of crisis, can be a turning stone in creating positive change for communities (Redmond & Dolan, 2016). Therefore, there is reasoning to think that in times of uncertainty empathy can be an additional pillar to support human motivation to be engaged.

In response to the events of 2020, it is essential to understand where populations stand on their three human needs and how empathy can be incorporated into those needs. It is with this understanding that societies can craft programs to support communities of people that have free will, the skills to react to the impacts of the pandemic and be emotionally supportive towards one another. What better population to focus on, than youth? Young people aged 14 – 24 years old represent 16% of the worlds' population (United Nations, 2020). In every decade and with every major international upheaval this population is renowned for its ability to call out injustice and take-action. In the 1960's in the United States (U.S.), it was the youth led the call to end the Viet Nam war (Blakemore, 2018), in the late 1980's it was student-led protests that demanded free speech and free press in China (History.com Editors, 2020), and in 2010 it was young people that brought social media attention to the movement which would later garner the name the Arab

Spring (Schwartz, 2011). Youth voice rises in moments of tension, and programmatic support for that voice allows youth to become positive change-makers in their local and national communities. Societal programs geared towards working with young adults in response to the challenges faced by COVID-19 pandemic can be the game changer in reacting to the pandemic and insulating communities to its long-term effects.

### **Statement of Problem and Importance of this Study**

As the COVID-19 pandemic continues to unfold it is essential to understand the young people of the world, particularly those that are motivated to be engaged in addressing the outcomes from the pandemic in their localities. Understanding this population and what motivate them to engage in community efforts, will enable support systems to provide resources and structures to these pockets of people so that they are able to enact change in their local areas and thus influence others in their localities. If researchers can identify the basic psychological needs of youth change makers in this time of crisis and the relationship these needs have with respondents' personal motivation to participate in youth change makers program, then decision makers can make informed action plans on ways to support this population.

The participants in this study are unique in many ways yet share a common goal of wanting to join an international program that is designed to provide youth participants the toolkit to make actionable change in their communities, specifically in response to the COVID-19 pandemic. All study respondents applied to the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Youth as Researchers program (NUI Galway, 2016) in the summer of 2020, this same pool of applicants was later asked to complete a survey including the data in this study, during the winter of 2020. The timing of this study is important, as it reflects

respondents at a single moment, after the initial impact of the pandemic had calmed and this moment of crisis was becoming normalized.

The UNESCO Youth as Researchers program is a youth-led research-based program that was designed to provide young people the tools and support to conduct action-based social justice research with no prior-experience needed. Preceding the pandemic, the program successfully operated in Ireland, where it began with the National Institute of Ireland- Galway, as well as in the U.S., Viet Nam, Laos, and Myanmar. At the start of the pandemic this program was adapted through coordination with partners in Ireland, the U.S., Thailand, France, and South Africa, to create a global edition specifically with a call for youth to identify and address impacts of the COVID-19 pandemic in their local areas. The call was answered when over 6,000 young people from over 90 countries completed an entry application in the summer of 2020.

In the winter of 2020, following nonprobability purposive sampling (Babbie, 2016), Youth as Researcher applicants were asked to complete a Feedback Survey that consisted of 20 questions representing five different thematic areas. This survey informed a larger study with many facets including the present study, in total all five thematic areas included (1) community interaction, (2) relationships, (3) civic engagement, (4) motivation, and (5) demographics. The present study used focused on data retrieved from (2) *relationships* (4) *motivation* and (5) *demographics*. In total, the Feedback Survey used in this study had response rate of 27% (1,546), representing 73 countries and a spectrum of lifestyles from rural to urban. While not generalizable to a global youth audience, responses are indicative to a global youth audience. For specific use in this study, applicants were asked to identify their (1) personal motivation to join the program, (2) basic psychological needs (Deci et al., 2001), (3) perspective taking and empathetic understanding ( Davis, 1980; Odera, 2018), and (4) basic demographic information.

All data was collected virtually over a 6-week time-period and IRB approval was received from The Pennsylvania State University to analyze this data.

### **Research Question and Objectives**

This descriptive-correlational survey research design was crafted to understand the motivations of young people to engage in a program focused on youth change makers. Furthermore, the purpose of this study was to explore participants' personal motivation to engage in an international program (Youth as Researchers) focused on community efforts. To achieve this, the researcher used an assessment of basic psychological needs as identified in self-determination theory (Deci et al., 2001; Ryan & Deci, 2000, 2020). As well as exploring the connection of empathy to participants' motivation to engage, this is assessed through the Interpersonal Reactivity Index (Davis, 1980). These tools along with basic demographic characteristics were used to measure a researcher developed scale of personal motivation to participate in the UNESCO program, *Youth as Researchers*. The online Youth as Researchers program applicant respondents consisted of young people aged 18 – 35 years and representing over 70 countries, who responded to a call for applications to participate in a youth-led research program with a focus on the COVID-19 pandemic and its implications for the young people of the world. The following overarching research question guided this study:

*What motivated young people to join the Youth as Researchers program during a moment of global uncertainty?*

As this is a unique population, in a unique moment in time, being able to understand who the make-up of Youth as Researcher applicants is, and then how those characteristics influence personal motivation is important. To address this overarching research question, there were five research questions analyzed in this study. The first research question is:

*RQ 1: Determine to what extent youth participants' demographic characteristics predict respondents' personal motivation in the Youth as Researchers program.*

Following an understanding of demographic characteristics, the researcher employed self-determination theory as a motivational theory to understand the overarching research question. With that in mind, the three components of self-determination theory have each been compartmentalized to understand their specific role with the personal motivation of applicants. Thus, the following three research questions were analyzed to assess the self-determination theory aspect of this study:

*RQ 2: Determine to what extent youth participants' autonomy scores predict respondents' personal motivation in the Youth as Researchers program.*

*RQ 3: Determine to what extent youth participants' relatedness scores predict respondents' personal motivation in the Youth as Researchers program.*

*RQ 4: Determine to what extent youth participants' competency scores predict respondents' personal motivation in the Youth as Researchers program.*

The final component within this study of exploring personal motivation for applicants, is the role of Empathy. As the Youth as Researchers program is being implemented in a unique and challenging time, it is important to understand how respondents' perspective of others influences their personal motivation, thus the following research question was used to analyze empathy within this study:

*RQ 5: Determine to what extent youth participants' empathy scores predict respondents' personal motivation in the Youth as Researchers program.*

To assess the five research questions guiding this study, the researcher used survey data collected from the Feedback Survey to conduct descriptive, bivariate, and multivariate statistics. More specifically after identifying relations between independent variables (demographic characteristics, autonomy, relatedness, competency, and empathy) and the dependent variable

(personal motivation), a multiple linear regression was conducted to understand the predictive power of all independent variables when compared with the dependent variable.

### **Operational Definitions:**

The following terms specific to the study are defined as follows:

*Autonomy*: “a sense of initiative and ownership in one’s actions” (Ryan & Deci, 2000)

*Competency*: “the feeling of mastery, a sense that one can succeed and grow” (Ryan & Deci, 2000)

*Empathy*: “the ability to experience and understand what others feel without confusion between oneself and others” (Decety & Lamm, 2006)

*Relatedness*: “a sense of belonging and connection” (Ryan & Deci, 2000)

*Personal Motivation*: completing an activity or task based on inherent interest and enjoyment (Ryan & Deci, 2000)

*Youth*: individuals aged 18-35 years, adapted definition (United Nations, 2021; African Union Commission, 2006)

### **Structure of the dissertation:**

This dissertation is contributing to the scholarship of self-determination theory by creating a baseline of where youth around the world identify their basic psychological needs and through identifying the relationship that empathy has to personal motivation to engage in a time of uncertainty. This population consists of youth change-makers that responded to a moment of crisis. By more thoroughly understanding their psychological needs, supportive programs, such as the Youth as Researchers program can better adjust their strategies to meet the needs of this change-making population.

To address how this study explores the applicants of the Youth as Researchers program and their relationship between self-determination theory and empathy, this dissertation consists of six chapters in total. Chapter two focuses on the review of literature, where programmatic

approaches are explored including the Youth as Researchers program, a theoretical discussion of self-determination theory is conducted, the setting of the COVID-19 pandemic is described, and the association of empathy is reviewed. Chapter two concludes with a description of the theoretical framework. In the third chapter, the methodology used to understand the relationship between self-determination theory, empathy, and the study population is laid out. The fourth chapter is dedicated to describing the results of the study. Chapter five, the final chapter, connects the theory, review of literature, and results of this study to form the discussion and recommendation chapter.

## CHAPTER II:

### LITERATURE REVIEW AND ANALYSIS OF THEORY-

#### Introduction

Kofi Annan of Ghana was the seventh Secretary-General of the United Nations (UN), renowned for his peacekeeping efforts with the agency and across countries including those in Africa, Southeast Asia, and the Middle East. In a speech honoring International Youth Day, Mr. Annan made a statement that would become a talisman saying for youth for years to come:

“Young people should be at the forefront of global change and innovation. Empowered, they can be key agents for development and peace. If, however, they are left on society’s margins, all of us will be impoverished. Let us ensure that all young people have every opportunity to participate fully in the lives of their societies.”

Kofi Annan (United Nations, 2001)

What is interesting about this statement, is that while it is accurate and will be expanded upon in this work, it is also noteworthy that Mr. Annan was not a diplomat focused on youth development. He was not known for champion youth rights specifically or being the voice of the younger generation. Rather he understood how integral youth were to everyday challenges, big and small, in nations across the world, and therefore how important it was to include them as part of conversations. Youth voice is not to be revered; it is to be incorporated into the everyday actions of a community. Integrating youth voice into the resolutions of today’s challenges, as though they rightfully belong there and are not treated as a special viewpoint, is essential for overcoming those challenges today and in the future.

The work in this dissertation explored the motivations of the young people, across the globe, who applied to participate in a youth-led program addressing today’s most pressing topic,

the COVID-19 pandemic. More specifically this work connects the theoretical pillars of self-determination theory (Ryan & Deci, 2000; Vansteenkiste et al., 2020), with concepts around empathy as this is a trying time for all and being aware of others is essential for enduring this trying time. In order to better understand this populations motivation to apply to the program, this chapter provides an overview on the challenges of youth voice, programmatic approaches to addressing those challenges, and the theoretical framework guiding this study.

### **Describing Youth**

The UN defines the word “youth” in a number of different ways. The first, being that there is no universal global definition of youth, rather countries and regions around the world have adapted the definition to suit their cultural and legal understandings. However, in general, the UN defines “youth” as those between the ages of 15 – 24 years. Some countries identify youth to be broadly defined as those aged 15 – 35 years (African Union Commission, 2006), while others (the United States) take a more conservative approach with youth assuming adult responsibilities at age 18 – years but are still considered youth until age 24 years (Interagency Working Group on Youth Programs, 2013). Still other cultures might adhere to a nations’ legal definition of youth, but still have adjusted life milestones. These including driving and voting ages in many countries, and for many Latin communities, coming of age ceremonies such as the quinceanera (Cantu, 2006) to name a few.

Youth is so much more than an age. Cieslik and Simpson (2013) provide a broad overview of key concepts of defining *youth*. They refer to the time-period as being an in-between time, where an individual is not quite a child or adolescent but not quite an adult. Arnett (2000) introduced the concept of *emerging adulthood*, where he describes a loose age range of 18 – 25 years, where young people of industrialized countries are entering a period of “profound change

and importance” (pg. 469). The author explores this concept further through identifying five dimensions of this changing time period in a young person’s life. He shares that this time can be “the age of identity explorations, the age of instability, the self-focused age, the age of feeling in-between, the age of possibilities (Reifman et al., 2007)”. While he goes on to write of the often optimistic perspectives of these dimension, the author also describes the negative components that can pertain to so much choice and a lack of confidence that can accompany that choice.

In an alternative context, is the notion of *waithood*. A term for young people, often in Africa and the Middle East, whose lives have been disrupted in a social, economic, or political manner causing them to feel as though they are in limbo (Kovacheva et al., 2018; McEvoy-Levy, 2014). Honwana (2014) explored the notion of waithood in the cusp of the 2010’s and describes it as young people who are *waiting* for *adulthood*. She goes on to state “While chronological age defines them (young adults) as adults, socially they are not recognized as such” (Honwana, 2014). While it could seem as though this is just a period for young people to spend more time at home, the realities are far from glamorous. Honwana (2019) asserts that the concept of waithood is present wherever there are young people entrenched in political, social and economically distraught areas, and that these circumstances create a population ripe for change. In her 2019 article, the author promotes three arguments (1) “youth protest movements stem directly from the economic and social pressures the youth endure”, (2) “young people are rebelling against the status quo,” and (3) “youth political protest movements continue to impact social and political change” (Honwana, 2019). These arguments support the negative consequences of waithood, partnered and the challenges and the reactions of young people who are faced with obstacles to socially recognized adult milestones.

In addition to youth strife, the concept of young people not being able to meet societal expectations, continues in yet other cultural context. In Italy, modern youth aged 18 – 34 years are considered ‘bamboccioni’ (‘big babies’) and are caricaturized as being too choosy and unwilling to leave the family (Storti et al., 2018). The resistance to leave the safety of the familial home whether real or perceived, to reach societal life milestones based in societal time, can create complex challenges. This is amplified when political and media outlets identify these youth as ‘bamboccioni’ compared to outlining the bleak economic realities of many Italian youth (Cuzzocrea, 2018). The challenges for young people include balancing new and increased education opportunities – particularly for young women – with poor employment opportunities, changes in roles and ages associated with marriage, and in managing national struggles (Kovacheva et al., 2018; Mendoza-Denton & Boum, 2015; Storti et al., 2018).

For the purposes of this study, understanding that there are disagreements on the concepts around who is and who isn’t youth, and the challenges associated with placing boundaries around a global definition of youth, is important when it comes to this study population. Regardless of the challenges associated with young people across nations, a common theme is the notion that young voices are marginalized and not at the table when considering development and political changes, even if these changes heavily impact youth (Offerdahl et al., 2014; Woodgate et al., 2020). As outlined by Honwana (2012, 2019) not providing youth realistic options to managing the often country-level challenges their facing can lead to youth in strife with their nations. Cuzzocrea (2018) demonstrates the way that perceptions towards young people can often be misleading and be indicative of an absence of understanding the social and economic challenges their experiencing. A way to change and challenge that notion is to bring this population into the conversation regarding their current day circumstances and the futures

they will inherit. By doing so, the focus shifts from youth being inactive and problematic, to youth being active through drawing on their realities to resolve their cultural and political situations (Oosterom, 2021).

### **Positive Youth Development**

One approach to engaging with young people in a way that provides support for their voice, is through the use of positive youth development (PYD). PYD proposes a strengths-based approach to youth development, where the focus is on what young people can provide and contribute opposed to what negative behaviors need to be prevented (Lerner, 2015; Lerner et al., 2011; Lerner, Lerner, et al., 2005). PYD is construed in three different but interrelated ways (1) as a developmental natural process, young people have the capacity to grow and understand, (2) an approach to youth, in that *all* young people can thrive, (3) a practice, using the process and approach into actionable youth programs (Hamilton, Hamilton, & Pittman, 2004). In the work of this dissertation, the focus will be on the third approach – as a practice in youth programs.

A youth-oriented approach to addressing societal challenges creates space for youth to employ their developmental skills while also demonstrating to societal leaders that youth have a voice and their voice matters. PYD, in theory and in practice, takes an approach to youth development that is focused on the strengths young people can provide, the capacity building that can occur when youth and youth-focused organizations work collaboratively, thus creating tactics allowing for youth to bring their concerns to the table in a youth-centered manner (Iwasaki, 2016). These techniques have been employed with marginalized youth across the globe with success although this is heavily cautioned in that youth programs around the world need to be tailored to match cultural context. That being said the cultural adaptation of PYD particularly with the elements of a youth-centered strengths-based approach is gaining success in Asian

countries (Shek & Yu, 2011), marginalized youth in Canada (Iwasaki, 2016), poor youth in El Salvador (Tirrell et al., 2019), and from a cross-cultural lens (Koller & Verma, 2017) amongst many others.

In Asia, Shek and Yu (2011) conducted a literature review exploring the use of PYD programs in some Asian countries. Their review was focused on the use of PYD programs in prevention contexts and approximately 63 programs were identified that met the program requirements, with only 14 of the 63 programs fitting the PYD domain. Of important note, the authors were only including PYD programs that were developed in an Asian context or evaluated in an Asian context (but developed elsewhere). This review informs the use of PYD in Asian countries – adapted for an Asian audience and indicates that the strengths-based approach is gaining traction in this region of the world, but also is indicative that more work on PYD is needed in an Asian context.

Iwasaki (2016) explored a multi-year community-based research project, the author shares “The overall principle/guideline of our research is that effectively engaging youth and community partners in a mutually respectful way to build a trustful relationship is vital to a positive transformation and systems change in order to more effectively support youth in our community.” Several key components from PYD came through in their qualitative work including, their use of a strengths-based approach to empower youth to explore how they (the youth) could partake in youth engagement and finding that the PYD approach increased capacity for not only the youth but for the youth-serving agencies. These are just a few examples of how this approach proved to be of value to not only the youth but the partners they worked with in this diverse Canadian community.

In a practical sense, particularly for programming, the concepts of a strengths-based programmatic approach need to have some concreteness about them. With this in mind, Lerner, Almerigi, & Lerner, (2005) along with previous researchers including Blum, (2003) and Ruth and Brooks-Gunn (2003) (as cited in Lerner, Almerigi, & Lerner, 2005), identified what has become known as the 5 C's of PYD. The 5 C's of PYD include (1) competence, (2) confidence, (3) character, (4) connection, and (5) caring. With the suggestion that if these 5 Cs can be supported in youth, then youth will be capable of reaching their developmental potential. The 5 Cs became a talisman of youth development programmers and researchers in determining ways in which young people could thrive within the programs they participated in. While there is great interest in PYD and evaluating the outcomes from PYD such as the 5C's, there is room for improvement. In 2017, a USAID review was conducted and it was found that further work in evaluating the outcomes and promoting the theoretical understanding of PYD in program implementers are future steps that are needed to ensure PYD is appropriately used (Youth Power, 2017).

Tirrell et al (2019)'s study represents a potential way of achieving these PYD goals. The author's study of 888 Salvadorian youth, consisted of a control group and an experiment group that was given a PYD program centered around spirituality, hope, and thriving. Their findings suggest that those that participated in the program were identified to have an increase in *character* compared to those who did not. While this is a small, focused study, it does demonstrate the potential within PYD programs, their international usage, and the value of assessing the outcomes from these programs. Thus, a cross-cultural perspective of the strengths-youth can provide to society is present while it also is acknowledged that further exploration is needed in this field.

## **Youth Participatory Action Research**

While PYD can be seen as something akin to a theoretical approach to youth programming, youth participatory action research (YPAR) can be seen as a methodology and manner of implementing PYD concepts. Caraballo, Lozenski, Lyiscott, and Morell, (2017) describe YPAR as “a radical effort in education research to value the inquiry-based knowledge production of the youth who directly experience the educational contexts that scholars endeavor to understand” (pg. 312). What YPAR does that is unique to other approaches to knowledge, is that it creates a space where young people are considered co-researchers. Youth’s experiences and knowledge are just as valuable as formal researchers; thus youth’s discussion points and opinions are taken with the same weight as those with formal credentials, a novel idea to many. In implementation, Tirrell’s (2019) community-research project, which implemented PYD concepts, is an example of youth-led action research project, albeit with heavy community input coming from multiple stakeholders.

While this takes a unique approach to PYD, the premises remain the same. Youth-led YPAR research is a strengths-based approach to working with young people. The assumption in YPAR programs is that youth have something of value to add to research, specifically about the lives they live. This concept is seen well in Starodub’s work on refugees in Central Europe (Starodub, 2019). In this work the author outlines the approach to research along the West Balkan boarder and how young people conducted research on ways to effectively cross the border. The youth involved conducted the work with conviction in their experiences and that they had something to add to the body of knowledge. They were viewed in a strengths-first approach. On the flip side of the coin, non-youth researchers gained valuable insight into the realities of life along the border in manner that would have been inaccessible otherwise.

When working with immigrant youth in New York City, Walsh (2018) identified a YPAR approach to be culturally sustaining to this vulnerable population. In this work, immigrant youth are learning English, and the use of a YPAR approach allows them to re-evaluate their way of knowing language enabling them to not only recognize their ability to learn English in the circumstance but to then apply it to their everyday lives (Walsh, 2018). This last piece is essential to the “A” portion of YPAR work, *action*. YPAR involves action as a result of the youth-led research. In the case of immigrant youth, they were able to take their new grasp on language and apply it to their lives, this was an uncommon occurrence to their peers who learned English in a non-YPAR setting.

YPAR has been implemented in western countries in a number of studies, typically in case study formats, with varying levels of involvement from youth (Anyon et al., 2018; Branquinho et al., 2020; Shamrova & Cummings, 2017). The approach to youth engagement has been implanted in non-western settings as seen in Tirrell (2019), however there is much work to be done in understanding how this approach to youth engagement can be successfully implemented in non-western cultures.

### **Youth as Researchers Program**

This study explores a population of young people who self-selected and applied to participate in a YPAR youth-led global program addressing a prominent issue of their time, the COVID-19 pandemic. The Youth as Researchers program began in 2016 (NUI Galway, 2016) and is designed as a youth-led research initiative. Within the boundaries of the program, young people aged 14 – 35 years are given the space to learn how-to and to then conduct their own, often social justice based, research. The program operates in the following manner.

Young people are placed or exist in pre-formed groups of 5-10 individuals, often of a similar age or educational background. These small groups work with an “adult” or external group member to help facilitate group activities and provide external input when asked or when safety becomes a concern. Participants complete an interactive training developed by NUI Galway and adapted for audience maturation. The training reviews the basic concepts of social science research methods, these include “deciding on a research topic, finding out about the topic, plan for change, writing a research question, research design, research ethics, reporting your research findings, and dissemination” (NUI Galway, 2016). By the completion of the training young people can identify a research question that impacts them/their group specifically, and have decided on ways they intend on collecting, analyzing, and sharing their data.

When the COVID-19 pandemic became a reality, a team of Youth as Researchers leadership which comprised of youth development specialists and researchers from The Pennsylvania State University and The National University of Ireland: Galway; as well as youth program specialists and field agents from UNESCO and partners in France, Thailand, South Africa, Haiti, Pakistan, and Viet Nam (see Appendix A for details) collaborated on the idea to conduct a global edition of the Youth as Researcher program. This initial idea opened the program to youth from across the globe where they would be virtually trained to conduct virtual research on the role of the pandemic on the lives of young people. The idea took like wildfire when proposed. In three weeks, through convenience advertising on social media, the team had 6,000 applicants from over 90 countries. This strength based YPAR program created a space, where young people who had something to say about the pandemic and were motivated to do something about it, could be supported.

Specific details on the methodology used to enact this program are noted in Chapter III of this work, however in short, the program leadership team sorted through the 6,000+ applications and identified, in total, 35 teams to conduct youth-led research across the globe on the impacts of the pandemic on today's young people.

What motivated those young people from over 90 countries to apply to the program? There was no monetary agreeance, no label of an internship, no promise of paid work or recommendation letters from high officials. Thousands of young people responded to a call to participate in a skill many of them identified they did not have (research), to address the global pandemic. While there are many reasons that could be the answer to what motivated these young people, this study explores two main concepts and their relation to the Youth as Researcher applicants' personal motivation to apply; the psychological needs identified in self-determination theory and prosocial behaviors outlined by the construct of empathy.

## **ANALYSIS OF THEORY**

“To be motivated means *to be moved* to do something (Ryan & Deci, 2000 pg. 54). This research is guided by an educational motivational theory: self-determination theory (Ryan, R., & Deci, 2017; Ryan & Deci, 2000; Vansteenkiste et al., 2020). Using self-determination theory as a guidepost the researcher developed a conceptual model that is specific to this study and incorporates the use of *empathy*. A brief overview of motivational theories will be provided for context, followed by an in-depth look at self-determination theory, the societal setting of the study, a review of empathy and its connection to the study, then this section will conclude with a review of the conceptual model used in this study.

### **Motivational Theories: An Overview**

In the early 1940's an American psychologist, Abraham Maslow, published an article detailing how frustrated he was with the lack of data on motivation (Maslow, 1943). This lack of data propelled him into action where he created a human theory, which is commonly known as Maslow's Hierarchy of Needs (McLeod, 2020). Maslow's theory asserts that there are basic human needs that are to be met before higher order needs are achievable. The needs are often depicted in a triangle model, where (1) physiological needs and (2) safety needs are the base, followed by (3) needs of belonging, (4) self-esteem needs, and (5) self-actualization needs, which are progressively depicted at the top of the triangle, suggesting these are harder to achieve. McLeod (2020) writes of these in terms of deficiency needs (the first four needs) and growth needs (the top need of self-actualization). Berardi (2020) utilizes Maslow's Hierarchy of Needs to position empathy within the upper psychological need of self-actualization, indicating that one needs to be in a position of growth to experience and exchange empathy. In their use of the hierarchy, Berardi discusses how an individual can be motivated to move up the needs-based hierarchy once the lower-level needs have been met to some degree. Furthermore, partnered with a positive psychological approach to motivation, empathy provides one with the capacity to go beyond self-interest and connect with others, which in turns allows one to move up the hierarchical triangle reaching self-esteem and self-actualization needs (Pavlovich & Krahnke, 2012). This is the beginning stage of connecting empathy with motivation. Maslow went on to then assert that one's motivation increases as one's self-actualization is fostered (Maslow, 1943; McLeod, 2020).

Maslow's hierarchy of needs is common throughout literature and community programming even today, nearly 80 years later. However, this is by far not the only theory to discuss human motivation, particularly as you enter educational fields. Four popular educational

motivation theories include *modern expectancy-value theory*, *self-efficacy*, *attainment-goal theory*, and lastly *self-determination theory*. *Modern expectancy-value theory* refers to an individual's belief around their competency in completing a task. The theory shares that one's values are equated to tasks-based beliefs, and that there are four primary values to consider: *attainment*, *intrinsic*, *utility*, and *costs* (Eccles et al., 1983). This theory has been heavily involved in children and youth studies predominantly in formal educational settings and suggests that there are clear expectations in formal education, therefore there are clear connections to which values motivate a young person to become engaged in a task (Graham & Weiner, 2011; Linnebring- Garcia, Patall, & Pekrun, 2016). A challenge with using this theory is that non-formal multicultural settings, such as the Youth as Researchers program, do not have supporting evidence in the theory application. Yang and Mindrila (2020) found the theory to be applicable to multicultural settings however there was a need for further studies for conclusive understanding of expectancies and value understanding between individuals from different cultures.

*Self-efficacy* is described as an individual's belief in their capacity and capabilities to perform well. This is to say that when confronted with a challenge or an obstacle (something to stifle one's motivation), an individual is likely to be more motivated if they *believe* in their capacity to overcome the challenge. The idea here being that if you foster one's self-efficacy, then they are able to be more motivated (Bandura, 1986; Graham & Weiner, 2011; Linnenbrink-Garcia et al., 2016). Within the self-efficacy literature there are numerous studies on formal K-12 education and within the boundaries of university higher-educations settings. Additionally, there is prominence for the use of self-efficacy theory in nursing and medical settings, which indicates a lack of use in the theory for non-formal programs. In terms of cultural understandings, Ahn,

Usher, Butz, and Bong (2015) found that student populations in their different countries identified self-efficacy in different manners, suggesting that the theory needs to be adapted when applied to multi-cultural settings.

*Attainment- goal theory* explores the notion of why an individual engages in an achievement behavior, suggesting that motivation comes from two main goals (1) mastery, and (2) performance. Mastery goals motivate an individual through one's desire to achieve competence in a skill, and performance goals associated with one's desire to have a public display of their competence in skills (Graham & Weiner, 2011; Linnebring- Garcia, Patall, & Pekrun, 2016). Attainment-goal theory while used in educational settings, the theory has prominence in high stress medical settings with many studies rooted in nursing (King, 1997).

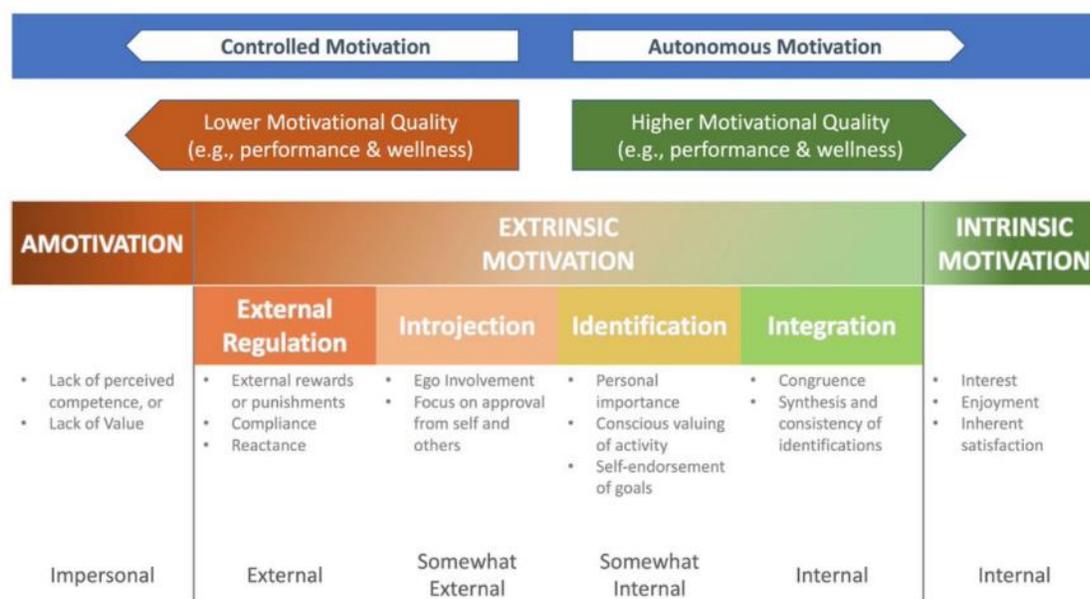
### **Motivational Theories: Self-Determination Theory**

While the aforementioned motivational theories have been explained in context of formal educational settings and the motivation of young people, the theories are positioned to each focus on a particular angle of motivation, often not including informal education options nor multi-cultural perspectives, to aspects that are key to this research study. Whereas self-determination theory first took shape in the 1980's and was solidified in the early 2000's, with the prominent authors being Ryan and Deci (2000), who took a more comprehensive look at the motivational theories of the past. Graham and Weiner (2011) share that "A major premise of self-determination theory is that intrinsic motivation is promoted when individuals are able to satisfy basic needs for competency, autonomy, and relatedness (pg. 376)." It is with this, that the three basic tenets of self-determination theory (1) autonomy, (2) relatedness, and (3) competence are seen and explored.

This research study is expanding on the knowledge of self-determination theory as it is applied to both an informal educational setting and in an international context. The aforementioned motivational theories had a stronghold in educational psychology and therefore

**Figure 2.1**

*Self-Determination Theory (Ryan & Deci, 2000)*



in formal K-12 educational settings. In their reflection work, Ryan and Deci (2000) first explore a-motivation, extrinsic motivation, and intrinsic motivation (see Figure 2.1).

At the far end of the motivational spectrum lies a-motivation, referring to when someone has a lack of value and a lack of perceived competence. Progressing through the motivational spectrum, leads to extrinsic motivation and the ways in which this predominantly external motivation is viewed. The key takeaway from this perspective is that extrinsic motivation is almost always externally promoted, therefore there are external factors that can be manipulated to motivate an individual (Ryan & Deci, 2000 pg. 61). Ryan and Deci (2000) explored extrinsic motivation and determined there to be four primary types of extrinsic motivation. The four are

(most external) external regulation, (somewhat external) introjection, (somewhat internal) identification, and (internal) integration (Ryan & Deci, 2000 pg. 61). Self-determination theory proposes that an individual can go from a-motivational (neither extrinsically nor intrinsically motivated), to extrinsically motivated. Within extrinsic motivation, as one begins to foster more identification and integration an individual is then able to become more self-regulated and exhibit more intrinsic motivation to complete a task at hand. Most relative to this research study is that of intrinsic motivation, where an individual is fully internally motivated to participate due to the interest, enjoyment, and inherent satisfaction that they receive from participation in a task, activity, or chore.

Intrinsic motivation is defined as “completing an activity for its inherent satisfaction rather than for some separable consequence” (Ryan & Deci, 2000, pg. 56), and it is thought that intrinsic motivation results in higher quality of learning that is seen through creativity and play, therefore it is of great interest to educators (formal or informal). Thus, how an educator or authority figure engages with a young person can have the potential to promote intrinsic motivation or deter it, which would equate to promoting higher quality of learning or deterring higher quality of learning. As such the importance of understanding ways to engage intrinsic motivation is one of utmost interest.

As mentioned previously, self-determination theory posits three main needs, that when met, support intrinsic motivation, see Figure 2.2. *Autonomy* is focused around an individuals’ choice, particularly their choice to complete a task (Graham & Weiner, 2011) and is further described as “the need to regulate one’s experiences and actions” (Ryan, & Deci, 2017, pg. 10). The authors dive deep into the theoretical development of one’s identity with their *self* where reality of one’s *self* is perceived only as it relates to one’s autonomy. You cannot perceive your

*self* and the actions you condone unless doing so through your sense of autonomy. In practice, this translates to understanding when their actions are supported by their own willingness compared to being forced into completing a task.

Ryan and Deci (2017) focus a chapter of their revised book on the notion of *autonomy* as it is a more complex core to self-determination theory particularly when considering how individuals in different cultures related to their sense of *self*. The authors dive into the dearth of knowledge of understanding *self*-citing German philosopher Immanuel Kant's perception of *self* being the means in which experiences are interpreted (p.54). Another German philosopher Alexander Pfander is identified as asserting that self-determined acts are endorsed by one's will (p.54). Both concepts towards ones' *self*-support the literal meaning of *autonomy* as meaning *self-governing* (p.53).

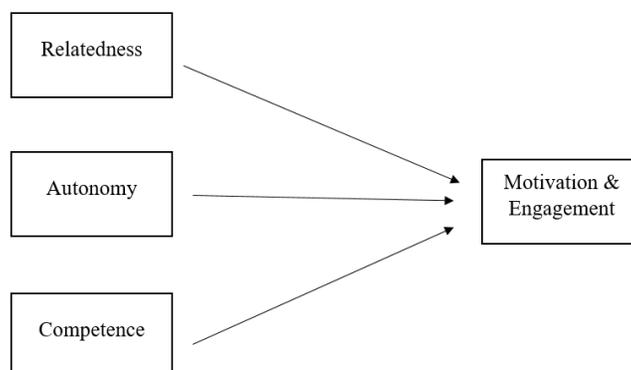
Ryan and Deci (2017) go on to discuss elements of authenticity as it pertains to the notion of *self* and therefore the notion of *autonomy*. The authors cite Danish philosopher Oren Kierkegaard in the following way; "In Kierkegaard's view, a genuine, authentic human being is 'infinitely interested in his existence,' and what he or she does is the current best synthesis of all that he or she truly believes, knows, and feels. To the extent that synthesis is complete and one is not duplicities or self-deceptive, then one will act in accord with one's self and will experience some, always relative, sense of integration." (Ryan & Deci, 2017, p.58). Sharing these different philosophical points associated with the self, how one acts in regard to the self, and the hinting towards a relational component associated with the self, demonstrates the complexity behind the notion of *autonomy*. In this research, *autonomy* is being discussed in many cultural scenarios and understanding how this notion of ones' self is understood is elemental in being able to apply to cultures from the east to the west and in-between.

Ryan and Deci (2017) take care to consider how their theory can be applied and critiqued in cross-cultural manners. In Chapter 22 of their revised book (Ryan & Deci, 2017), the authors take care to address these components. Within this setting they identify several studies that have been conducted on the critique of self-determination theory in different cultures. These include Cheng, Shu, Zhou, & Lam's 2016 study on Chinese and Western parenting and Wuyts, Chen, Vansteenkiste, and Soenens' 2015 study on Chinese and Belgium parents, both demonstrating well known notions on a sense of control (thus minimal youth autonomy) over their children. However, the results also demonstrate that while culturally accepted, there were negative associations with Chinese parents tight control over their youth. Thus, while just two examples, indicating that self-determination theory can still be applicable in these two separate settings. Ryan (1993) early on identified the way that individuals and their cultures are so closely entwined that there is no way to separate someone from their culture thus incorporating that element into the development of self-determination theory.

In their 2017 work, Ryan and Deci challenge notions of *cultural relativism* as potentially supporting the dangerous narratives that it spouts. To clarify, they identify cultural relativism as taking expressed values of cultures as being inherently *good for* the people within those cultures (for more details see page 565). Whereas in self-determination theory, there is the notion that there are basic needs regardless of cultural background, and these needs can be interpreted, challenged, and accepted in different capacities from cultures, but that they can still exist as universal needs. A closing segment argument they had is positioned specifically the more controversial basic need, *autonomy*; "Autonomy is a basic need that is not content-specific – indeed, one of the facts of human diversity is that different cultures, groups, and individuals will autonomously embrace and endorse different values and practices." (p. 565).

**Figure 2.1**

*Self-Determination Theory Model (Ryan & Deci, 2020)*



When considering programming and the ways that autonomy might fit into a positive youth development and/or YPAR approach to programming, providing choice for participants to take ownership over their actions is a core component. In the positive youth development context, autonomy is seen in when recognizing that young people have experiences that are uniquely their own and worth both acknowledging and expanding upon. This recognition of the youth perspective provides a space for youth to identify their sense of self within their programmatic setting and relate their actions to how they identify that sense of self. Thus, becoming more autonomously engaged with their program and with their role within the program. The YPAR context provides the setting for both positive youth development and this need of autonomy to be met. The crux of YPAR is the element of it being youth-led, thus youth are regulating their actions and experiences throughout the entirety of YPAR projects.

The second need of self-determination theory is that of *relatedness*. The basis of the human need of relatedness is that human behavior is determined by one's social contexts (Ryan & Deci, 2017). The authors then go on to relate that not only is it one's context and a desire

based on physiological needs from others, but a desire to connect with others in a meaningful way, suggesting “there is a basic need to feel responded to, respected, and important to others, and, conversely, to avoid rejection, insignificance, and disconnectedness” (pg. 96). This need is similarly identified in other motivational theories as a sense of belonging as seen in Maslow’s Hierarchy. However, within self-determination theory, Graham and Weiner (2011) discuss how relatedness is associated with belongingness and social support *from* others and *to* others. Thus, this need is relational. Ryan and Deci (2017) discuss that relatedness is satisfied when there is opportunity for an individual to show care towards others and to be shown care from others.

When considering the practicalities of this need, in the YPAR setting, the projects are established through a group of youth identifying a need that almost always impacts them on a social level. While not explicitly focused on social justice issues, nearly all YPAR projects have an outcome associated with social justice issues (Shamrova & Cummings, 2017). What this element of a social justice lens does is enable YPAR researchers to focus on issues that tend to impact them directly or impact someone close to them. This partnered with the action research component of YPAR work, enables researchers to enact care, through research and action, onto their community, thus addressing one aspect of relatedness. Furthermore, while future research is still needed, community-level research on YPAR programs suggests that there is an enhanced relationship between YPAR researchers and their community members. This relationship does not guarantee *care* towards participants in the exact manner as relatedness suggests, however it is suggestive that there is potential for growth in the relationships between YPAR researchers and community members impacted by their work (Shamrova & Cummings, 2017).

The final need identified in self-determination theory is that of *competence*, “our basic need to feel effectance and mastery. People need to feel able to operate effectively within their

important life contexts” (Ryan, & Deci, 2017, pg. 11). The authors go on to describe the need to experience opportunities where one can explore their capabilities and talents in a supportive environment. The need for being competent has been described in other motivational theories such as self-efficacy (Bandura, 1986), its application in self-determination theory varies slightly, in that competency operates in conjunction with autonomy and relatedness, opposed to being a central component of the motivational theory. In theory, there is a need to not only know that one can create a change to their environment but that they can do so through their own volitions, thus autonomously.

In practice, this translates to an individual being supported to try and create change, from their choice, to their environment. When considering the application of competency to positive youth development and YPAR programs, the first uses a strengths-based approach providing a supportive environment for young people to explore potential new skills. Youth are considered to have strengths and thus can improve and continue to grow and impact their environments in a positive manner. In YPAR programs, the programmatic approach once again creates a space where young people, with no talent in research and no pre-existing knowledge in a topic – outside their own experiences – can learn a skill thus. These newly developed skills, while developed in a supportive environment, are a ripe setting for the need for competency to be met.

When considering all three needs of self-determination theory in the setting of this research, it is important to note how the three components were developed and are experienced in different cultures. In Ryan and Deci (2017)’s review of their twenty-year theory, they expand heavily on the history of self-determination and how the three pillars were historically viewed and ultimately joined in the theory. With this notion, the authors introduce Western philosophers that influenced the three components including Carl Jung and Eastern approaches to philosophy

such as Buddhism (p. 60). They then share the many cross-cultural studies that have explored each of the three needs and how they are situated in different cultural context. Within their book,

the authors expand on twenty years of work involving dozens of studies in dozens of cultures that tests the three needs. What they find is that “despite the fact that *what* people may practice of value differs as a function of culture the issue of *why* they engage in practices or values has universal import” (p. 573, emphasis theirs). Outside of their 2017 work, concepts of these universal needs has been tested and supported in cross cultural studies such as with Hong Kong and British/Canadian participants (Walker et al., 2020), within a large 90,000 sample population including 11 countries with participants based in New Zealand and South Korea for example (Nalipay et al., 2020), and within small studies such as with at-risk youth in Singapore (Nagpaul & Chen, 2019).

### **The COVID-19 Pandemic**

The work being conducted in this research is centered around a moment in time and a situation that affected everyone in the diverse population explored, the COVID-19 pandemic. On January 30, 2020, the World Health Organization declared the COVID-19 outbreak to be a “public health emergency of international concern,” reportedly the highest level of alarm from the international organization (World Health Organization, 2020a). At this point and throughout the month of February the pandemic had begun to negatively impact countries heavily in the western pacific and the virus’ origin country of China (World Health Organization, 2020a). In March 2020, the virus became a national emergency in the United States with the virus infection rate steadily climbing causing deep seated concern in counties such as Italy and Spain. These climbs cause nation-wide changes in business operations and began to alter the economics and the daily lives of individuals in these areas.

By April 2020, the COVID-19 pandemic was widespread throughout all regions of the world, with many nations experiencing their initial heaviest spike in infection and death rates.

The disease was clearly a danger to people's health, and management of the spread of the disease included facilitating personal, administrative, and engineered approaches in crowded areas (Center for Disease Control, 2021). Such measures and controls on personal and public areas would continue throughout the entirety of the pandemic, including at the time of this writing. These measures created a change in individuals' daily lives in all corners of the world. These impacted the daily routines, expectations, and accessibilities of the world's most vulnerable, including young people (United Nations Department of Economic and Social Affairs, 2020).

In terms of self-determination theory, researchers across the globe began conducting motivational work on the three needs and their relationship to the pandemic. In Poland, researchers explored the three basic needs and their association with well-being (Cantarero et al., 2020). Their findings suggest that an intervention is needed to decrease stress through bolstering relatedness. Similar studies were conducted in Spain (Behzadnia & FatahModares, 2020) and Serbia (Šakan et al., 2020), both assessing the well-being of their respective populations through the three needs expressed in self-determination theory. These studies confirm that populations around the world are under stress and through providing tools found within the three basic needs there is a way to alleviate some of the stress felt from the COVID-19 pandemic.

An additional approach that is seen time and time again alongside the self-determination theory concepts within the pandemic, is that of empathy. "Empathy allows us to understand the intention of others, predict their behaviors, and experience an emotion triggered by their emotions" (Baron-Cohen & Wheelwright, 2004), in the case of a global pandemic, empathy for others and ourselves is the saving grace of humanity. In American culture, Franke and Elliot (2021) found empathy to be the key to countering fear associated with spread of the pandemic and related economic challenges, thus another key to reducing stress alongside of the three needs

of self-determination theory. In a Chinese study, empathy was once again a key element in elevating hope and reducing stress associated with the pandemic (Hu et al., 2021), and a study in the Netherlands on adolescents demonstrated the resiliency that was associated with perspective-taking and giving to others (Van de Groep et al., 2020). This clearly suggests that in a time as trying and stressful as that of the global COVID-19 pandemic, in addition to understanding the needs associated with self-determination theory, there is a need to incorporate empathy.

### **Empathy**

Empathy is considered to be an essential element of developing and utilizing one's moral compass (Jolliffe, & Farrington, 2006). As such a key element of human interaction, empathy has been studied in several different fields in a number of differing capacities, certainly within the context of the pandemic as noted above. Overall, there is agreement to there being two primary approaches to how to view empathy, the first being affective empathy and the second being cognitive empathy. *Affective empathy* "the ability to emotionally share another person's feelings or emotions" (Silke et al., 2018, pg. 423; Baron-Cohen, & Wheelwright, 2004; Jolliffe, & Farrington, 2006). Many liken affective empathy to being able to *feel* another person's emotions, such as being sad when you see your friend sad. Whereas *cognitive empathy* refers to "the ability to understand another person's emotional state" (Silke et al., 2018, pg. 423; Baron-Cohen, & Wheelwright, 2004; Jolliffe, & Farrington, 2006). While there is not a shared emotion, there is the ability to understand what another individual could be feeling at that point in time, thus associating with others through appreciating another individual's emotional state via cognitive empathy.

Both affective and cognitive empathy are important to recognize and understand particularly as empathy as a construct plays a role in an individual having prosocial behaviors.

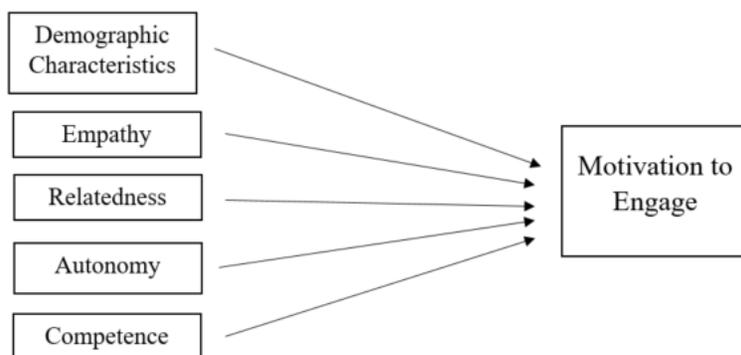
Prosocial behaviors are defined as “voluntary, social behaviours or intentions (e.g. helping, caring, sharing, defending & comforting) intended to benefit another individual or group” (Silke et al. 2018). Therefore, prosocial behaviors are intrinsically motivated intentions designed to help another individual, or the social glue that helps society function in moments of frustration (or when an individual would need caring, sharing, or comforting). As important as empathy is in society, there is a need to understand more about how to develop and foster more empathy in young society members. Empathy that is not actively worked on in younger populations can lead to un-empathetic adults (Allemand, et al.2015). These would be adults without a connection to another’s emotions and thereby missing an element of pro-social behaviors. Considering the increases in unrest and more volatile responses from society, empathetic youth and adults are crucial to the current and future well-being of society.

At the foundational level of positive development are social and socio-cognitive competencies (Metzger, et al., 2018). Found within these is, of course, empathy. There is a need for people, including young people, to recognize emotions within themselves and those around them. So much so much so that within the positive youth development framework, a strengths-based approach to youth development, there are 6 C’s (*competence, confidence, connections, character, contribution, and caring/compassion*) that operationalize concepts that equate to a developed youth who actively and positively contributes to society (Lerner, et al., 2005). Within the positive youth development framework, the concept of empathy can be found, specifically within the operationalization of *caring/compassion* (Bowers, et al., 2010). Thus, when engaging a program that fosters youth to have pro-social behaviors and be contributors to society, empathy is a must.

### **Conceptual Framework**

This study takes Ryan and Deci (2000; 2017; 2020)'s self-determination theory and adapts it for this study which is set in within the COVID-19 pandemic. As such, the independent variables of demographic characteristics, empathy, relatedness, autonomy, and competence are designed to better understand motivation to engage in the Youth as Researcher program. See Figure 2.3 for a visual display of the conceptual model guiding this study.

**Figure 2.2**  
*Conceptual Model*



Previous literature has suggested that empathy is a component of self-determination theory in the areas of *autonomy* and *relatedness*. Yet in challenging times, research has also demonstrated the importance of empathy in communities and the role that empathy can play in connecting community members. It is with this in mind that the researcher has added the construct of empathy to the theoretical framework, suggesting that empathy could be a key pillar of motivation to engage in more uncertain times. Additionally, as this is a global study it is important to understand if key demographic variable impact one's personal motivation.

## **CHAPTER III**

### **METHODS**

This chapter describes the methods used in this study. It includes the following: purpose and objectives; IRB approval; research design; study background; population and sample; instrument development; data collection and data analysis procedures.

#### **Purpose and Objectives**

This descriptive-correlational survey research design was crafted to understand the motivations of young people to engage in a program designed for youth change makers looking to impact their community. The purpose of this study was to then explore participants' personal motivation to engage in an international program, Youth as Researchers (YAR). To achieve this, the researcher used an assessment of basic psychological needs as identified in self-determination theory (Deci et al., 2001; Ryan & Deci, 2000, 2020). As well as exploring the connection of empathy to participants' motivation to engage, this is assessed through the Interpersonal Reactivity Index (Davis, 1980). These tools along with basic demographic characteristics were used to measure a researcher developed scale of personal motivation to participate in the UNESCO program, Youth as Researchers. The online YAR program consisted of young people aged 18-35 years and representing over 90 countries, who responded to a call for applications to participate in a youth-led research program with a focus on the COVID-19 pandemic and its implications for the young people of the world.

**Research Questions:**

To guide this study, the following research questions were used:

- 1) Determine to what extent youth participants' demographic characteristics predict respondents' personal motivation in the Youth as Researchers program.
- 2) Determine to what extent youth participants' autonomy scores predict respondents' personal motivation in the Youth as Researchers program.
- 3) Determine to what extent youth participants' relatedness scores predict respondents' personal motivation in the Youth as Researchers program.
- 4) Determine to what extent youth participants' competency scores predict respondents' personal motivation in the Youth as Researchers program.
- 5) Determine to what extent youth participants' empathy scores predict respondents' personal motivation in the Youth as Researchers program.

**IRB Approval**

This study was submitted to the Institutional Review Board (IRB) of The Pennsylvania State University for approval in Fall of 2020. After adjustments to the survey and protocol, approval was granted in December of 2020 (IRB # STUDY00016525). See Appendix B for correspondence of the approval.

**Researchers' Positionality**

The international nature of this research provides insight into different perspectives of the Youth as Researchers' program and the programs relation with a motivational theory. While this research study will outline some of the demographic characteristics of research participants it is useful to understand the researcher herself, and her positionality on research. I identify as a well-educated unwed white woman who has personal and professional experience in low socio-economic status (SES) areas. It is important to clarify that my background is in low SES environments, not heavily impoverished or violent areas. My personal and professional experiences have provided me exposure to various locations across the United States (U.S.) and to some extent international settings, however my most prominent cultural backgrounds are rooted in the culture of the southeastern region of the U.S., an area that is known for many socially charged issues. My professional experience informs both my worldview and the nature of the type of research that I

interact with. I spent the early portion of my career working with young people, in informal settings, with experiential learning. In these settings, the people I worked with were given opportunity to explore their learning environment more on their terms, adjusting elements of their education to meet their needs. Often, as the educator, I am reaching out or looking for clues from those I work with on ways they are interested in learning. This exposure as both a teacher and youth programmer has provided me a strong connection to the benefit of having practical solutions when learning.

It is with this in mind, that I identify as a *pragmatist*. It is shared by Creswell and Plano-Clark (2018) that a pragmatist is centered on the consequence of actions, is problem-centered, and is focused on real-world practices (pg. 36). My research interests are focused on engaging young people to address social issues they are concerned with, in actionable ways. Through my research I hope to improve on the ways that youth can become engaged and empowered to make practical change. While I identify as a *pragmatist* as I grow as a researcher it is important to also acknowledge that my work, which involved social justice topics, is also influenced by the transformative paradigm. The transformative paradigm is grounded in issues surrounding ongoing inequality and injustices, and the concept that researchers can play a pivotal role in addressing and moving issues of injustices (Jewiss, 2018; Mertens, 2009). At my current state as a researcher, I do not see my work as part of the role of addressing and challenging issues of injustice. However, my work is influenced by injustices, therefore I feel as though I am one degree of separation away from this paradigm.

Johnson and Onwuegbuzie (2004) state that “pragmatism also helps to shed light on how research approaches can be mixed fruitfully (Hoshmand, 2003); the bottom line is that research approaches should be mixed in ways that offer the best opportunities for answering important

research questions” (pg. 16). I suppose holding an overall worldview of pragmatism will enable me to be open to perspectives such as the transformative paradigm when approached with a research topic with a more human rights center. Truthfully, the two approaches seem quite similar. A potential way I conceptualize differing them is that a pragmatic approach lends itself towards research that is applicable to the common need or anticipated future common needs (the populations may change, but still having research useful to a group of people). Whereas a transformative approach would be conducting research for the purposes of that research changing some aspect of the current system that the common need is impacted by. As I grow as a researcher it will be important for me to consistently revisit this topic to see how it has changed and how that change influences my work.

## **Research Design**

This study used a descriptive-correlational survey design, where the researcher described the Youth as Researchers applicants and their personal motivation to engage. From there, the researcher determined the *relationships* between the applicant’s *relatedness, autonomy, and competency* and their *empathy* (Bordens & Abbot, 2018). Creswell (2014) describes the correlational design as “measure(ing) the degree or association (or relationship) between two or more variables or sets of scores” (p. 41). This research aims to (1) describe the demographic profile of study respondents (2) describe the independent variables of *autonomy, relatedness, competency, and empathy* for participants and the dependent variable of *personal motivation*, (3) determine the *demographic characteristic* differences in *personal motivation*, and to (4)

determine the individual predication variation that *demographic characteristics, autonomy, relatedness, competency, and empathy* have within respondents' *personal motivation*.

## **Study Background**

This study is centered around youth who answered a call to action in response to the COVID-19 pandemic. To understand this study population, it is important to understand the events that created the call to action and to understand what the call to action was. These events include the COVID-19 pandemic as it stood in the year 2020, as this was the time of data collection. Additionally, understanding the Youth as Researchers initiative is paramount to understanding the population of the study.

### ***The COVID-19 pandemic***

On January 30, 2020, the World Health Organization declared the COVID-19 outbreak to be a “public health emergency of international concern,” reportedly the highest level of alarm from the international organization (World Health Organization, 2020a). Since then, the management of the pandemic has been met with confusion, distrust, lack of motivation, increased levels of stress among other distressing outcomes (Franke & Elliott, 2021). Young people are experiencing negative impacts in their social well-being (Saladino, et al., 2020), and are disproportionately impacted in the areas of employment and disruptions in education (United Nations, Department of Economic and Social Affairs, Social Inclusion, 2021). However, young people have also been called on as a source of tremendous potential within their communities to “(youth are critical to) limiting the virus’s spread and its impact on public health, society, and the economy at large.” (United Nations, Department of Economic and Social Affairs, Social Inclusion, 2021). Furthermore, youth voices are at the forefront of addressing systematic

challenges exemplified from the pandemic (Women Deliver, 2021). Thus, it is imperative to support young people in this time of uncertainty.

### ***The Youth as Researchers COVID-19 Initiative***

On March 23rd, 2020, a group of UNESCO Youth as Researchers (YAR) leaders began conversations around having a global YAR initiative centered around understanding the youth perspective of the COVID-19 pandemic across the world. Leaders in this conversation were based in the U.S., Ireland, France, South Africa, Thailand, and Viet Nam, see Appendix A for details on who was a part of the YAR leadership team. From this initial conversation, weekly meetings ensued, and the following steps were taken in creating this program (see Table 3.1).

United Nations organizations, including UNESCO, operate in two of the six official languages of English and French<sup>1</sup>, thus all YAR materials are presented in English and French. To ensure that the Feedback Survey used in this study was also available in French multiple steps were involved. During the creation of the survey questions themselves, individuals who served on the panel of experts consisted of French natives and those fluent in the language. Once the survey itself was created in English, it was then translated into French by a native speaker (from Haiti) and fluent non-native speaker (trained in the U.S. and Senegal). This final version of the French Feedback Survey was reviewed by a third expert who was a native speaker (from France). The final check to ensure that the survey was suitable to French speakers was conducted once the survey had been inputted into the survey system, Qualtrics and was reviewed a final time to ensure the transitions and ‘real-life’ view of the survey was appropriate in the second language.

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<sup>1</sup> The United Nations operates with six official languages (Arabic, Chinese, English, French, Russian, and Spanish), however this UNESCO Youth as Researchers project only utilized English and French therefore this study which examined the UNESCO project was only conducted in English and French.

Table 3.1 demonstrates the different steps that were involved in creating both the English and French versions of the Feedback Survey. These steps include early stage brainstorming amongst partners, and the initial scoping assessment that was administered to a broad youth population based on UNESCO contacts. Following this, the call for applicants was administered in the Summer of 2020, followed by an extensive amount of effort to ensure the program was both fair and equitably distributed. The first wave of the global version of the YAR program began in the Fall of 2020. While the second wave was being prepared, UNESCO contact remained with all applicants through the sharing of bi-weekly newsletters containing programmatic updates. In the Winter of 2020, the Feedback Survey used in this study was collected. More details on the populations of the scoping assessment, those who responded to the call for applicants, and the Feedback Survey can be found in the sample and population section of this chapter. The process of the development the program is relevant to understanding more about the composition of the unique population that this study is comprised of.

**Table 3.1***Youth as Researchers Program Initiatives*

Topic	Time Period	Activity
Initial programmatic ideas	March 2020	Emails and virtual brainstorming discussions
Project approval from the Director General of UNESCO	Early May, 2020	This approval was needed to ensure support from the international organization
Scoping survey gathering data from youth to aid in creating the program to be tailored to a global audience specific to the COVID-19 pandemic	Late May – early June 2020	The scoping assessment was sent out through UNESCO and partner organizations gathering youth feedback on their concerns from the pandemic. In total 762 eligible individuals responded to this survey
Call for YAR applicants	June 28th – July 12th 2020	A call for applicants to the YAR COVID-19 program was sent out, see Appendix B Over 6,000 forms completed in response to the call After screening for appropriate criteria, there were 5,581 young people who applied from 91 countries to participate in the program
Applicants from Asia, Europe, and North America were organized into teams	September 2020 – Summer 2021	27 programs in 56 countries are currently under operation; these groups were mobilized quickly due to the response in leadership in those areas
Feedback Survey used in this research was administered	November – December 2020	The Feedback Survey used in this study was sent out through UNESCO to all YAR applicants, details are found in the data collection section.
Applicants from Latin American, the Caribbean, and Africa were organized into teams	December 2020 – Summer 2021	In total 35 programs in over 65 countries are currently under operation; these groups were mobilized in a second wave due to challenges in leadership coordination in those regions.
Additional opportunities are developed and provided to YAR applicants who were not selected	November 2020 – Summer 2021	Due to space, many YAR applicants were not selected to participate in the program. Therefore, it was important to program developers to identify and offer additional opportunities such as assisting in translations, enumerating, and joining new adjacent program teams such as <i>communications</i> .

The YAR call to applicants was designed to indicate (1) what the program was about, (2) expectations of youth applicants during the program, and (3) anticipated outcomes from the program. An excerpt of the call to applicants is listed below, the full application call is found in Appendix C.

“Want to know how young people are being affected by the pandemic, show the world how young people are responding to COVID-19, or just to join in and do something positive? The Youth As Researchers (YAR) project, supported by UNESCO, the National University of Ireland Galway and Penn State University, is forming a global initiative to answer questions like these.” (Youth as Researchers call to applicants, Appendix C).

For purposes of clarity, not everyone who applied to the program was able to participate in the program. However, as it pertains to the ethics of this study, it is important to point out that additional opportunities have been and continue (as of this writing) to be presented to YAR applicants who were not selected to participate in the program.

### **Population and Sample**

The overall population for this study consisted of the global applicants to the YAR program when they applied to the program in June 2020. As the application to the program was available in French and English, the population reflects individuals who can speak one of the two languages. The population is comprised of young people from 91 countries aged 18-35 years. The age range was determined by UNESCO YAR leadership in alliance with the United Nations definition of *youth* and broader national definitions of *youth* (United Nations, 2021; African Union Commission, 2006). According to the United Nations 1.2 billion individuals in the world identifies as *youth* aged 15-24 years, this of course exclude those who identify as youth within our study frame of 18-35 years.

As this study does not intend to be generalizable to all young people in the world our target population reflects many attributes of the global population, however, is not comparable to that population. As indicated in the timeline above, there was a scoping assessment administered

by UNESCO in the spring of 2020. This assessment, administered through the same sampling techniques as the survey used in this study, obtained general demographic information, perceptions of the impacts of the Covid-19 pandemic, and initial areas of focus for youth participants. This assessment can represent a target population for the data of this study to be compared against. The scoping assessment was administered to a global population with a response of 762 young people that fit the criteria (being between the ages of 18-35 years, with the capabilities of reading English or French). Reference Table 3.2, to see the demographic characteristics identified within that assessment.

**Table 3.2**  
*Scoping Assessment Demographic Characteristics*

Scoping Assessment	18-21 years old (n=148)						22-35 years old (n=309)					
	Female		Male		Other		Female		Male		Other	
	n	%	n	%	n	%	n	%	n	%	n	%
N= 458												
Africa	28	18.92	12	8.11	0	0.0	24	7.77	40	12.94	0	0.0
Arabic Nations	3	2.03	7	4.73	0	0.0	15	4.85	12	3.88	0	0.0
Asia	31	19.59	23	15.54	1	0.68	64	20.71	56	18.12	1	0.32
Europe/North America	29	19.59	7	4.73	0	0.0	48	15.53	17	5.50	1	0.32
Latin & Central America	7	4.73	0	0.0	0	0.0	17	5.50	14	4.53	0	0.0
Total	98	64.86	49	33.11	1	0.68	168	54.37	139	44.98	2	0.65

To obtain the initial list of YAR applicants, UNESCO program leadership sent out a call to applicants throughout their networks and partner organizations networks. As indicated above in Table 3.1, the call for applicants was open for two weeks and was publicized in formal and informal avenues such as, UNESCO partner offices and via social media. The sample population

for this study consisted of the 5,581 applicants to the YAR program. Reference Table 3.3, to see the demographic characteristics identified within the YAR applicants.

**Table 3.3**  
*Call to Applicants Demographic Characteristics*

Applicants N = 5,581	18-22 years old (n=1053)						23-35 years old (n=4528)					
	Female		Male		Other		Female		Male		Other	
	n	%	n	%	n	%	n	%	n	%	n	%
Africa	24	2.28	27	2.56	0	0.0	211	4.66	295	6.52	0	0.0
Arabic Nations	94	8.93	53	5.03	0	0.0	374	8.26	260	5.74	0	0.0
Asia	391	37.13	231	21.94	7	0.67	1,177	25.99	836	18.46	12	0.27
Europe/North America	40	3.80	15	1.43	0	0.0	173	3.82	76	1.68	3	0.07
Latin & Central America	101	9.59	70	6.65	0	0.0	503	11.11	602	13.30	6	0.13
Total	650	61.73	396	37.61	7	0.66	2438	53.84	2069	45.69	21	0.46

In terms of the Feedback Survey used in this study, the researcher used nonprobability purposive sampling (Babbie, 2016). As our population consisted of 5,581 individuals, our sampling frame aimed to reach 907 respondents in line with a 97% confidence level, which would indicate that results from this are within plus or minus 3 percentage points of the study population parameter (Babbie, 2016; Krejcie & Mogan, 1970). As such, researchers did not place a boundary on who of the 5,581 applicants was to be contacted. Furthermore, researchers worked with UNESCO to send the Feedback Survey, used in this study, to the total sample population of 5,581. Reference Table 3.4, to see the demographic characteristics identified within the respondents to this study from the Feedback Survey.

**Table 3.4***Crosstab of Key Demographic Characteristics: age, gender, and region*

Feedback Survey	18-24 years old (n=675)						25-30 years old (n=594)						31-36 years old (n=279)					
	Female		Male		Other		Female		Male		Other		Female		Male		Other	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
N=1548																		
Africa (n=286)	41	6.07	45	6.67	2	0.30	62	10.49	84	14.21	2	0.34	18	6.45	32	11.47	0	0.0
Arabic Nations (n=139)	45	6.67	17	2.52	0	0.0	33	5.58	21	3.55	0	0.0	18	6.45	5	1.79	0	0.0
Asia (n=676)	230	34.07	106	15.70	10	1.48	119	20.14	96	16.24	5	0.85	36	12.90	74	26.52	0	0.0
ENA (n=50)	15	2.22	6	0.89	0	0.0	14	2.37	4	0.68	0	0.0	7	2.51	4	1.43	0	0.0
LAC (n=364)	94	13.93	48	7.11	2	0.30	58	9.81	81	13.71	3	0.51	24	8.60	54	19.35	1	0.36
Refugee/Other (n=33)	13	1.92	1	0.15	0	0.0	7	1.18	5	0.85	0	0.0	5	1.79	1	0.36	0	0.0
Total	438	64.89	223	33.04	14	2.07	293	49.34	291	49.24	10	1.18	108	38.71	170	60.93	1	0.36

While this study does not intend to be generalizable to all youths in the world within our age boundaries, the scoping assessment and list of applicants does provide a target population to compare to the Feedback Survey used in this research. In addition, raw numbers for populations based on similar age ranges were located from the United Nations population data based with data collected in 2019,

see Table 3.5 (United Nations, Department of Economic and Social Affairs, Population Division, 2019). This data provides a demonstration of how age, gender, and region are broken down when considering the global scale. Important notes associated with this table are that the age range varies based on data provided by the United Nations, therefore the age range used in this table is for individuals 15-34 years. This age selection was made as it was closest available data points. Additionally, this dataset does not differentiate Arab Nations and as indicated in the dataset these regions are split between Africa and Asia, specific countries were not provided in the dataset.

**Table 3.5**  
*United Nations Population Dataset*

UN Data* N=2,355,841,000	15-24 years' old N=1,155,619,000		25-34 years' old N=1,200,222,000	
	Female	Male	Female	Male
	%**	%	%	%
Africa	11.08	11.26	8.17	8.18
Arabic Nations***	-	-	-	-
Asia	29.39	32.30	30.09	32.41
Europe/North America	3.24	3.41	6.13	6.34
Latin & Central America	4.60	4.71	4.35	4.34
Total	48.30	51.70	48.73	51.27

\*United Nations, Department of Economic and Social Affairs, Population Division (2019)

\*\* Due to the large numerical value of the data, only percentages were provided for easy readability, raw data numbers can be found at the reference

\*\*\*Arabic Nations were not desegregated in data, and are distributed between Africa and Asia

This information becomes most pertinent when all four tables are examined against one another.

When all three studies are broadly compared, with youth age differences collapsed, the differences between the three sample populations and with the global comparison data is within plus or minus 10% across male and female characteristics. See Table 3.6, for reference. This demonstrates that the data from this study is comparable to global populations.

**Table 3.6**  
*Demographic Comparisons*

Regions	Scoping: ages 18-35 (n=457)		Applicants: ages 18-35 (n=5,558)		Feedback: ages 18-35 (n=1,548)		UN data: ages 15-35 (n= 2,355,841,000)	
	F	M	F	M	F	M	F	M
Africa	11.38%	11.38%	4.21%	5.77%	7.87%	10.47%	9.60%	9.70%
Arabic Nations	3.94	4.15	8.39	5.61	6.24	2.80	-	-
Asia	20.79	17.29	28.10	19.12	23.28	17.95	29.74	32.35
Europe/North America	16.85	5.25	3.82	1.63	2.34	0.91	4.71	4.91
Latin & Central America	5.25	3.06	10.82	12.04	11.44	11.9	4.5	4.52
Other/Refugee	-	-	-	-	1.63	0.05	-	-
Total*	58.21	41.14	55.33	44.17	52.8	44.47	48.52	51.48

\*For visual clarity, the ‘other’ category in gender identity has been omitted from this table

### **Instrument Development**

The Feedback Survey that was used in this study was developed for use in a larger study and was led by UNESCO YAR partners, including the researcher of this study. As such, the details of the survey as a whole will be briefly described. Following this, more detail describing the instruments used in this study will be provided.

### ***Instrumentation***

The Feedback Survey used in this study was developed over the Fall of 2020. In its design, the YAR leadership team aimed to capture information from the individuals that had applied to the program over the summer of 2020. As such,

the Feedback Survey consisted of five sections: (1) community interaction, (2) relationships, (3) civic engagement, (4) motivation, (5) demographics. The instruments used in this study were specifically found in the sections dedicated to (2) *relationships* (4) *motivation* and (5) *demographics*. Additionally, the survey was translated into French, as the program application was available in both English and French. See Appendix D for the full Feedback Survey.

The five-section survey was reviewed by a panel of experts and field tested to address validity and reliability. The panel of experts consisted of the YAR leadership team which comprised of youth development specialists and researchers from The Pennsylvania State University and The National University of Ireland: Galway; as well as youth program specialists and field agents from UNESCO and partners in France, Thailand, South Africa, Haiti, Pakistan, and Viet Nam. Their reviews and comments were taken into consideration by the research team. The survey was also field tested with previous YAR participants and applicants from the U.S., Ireland, and Viet Nam. Previous youth's comments were also taken into consideration and adjustments were made to the survey.

In terms of measurement tools used in this study, two established scales were used, and researcher created scale was used. The two established scales used were the Basic Need Satisfaction in General scale (Deci & Ryan, 2000; Gagné, 2003) and the Interpersonal Reactivity Index (Davis, 1980). Both of which were used to comprise the independent variables used in this study. To identify the dependent variable, the researcher worked with the panel of experts to create two scales used to identify personal motivation of YAR applicants and professional motivation of YAR applicants. More detail on each of these scales is provided below.

### ***Basic Needs Satisfaction Scale***

The Basic Psychological Needs scale was developed in 2001 and has been implemented in several studies over the past 20 years (Conroy & Coatsworth, 2007; Gagné, 2003; Kashdan, et al., 2006; Vansteenkiste et al., 2006). The Basic Need Satisfaction in General scale (Deci & Ryan, 2000; Gagné, 2003) was used to measure satisfaction of the needs for autonomy, competence, and relatedness; the three pillars of self-determination theory. The Basic Need Satisfaction scale consists of 21 items in total and a full example of the scale as it was used is available in Appendix D. The scale further assesses each item in a 7-point Likert-style scale where 1 equals *not at all true*, 4 equals *somewhat true*, and a 7 equals *very true*. To measure the internal validity within the scale itself, Cronbach's alpha scores can be conducted and used (Tavakol & Dennick, 2011). Cronbach's alpha creates a score between 0 and 1 and demonstrates how consistent individual scale items are when measured against each other. Thus, the test determines how well items in a scale measure the same concept. In the case of the Basic Need Satisfaction scale, there are three constructs being measured, that of *autonomy*, *relatedness*, and *competence*. Therefore, each construct receives its own reliability score (Johnston & Finney, 2010).

The Basic Needs Satisfaction scale consists of 21-items, seven of which are found throughout the scale identify with the construct *autonomy*. *Autonomy* is described as “the need to regulate one's experiences and actions” (Ryan, & Deci, 2017, pg. 10), an example of an *autonomy* item found within the scale is item one of the 21-item scale, “I feel like I am free to decide how to live my life.” Of the 7-items found within the scale, the scale authors have crafted three of these items in reverse, thus when analyzed they are to be reverse coded. This is done to help break up the mental response associated with items within a scale that are written in the same direction (Frey, 2018). An example of an item under the construct *autonomy* that needs to be reverse coded is item

four of the 21-item scale, “I feel pressured in my life.” When all 7-items under the construct of *autonomy* are assessed using the Cronbach’s alpha test, they receive an alpha score of  $\alpha = .69$  (Gagné, 2003) which is within an acceptable reliability range (Ursachi et al., 2015). The final score on a scale from 1 *not at all true* - 7 *very true* indicates the degree to which someone is satisfied with the need of *autonomy* (Deci & Ryan, 2000; Gagné, 2003).

The second construct being measured within the Basic Needs Satisfaction scale is *relatedness*. *Relatedness* refers to one’s interest and ability to be socially connected. Ryan and Deci (2017) describe the back and forth between being received socially and giving socially to others as being essential to relatedness and further describe it as “relatedness is also about belonging and feeling significant among others” (Ryan & Deci, 2017, pg. 11). There are 8-items that assess *relatedness* within the 21-item scale. An example of one is item two “I really like the people I interact with.” Of the 8-items assessing the construct of *relatedness* three of them are written in the opposite direction, again to break-up the mental response of respondents (Frey, 2018). An example of an item written in reverse is item seven of the 21-item scale “I pretty much keep to myself and don’t have a lot of social contacts.” When all 8-items under the construct of *relatedness* are assessed for reliability using the Cronbach’s alpha test, they receive an alpha score of  $\alpha = .86$  (Gagné, 2003) which is considered a very good reliability range (Tavakol & Dennick, 2011; Ursachi et al., 2015). The final score on a scale from 1 *not at all true* - 7 *very true* indicates the degree to which someone is satisfied with *relatedness* (Deci & Ryan, 2000; Gagné, 2003).

The final construct to be analyzed in the Basic Needs Satisfaction scale is that of *competence*. *Competence* is described as “our basic need to feel effectance and mastery. People need to feel able to operate effectively within their important life contexts” (Ryan, & Deci, 2017, pg. 11). There are six items assessing the construct of *competency*, an example can be found in

item five from the 21-item scale “People I know tell me I am good at what I do.” To break up the mental response with only answering one-direction items within a scale, the scale authors wrote three of the six questions in reverse (Frey, 2018). An example of an item written in the opposite direction is item three of the 21-item scale “Often, I do not feel very confident.” When all six items under the construct of *competence* are assessed for reliability using the Cronbach’s alpha test, they receive an alpha score of  $\alpha = .71$  (Gagné, 2003) which is within an acceptable reliability range (Tavakol & Dennick, 2011; Ursachi et al., 2015). The final score on a scale from 1 *not at all true* - 7 *very true* indicates the degree to which someone is satisfied with the need of *competency* (Deci & Ryan, 2000; Gagné, 2003).

### ***Interpersonal Reactivity Index***

The second scale used in this study was that of Davis’ (1980) empathy instrument the Interpersonal Reactivity Index. The original instrument consists of four sub-constructs, (1) *perspective taking*, (2) *fantasy*, (3) *empathetic concern*, and (4) *personal distress*. For this study, the researcher only examined two of the four sub-constructs, (1) *perspective taking* “the tendency to spontaneously adopt the psychological point of view of others” and (4) *empathetic concerns* “assesses ‘other-oriented’ feelings of empathy and concern for unfortunate others” (Davis, 1980, pg.1). This decision was deliberate in response to the study population and the desired understanding of empathy from the study population. Previous studies working with the YAR population have utilized this scale, specifically examining the two sub-constructs that were used in this study (Odera, 2018). The YAR program is heavily focused on action-research and working with others, including strangers. These elements partnered with the setting that YAR applicants participated in this study in a time of uncertainty, suggests that *perspective taking*, and *empathetic concern* are still the two key sub-constructs of the Interpersonal Reactivity Index that

are most appropriate for this study. In this study, the construct of *empathy* is determined by a summated score from the two sub-constructs of *empathetic concern* and *perspective taking*. In total, the construct of empathy consists of an 11-item scale, using a 5-item Likert scale response where 1 equals *strongly disagree* and 5 equals *strongly agree*. The higher summative score a participant receives on the construct, indicates a higher-level empathy for respondents. A full depiction of the scale used can be found in Appendix D.

The subscale *empathetic concern* consisted of 5-items in this study, an example can be found in item two of the 11-item scale “When I see someone being taken advantage of, I feel kind of protective towards them.” Of the five items assessing the *empathetic concern* two of them are written in the opposite direction, to break-up the mental response of respondents (Frey, 2018). An example of an item written in reverse is item four of the 11-item scale “Other people’s misfortunes do not usually disturb me a great deal.” The other sub-construct of *perspective taking* consisted of 6-items in this study, an example can be found in item one of the 11-item scale “I try to look at everybody’s side of a disagreement before I make a decision.” Of the six items assessing *perspective taking* one of them was written in the opposite direction, breaking up the mental response of survey respondents (Frey, 2018), this was item five of the 11-item scale “If I’m sure I’m right about something, I don’t waste much time listening to other people’s arguments.” The two sub-constructs of *empathetic concern* and *perspective taking* were summated in this study, creating the single construct of *empathy*. As such the 11-item scale as whole was assessed for reliability receiving a Cronbach’s alpha test of  $\alpha = .77$  which is within the acceptable reliability range (Odera, 2018; Tavakol & Dennick, 2011; Ursachi et al., 2015)

### ***Personal Motivation***

The researcher worked with the panel of experts to develop the two scales that when combined were used in assessing *personal motivation*. These experts included youth development specialists and researchers from The Pennsylvania State University and The National University of Ireland: Galway; as well as specialists and field agents from UNESCO and partners in France, Thailand, South Africa, Haiti, Pakistan, and Viet Nam. Furthermore, the two scales in question were then field tested with previous YAR participants and applicants from the U.S., Ireland, and Viet Nam. The two scales in question occur under the *motivation* section in the feedback survey. The first scale asks participants about their motivation to join the YAR program with a follow-up scale asking respondents about their expectations when applying to the YAR program. Collectively the two scales represent youth applicants' motivation to join the YAR program. In terms of analysis, the collective scale of motivation represents two constructs, *personal* motivation and *professional* motivation. When considering the 11-item motivation scale, an example of *personal* motivation can be found in item number one of the 11-item scale "I want to improve my research skills." When considering the 12-item expectation scale, an example of *personal* motivation can be found in item number five of the 12-item scale "The YAR experience would be personally challenge."

In total, the construct of *personal* motivation consists of an 11-item scale, using a five-item Likert scale response where 1 equals *strongly disagree* and 5 equals *strongly agree*. The higher summative score a participant receives on the construct, indicates a higher level of *personal* motivation for respondents. As such the 11-item scale as whole was assessed for reliability receiving a Cronbach's alpha test of  $\alpha = .870$  which is within the acceptable reliability

range (Odera, 2018; Tavakol & Dennick, 2011; Ursachi et al., 2015). Table 3.7 demonstrates an example of all the scales used in this study.

**Table 3.7**

*Demonstration of scales and item examples of scales used in this study*

Variable	Scale Used	Construct	Item Example
Independent Variables	Basic Need Satisfaction in General scale (Deci & Ryan, 2000; Gagné, 2003)	Autonomy	“I feel like I am free to decide for myself how to live my life”
		Relatedness	“I really like the people I interact with”
		Competence	I feel pressured inn my life (R)
Dependent Variable	Interpersonal Reactivity Index (Davis, 1980)	Empathy	“I try to look at everybody’s side of a disagreement before I make a decision”
	Developed for study by researcher and partners	Personal Motivation	“I want to improve my research skills”

## Data Collection

As described in the population and sample section, a census of all 5,581 YAR applicants was conducted, the researcher’s aim was to receive responses from at least 907 participants, thus receiving a 97% confidence level (Babbie, 2016; Krejcie & Mogran, 1970). In terms of reaching out to participants, researchers working with UNESCO utilized a modified Tailored Design Method (Dillman et al., 2014). Dillman, Smyth, and Christian (2014) speak of four cornerstones for quality surveys, *coverage error*, *sampling error*, *nonresponse error*, and *measurement error* (pg. 3). *Coverage error* addresses every member of a population having equal opportunity to be surveyed. In this study, the participant list that was used had been cleaned and contact information (emails) had been utilized by the UNESCO Youth as Researcher team prior to administering the feedback survey. As such, any unusable contact information had been filtered out. *Sampling error* is defined as the difference between when a specified percentage of the population is surveyed opposed to the entire population. In this study, researchers had the

complete list to survey, however it was known that 100% response rate was unlikely, therefore with a sample population of 5,581, researchers aimed and achieved a survey response of 907 individuals indicating a 97% confidence level, suggesting that the responses garnered are with plus or minus three percent of the population (Krejcie & Mogran, 1970; Babbie, 2016; Dillman et al., 2014). While there is still a chance of sampling error, measures were taken to minimize that risk through survey design and addressing the cornerstones of quality surveys.

*Nonresponse error* is identified as the difference between when data is only driven by those that responded to the survey not accounting for the data of those that did not. This study consists of secondary data and therefore addressing nonresponse error is complex, relies on the host organization of UNESCO to contact those that did not respond, and is ethically a non-option for the researcher to pursue. However, as suggested by Miller and Smith (1983) and Linder, Murphy, and Briers (2001) a t-test was run comparing early and late respondents on the dependent variable of *personal motivation* and was found to be non-significant suggesting that there is no significant difference between respondents. Additionally, due to the nature of how this data was collected, non-response data could not be followed up on and maintain ethical approval. Additionally, data comparing age, gender, and regional breakdowns across population and sample pool, as indicated in Table 3.6, suggests that data represented in this study accounts for respondents who did not complete the Feedback Survey used in this study. The final tenet of quality surveys is *measurement error* which is addressed through using reliable constructs that have been used with this population prior (Odera, 2018), and through techniques including a diverse panel of experts and field testing the instrument prior to administering the survey as discussed in instrumentation.

With the four quality measures in place, researchers followed Dillman, Smyth, and Christian's (2014) techniques in administering the survey. This included being cognizant of the population taking the survey and the myriad of challenges they faced including technological education, remote location, and disrupted internet access. These issues were addressed in the field tests. Furthermore, to ensure support participants completing the survey, measures such as shortened URL's for ease in participant access at every point the participants were reminded of the survey, quality control with the different survey taking devices (computer, mobile, etc.) that participants, and creating welcoming opening and closing screens for participants, were techniques used in developing the survey (Dillman et al., 2014).

To administer the survey, researchers were guided by a tailored design approach (Dillman et al., 2014). In this approach, researchers administered the survey in five different intervals, in modes that were welcomed by participants. These included the survey coming from a trusted source via the UNESCO YAR leadership, survey links being provided in existing newsletter information formats, and clarity on the way participation in the survey was not going to impact their participation in the YAR program. Details on the survey administration process are provided.

### ***Survey Administration***

The survey was administered by UNESCO YAR leadership via the platform Qualtrics. On October 27<sup>th</sup>, 2020 applicants were first notified of the survey through an online newsletter. This notification was to inform applicants that there was an upcoming opportunity to provide feedback and assist with further research. On November 3<sup>rd</sup>, 2020, the survey was sent out to all 5,581 applicants by UNESCO YAR leadership. Through this initial email, YAR applicants were provided information about the survey, who to contact for questions, and the survey link, in English. The French edition of the survey was still being finalized, however researchers were

concerned about abusing applicants time by withholding the survey any longer. The following week on November 11, 2020 the survey was sent out to applicants with the same provided materials however this time the message was in French, with a reminder note for the English version of the survey. Two weeks later, on November 30<sup>th</sup>, 2020 a reminder with survey links in both French and English was provided in the program’s online newsletter. An additional and final reminder of the survey was administered on December 21<sup>st</sup>, 2020, the survey closed on December 23<sup>rd</sup>, 2020. Please see Table 3.8 for details.

**Table 3.8**  
*Data and Description of Sample Population Responses*

Date: Winter 2020	Description of notification	Responses from Youth as Researcher Applicants	
		n	%
October 27 <sup>th</sup>	Online Newsletter, informing of upcoming survey	-	-
November 3 <sup>rd</sup>	All respondents were emailed in English with details about the survey, who to contact, and survey links	-	-
November 11 <sup>th</sup>	All respondents were emailed in French with details about the survey, who to contact, and survey links (EN & Fr)	2158	80.19%
November 30 <sup>th</sup>	Online newsletter reminder with survey links (EN & Fr)	2607	96.88%
December 21 <sup>st</sup>	Online newsletter reminder with survey links (EN & Fr)	2691	100.0%
December 23 <sup>rd</sup>	Survey is closed	2691	100.0%

### **Data Analysis Strategy**

In order to properly assess the Feedback Survey data the following steps were taken prior to any analysis being run. This process is considered the data cleaning stage and was essential to creating a workable dataset (Israel, 1992). Please see Table 3.9 for tabular details on changes to the number of responses for the Feedback Survey.

Data was collected on Qualtrics and therefore all English and French data was imported onto SPSS and both datasets were combined into one SPSS file. A codebook was created, and all Feedback Survey variables were coded into the SPSS file. The total number of participants prior to any data cleaning consisted of 2,691 English and French responses. Frequency tables were run on all key variables throughout the Feedback Survey, and it was decided that survey responses that did not complete at least 90% of the entire survey were removed, thus leaving 1,953 responses to the Feedback Survey. Frequency tables were run a second time on all key variables pertinent to this study, and the researcher coded all responses that had or had not completed at least 75% of the key independent and dependent variables of the study. Thus leaving 1,546 responses to be used in this analysis.

**Table 3.9**  
*Data Cleaning Process*

Data	n
Raw data no cleaning English and French versions	2691
Number of responses after deleting surveys that were missing 90% or more of survey as a whole	1953
Number of responses after deleting surveys that were missing 75% or more of key independent variables of <i>autonomy, relatedness, competency, and empathy</i>	1691
Number of responses after deleting surveys that were missing 75% or more of the four key independent variables and the dependent variable, <i>personal motivation</i>	1546

After all data cleaning was completed, the individual variables were assessed for their use in the study. These steps included creating a new variable for the regional clusters of individual home countries, reverse coding necessary items in the scales used, and creating indexed scores for the scales that were used to address *autonomy, relatedness, competence, empathy, and personal motivation*. To confirm that the items compositing all scales were reliable, Cronbach's

Alpha tests were run and confirmed to be viable for all scales. These scores can be found in the section addressing *instrumentation*.

Once the data was cleaned and new variables were created, the survey analysis was conducted through the analysis used, please see Table 3.10. This process began with a descriptive analysis to provide an overview of respondents and findings associated with the independent variables including key demographic characteristics, respondents scores on *autonomy*, *relatedness*, and *competency* and respondents' *empathy* scores. Bivariate analysis is then used to identify individual relationships between the independent variables and the dependent variable of *personal motivation*. Finally, multivariate analysis was completed to identify prediction of variation from the individual and indexed independent variables and the dependent variable.

**Table 3.10***Sequencing of Survey Development and Analysis*

Study Objectives	Variables	Questions in Instrument	Scale of measurement	Analysis method
RQ 1: Demographic Characteristics	Age, Gender, Region, Home Area, Household Interaction, Community Interaction	Q15, Q17, Q13, Q14, Q16, Q3	Nominal, Nominal, Interval, Nominal, Interval, Interval	<u>Descriptive Statistics:</u> frequencies, mean, SD <u>Inferential Statistics:</u> T-test, ANOVA
RQ 2: Autonomy	Basic Psychological Needs Scale: autonomy	Q6 Items: 1, 4, 8, 11, 14, 17, 20	Interval	<u>Descriptive Statistics:</u> frequencies, mean, SD <u>Inferential Statistics:</u> Multiple Linear Regression
RQ 3: Relatedness	Basic Psychological Needs Scale: relatedness	Q6 Items: 2, 6, 7, 9, 12, 16, 18, 21	Interval	<u>Descriptive Statistics:</u> frequencies, mean, SD <u>Inferential Statistics:</u> Multiple Linear Regression
RQ 4: Competence	Basic Psychological Needs Scale: competence	Q6 Items: 3, 5, 10, 13, 15, 19	Interval	<u>Descriptive Statistics:</u> frequencies, mean, SD <u>Inferential Statistics:</u> Multiple Linear Regression
RQ 5: Empathy	Interpersonal Reactivity Index: empathetic concern and perspective taking	Q7 Items: 1-11	Interval	<u>Descriptive Statistics:</u> frequencies, mean, SD <u>Inferential Statistics:</u> Multiple Linear Regression

RQ1 – RQ5: Personal Motivation	Researcher and partners developed scale assessing personal motivation	Q10 Items: 1, 4, 7, 10, 11 Q11 Items: 1, 5, 6, 8, 11, 12	Interval, Interval	<u>Descriptive Statistics:</u> frequencies, mean, SD
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## CHAPTER IV

### RESULTS

This section of the study begins by detailing the purpose and objectives, outlaying the research questions guiding the study, and a brief reminder of the theoretical framework guiding the study. This is followed by the descriptive analysis of study variables, a bivariate analysis, and finally a multivariate analysis exploring the relationship between the dependent variable and the independent variables.

#### **Purpose and Objectives**

This descriptive-correlational survey research design was crafted to understand the motivations of young people to engage in a program designed for youth change makers looking to impact their community. The purpose of this study was to then explore participants' personal motivation to engage in an international program, Youth as Researchers (YAR). To achieve this, the researcher used an assessment of basic psychological needs as identified in self-determination theory (Deci et al., 2001; Ryan & Deci, 2000, 2020). As well as exploring the connection of empathy to participants' motivation to engage, this is assessed through the Interpersonal Reactivity Index (Davis, 1980). These tools along with basic demographic characteristics were used to measure a researcher developed scale of personal motivation to participate in the UNESCO program, Youth as Researchers. The online YAR program consisted of young people aged 18-35 years and representing over 90 countries, who responded to a call for applications to participate in a youth-led research program with a focus on the COVID-19 pandemic and its implications for the young people of the world.

### Research Questions:

To guide this study, the following research questions were used:

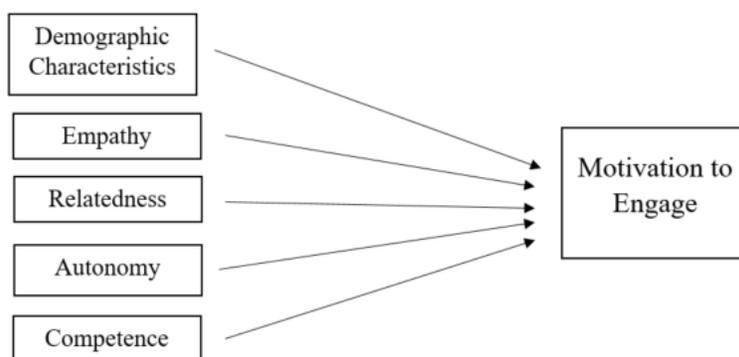
- 1) Determine to what extent youth participants' demographic characteristics predict respondents' personal motivation in the Youth as Researchers program.
- 2) Determine to what extent youth participants' autonomy scores predict respondents' personal motivation in the Youth as Researchers program.
- 3) Determine to what extent youth participants' relatedness scores predict respondents' personal motivation in the Youth as Researchers program.
- 4) Determine to what extent youth participants' competency scores predict respondents' personal motivation in the Youth as Researchers program.
- 5) Determine to what extent youth participants' empathy scores predict respondents' personal motivation in the Youth as Researchers program.

### Theoretical Framework:

To assist in the theoretical understanding guiding this study, Figure 4.1 shows the conceptual framework used in the study.

**Figure 4.1**

*Conceptual Framework*



### Survey Overview and Frequency of Responses

To understand the population of this study, this section will describe the demographic characteristics of participants, followed by respondent characteristics of the independent variables of *autonomy*, *relatedness*, *competence*, and *empathy*. This section will conclude with respondent characteristics of the dependent variable of *personal motivation*.

### *Descriptive Analysis: Demographic Characteristics*

Table 4.1 summarizes the age and gender of respondents. Youth respondent's age ranged from 18-36 years. Of note, by the time the Feedback Survey was administered some participants had turned 36 years of age, therefore all data from the Feedback Survey will include those aged 18-36 years. As described in the table, the youngest respondents, aged 18-24 years (44<sup>2</sup>%) were the largest represented group, followed by those aged 25-30 years (38%), and lastly the older contingency of youth aged 31-36 years (18%). A greater number of individuals identified as female (54%), with many of the remaining respondents identifying as male (44%).

**Table 4.1**  
*Demographic Variables: Age and Gender*

Age	n	% <sup>3</sup>
18-24 years	681	43.6
25-30 years	598	38.3
31-36 years	283	18.1
Total	1,562	100.0

Gender	n	%
Female	846	54.2
Male	690	44.2
Prefer not to say	15	1.0
Other	11	0.7
Total	1,562	100.0

In the Feedback Survey, respondents were asked explicitly *which country they call home*, as such, individual country information was collected and aggregated into regional categories.

Table 4.2 represents the regions which countries were grouped into, and the number of respondent's that comprise each region. The first section of the table describes the region each country was grouped into, the number of countries that represent each region (n), and the

<sup>2</sup> All percentages in the text have been rounded to the nearest whole number for clarity in reading, the percentage to the 10<sup>th</sup> decimal can be found in the tables.

<sup>3</sup> All percentages in all tables are rounded to the nearest decimal point

individual countries that comprise each country. Countries that had a larger representation of 10% or more of the total sample population include, Haiti (13%), and Pakistan (13%). Other notable countries are those that represented 5 -9.9 % of the sample population including India (6%), Nigeria (8%), and the Philippines (9%). Countries representing 2-4.9% of the sample population include, Argentina (2%), Bangladesh (4%), Brazil (2%), Egypt (5%), Kenya (3%), Peru (4%), Vietnam (2%), and those who indicated “other” (2%). All other remaining countries represented less than 2% of the sample population. In total there were 73 countries represented in this Feedback Survey. To better understand the population of this study, the 73 countries were divided into representative regions as indicated in Table 4.2. The largest represented region is that of Asia (44%), followed by Latin and Central America (LAC) (24%), Africa (19%), Arabic Nations (9%), Europe and North America (ENA) (3%), and finally Refugees/Other (2%).

**Table 4.2**  
*Country and Regional Breakdown*

Survey Question: What country do you call home?		
Region	n <sup>A</sup>	Countries
Africa	26	Benin (4)*, Botswana (2), Cameroon (6), Congo (1), Cote d'Ivoire (2), Ethiopia (1), Gabon (1), Gambia (1), Ghana (7), Kenya (47), Liberia (3), Madagascar (2), Mali (2), Malawi (6), Mozambique (3), Nigeria (119), Rwanda (7), Senegal (4), Sierra Leone (4), Sri Lanka (17), South Africa (5), Tanzania (10), Toga (1), Uganda (16), Zambia (9), Zimbabwe (7)
Arabic Nations	14	Algeria (3), Egypt (74), Iraq (19), Israel (1), Jordan (1), Lebanon (10), Morocco (7), Saudi Arabia (2), Somalia (1), Sudan (4), Syria (11), Tunisia (3), United Arab Emirates (2), Yemen (1)
Asia	20	Afghanistan (3), Australia (7), Bangladesh (69), Bhutan (2), Cambodia (3), China (9), Fiji (4), Indonesia (26), India (88), Japan (2), Malaysia (21), Mongolia (2), Myanmar (23), Nepal (29), New Zealand (1), Pakistan (215), Philippines (133), Thailand (6), Tonga (1), Vietnam (32)
Europe/ North America	16	Austria (1), Belgium (1), Bulgaria (1), Canada (4), France (2), Germany (1), Greece (2), Ireland (2), Italy (6), Kazakhstan (1), Mexico (10), Netherlands (0), Poland (1), Spain (2), United Kingdom (3), United States of America (10)
Latin and Central America	15	Argentina (31), Bolivia (3), Brazil (34), Chile (6), Colombia (7), Costa Rica (1), Dominican Republic (4), Ecuador (8), Haiti (205), Honduras (7), Jamaica (1), Peru (56), Portugal (1), Trinidad and Tobago (1), Uruguay (2)
Refugee/Other	33	n/a
Total	73	-

Region	n <sup>B</sup>	%
Africa	287	18.5
Arabic Nations	139	9.0
Asia	676	43.6
ENA	50	3.2
LAC	367	23.6
Refugee/Other	33	2.1
Total	1,552	100.0

\*Number in parenthesis represents respondents that identified that country as their home

<sup>A</sup> The number of countries in each region

<sup>B</sup> The number of respondents for each region

Additional demographic characteristics that were collected and inform on the study population include the *home area* that respondents acknowledged and identifying both the *household interactions* that respondents are associated with and the *community interactions* respondents experience. When asked *How would you describe your home?* over one-half of respondents (58%) identified a *City* as their home area. *Suburban* was the next largest area

described with 17% of respondents identifying that as their home area, followed by *Rural* (13%). Less than 10% of respondents identified *Village* (9%) and less than 5% of respondents identified *Other* (3%) as their home area, see Table 4.3.

**Table 4.3**

*Description of Home Area*

Survey Question: How would you describe your home?		
Setting	n	%
Village	136	8.7
Rural	197	12.6
Suburban	272	17.4
City	909	58.3
Other	46	2.9
Total	1560	100.0

To better understand the *household interactions* that respondents described in the Feedback Survey, researchers asked them to *share with us the number of people in your household (including you) that fit* (into one of four age group categories). The four age categories include *16 years or younger*, *between 17-35 years*, *between 36-60 years*, and *over 60 years*, and can be found in detail in Table 4.4. When considering those *16 years or younger*, 31% of respondents to the Feedback Survey described that they did not live with individuals in this category, while 25% of respondents indicated that they did live with one (1) person in this category, and 15% of respondents indicated living with at least two (2) individuals *aged 16 or younger*. The second age group category, *between 17-35 years*, had the greatest number of respondents (28%) indicated living with two (2) people in this category. This was followed by 21% of respondents living with three (3) people in this category, and closely followed by 20% of respondents indicating they lived with one (1) person *aged 17-35 years*.

When considering how many individuals between the *ages of 36-60 years* that respondents lived with, nearly one-half of respondents (49%) indicated that they lived with two (2) individuals in this category. This was followed by 26% of respondents indicating that they

lived with one (1) person between *the ages of 36-60 years*. The final age group category was for respondents to indicate how many individuals *over the age of 60 years* they lived with. Nearly one-half of respondents (44%) indicated that they lived with one (1) person in this category. This was followed by nearly one-quarter of respondents (24%) indicating that they live with zero (0) persons in this category, and then conversely the next largest percentage of respondents (21%) indicated they lived with two (2) individuals *over the age of 60 years*. An important note for *household interactions*, due to low response rate throughout the variable, this demographic characteristic will not be used in any further analysis.

**Table 4.4**  
*Household Interactions*

Age	0	1	2	3	4	5 & 6	7 & 8	9 & 10	n
16 or younger	377 30.7%	305 24.8%	182 14.8%	90 7.3%	77 6.3%	102 8.2%	59 4.8%	38 3.1%	1229
17-35 years	24 1.6	301 20.1	423 28.2	319 21.3	184 12.3	155 10.3	54 3.6	40 2.7	1500
36-60 years	94 7.1	346 26.0	654 49.1	94 7.1	46 3.5	43 3.2	33 2.5	23 1.7	1333
Over 60 years	191 23.7	356 44.2	169 21.0	34 4.2	17 2.1	26 3.2	4 0.5	8 1.0	805

In addition to *household interactions*, respondents were asked about *community interaction*. Specifically, respondents were asked *When thinking about your interactions with people, please describe how frequently you interact* with a list of seven groups of people. The seven groups of people consisted of *immediate family, extended family, in-person friends, online friends, classmates, people you work with, and acquaintances*. As seen in Table 4.5, respondents were able to indicate if they interacted daily, weekly, monthly, or not at all with the seven groups of people. When considering the greatest percentage of respondents for each category, with *immediate family*, respondents (88%) indicated having mostly daily interactions, whereas with

their *extended family* respondents (42%) had more weekly interactions. For *friends you know in person* respondents (47%) indicated the daily interactions as the most frequent, closely followed by weekly interactions (42%). For *online friends*, respondents (36%) described interacting with them on a weekly basis. Respondents (37%) indicated having daily interactions with their *classmates*, while when considering their *workmates*, respondents (67%) indicated having daily interactions. The final category of *acquaintances*, the greatest number of respondents (52%) indicated having monthly interactions.

**Table 4.5**

*Demographic Characteristic: community interactions*

Survey Question: When thinking about your interactions with people, please describe how frequently you interact with the following:

	n	Daily	Weekly	Monthly	Not at all
Immediate Family (parents, siblings)	1,676	88.3%	9.1%	2.1%	0.5%
Extended Family (cousins, aunts, uncles, etc.)	1,658	19.0	42.8	33.1	5.1
Friends you know in person	1,652	47.2	41.5	9.9	1.3
Friends you only know online	1566	20.1	35.6	28.4	16.0
Classmates	1641	36.9	33.3	22.4	7.5
People you work with	1609	66.6	22.7	6.7	4.0
Acquaintances (people you know but aren't close with)	1610	6.6	20.6	51.6	21.2

***Descriptive Analysis: Independent Variables and Dependent Variable***

With an understanding of the demographic characteristics that make-up this study, the next set of tables will be dedicated to the remaining key independent variables and finally the dependent variable. Question six of the survey consisted of 21-items based on the Self-Determination (Ryan & Deci, 2000). As indicated in Chapter 3, the 21-item scale was segmented into three sub-scales identifying the three components of self-determination theory: autonomy, competence, and relatedness. Table 4.6 describes the responses to the 7-items that described *autonomy*. This question asked respondents to identify “*When thinking about your life, how true*

*do you find the following statements?”* respondents were able to respond on a 1–7-point Likert scale, where 1 = Not at All True, 4 = Somewhat True, and 7 = Very True. When all 7-items were tested for reliability in addressing the construct of *autonomy*, they received an alpha score of  $\alpha = .64$ . This is considered within an acceptable reliability range (Ursachi et al., 2015) and is nearly identical to the alpha score associated with *autonomy* in the Basic Needs Satisfaction Scale (Deci & Ryan, 2000; Gagné, 2003), which had an alpha score of  $\alpha = .69$  (Gagné, 2003). In general, respondents tended to lean towards a higher *autonomy* score across all 7-items, indicating that respondents had higher levels of this basic need at the time of the Feedback Survey.

**Table 4.6***Independent Variable Autonomy*

Survey Question: When Thinking about your life:	Not at all True (1)	(2)	(3)	Somewhat True (4)	(5)	(6)	Very True (7)	n
(R*) I feel pressured in my life	175 10.5%	148 8.9%	195 11.7%	512 30.8%	184 11.1%	189 11.4%	262 15.7%	1665
I feel like I am free to decide how to live my life	45 2.7	39 2.3	50 3.0	312 18.6	205 12.2	348 20.8	677 10.4	1676
I generally feel free to express my ideas and opinions	20 1.2	29 1.7	51 3.1	227 13.7	249 15.0	430 25.9	655 39.4	1661
(R) In my daily life, I frequently have to do what I am told	185 11.1	196 11.7	251 15.0	431 25.8	202 12.1	210 12.6	194 11.6	1669
People I interact with on a daily basis tend to take my feelings into consideration	24 1.4	45 2.7	67 4.0	354 21.4	302 18.2	476 28.7	390 23.5	1658
I feel like I can pretty much be myself in my daily situations	38 2.3	44 2.7	86 5.2	313 19.0	266 16.2	400 24.3	499 30.3	1646
(R) There is not much opportunity for me to decide for myself how to do things in my daily life	75 4.6	72 4.4	208 12.6	269 16.3	90 5.5	393 23.9	540 32.8	1647

\*an (R) next to an item indicates that it was reverse coded

Indexed autonomy scale:  $\alpha = .64$ ,  $M = 35.74$ ,  $SD = 6.08$

The self-determination theory construct of *relatedness* consisted of 8-items and was found in question six of the Feedback Survey. To assess *relatedness*, respondents addressed the question *When thinking about your life, how true do you find the following statements?* where they responded to a 1–7-point Likert scale, where 1 = Not at All True, 4 = Somewhat True, and 7 = Very True, as seen in Table 4.7. When all 8-items were tested for reliability in addressing the construct of *relatedness* they received an alpha score of  $\alpha = .76$ . This is considered within an acceptable reliability range (Ursachi et al., 2015) and is similar to the alpha score

associated with *relatedness* in the Basic Needs Satisfaction Scale (Deci & Ryan, 2000; Gagné, 2003), which had an alpha score of  $\alpha = .86$  (Gagné, 2003). In general, respondents tended to lean towards a higher *relatedness* score across all 8-items, indicating that respondents had higher levels of this basic need at the time of the Feedback Survey.

**Table 4.7**

*Independent Variable: Relatedness*

Survey Question: When Thinking about your life:	Not at all True (1)	(2)	(3)	Somewhat True (4)	(5)	(6)	Very True (7)	n
I really like the people I interact with	15 0.9%	24 1.4%	33 2.0%	274 16.3%	261 15.6%	461 27.5%	609 36.3%	1677
I get along with the people I come into contact with	20 1.2	25 1.5	53 3.2	251 15.0	287 17.2	481 28.8	553 33.1	1670
(R*) I pretty much keep to myself and don't have a lot of social contacts	544 32.4	317 18.9	232 13.8	292 17.4	124 7.4	81 4.8	90 5.4	1680
I consider the people I regularly interact with to be my friends	59 3.5	51 3.0	121 7.2	359 21.4	272 16.2	398 23.7	416 24.8	1676
People in my life care about me	16 1.0	19 1.1	40 2.4	228 13.7	205 12.3	426 25.6	727 43.8	1661
(R) There are not many people that I am close to	387 23.4	254 15.3	235 14.2	338 20.4	157 9.5	137 8.3	148 8.9	1656
(R) The people I interact with regularly do not seem to like me much	658 39.9	455 27.6	213 12.9	180 10.9	59 3.6	6 2.8	38 2.3	1649
People are generally pretty friendly towards me	27 1.6	29 1.8	57 3.5	284 17.2	282 17.1	489 29.6	484 29.3	1652

\*An (R) next to an item indicates that it is reverse coded

Indexed relatedness scale:  $\alpha = .76$ ,  $M = 43.55$ ,  $SD = 7.26$

The self-determination theory construct of *competence* consisted of 6-items and was found in question six of the Feedback Survey. To assess *competence*, respondents addressed the question *When thinking about your life, how true do you find the*

following statements? where they responded to a 1–7-point Likert scale, where 1 = Not at All True, 4 = Somewhat True, and 7 = Very True, as seen in Table 4.8. When all 6-items were tested for reliability in addressing the construct of *competence* they received an alpha score of  $\alpha = .72$ . This is considered within an acceptable reliability range (Ursachi et al., 2015) and is nearly identical to the alpha score associated with *competence* in the Basic Needs Satisfaction Scale (Deci & Ryan, 2000; Gagné, 2003), which had an alpha score of  $\alpha = .71$  (Gagné, 2003). In general, respondents tended to lean towards a higher *competence* score across all 6-items, indicating that respondents had higher levels of this basic need at the time of the Feedback Survey.

**Table 4.8**

*Independent Variable: Competence*

Survey Question: When Thinking about your life:	Not at all True (1)	(2)	(3)	Somewhat True (4)	(5)	(6)	Very True (7)	n
(R*) Often I do not feel very competent	464 27.5%	331 19.6%	207 12.3%	381 22.6%	140 8.3%	100 5.9%	63 3.7%	1686
People I know tell me I'm good at what I do	18 1.1	18 1.1	33 2.0	193 11.5	249 14.8	467 27.7	706 41.9	1684
I have been able to learn interesting new skills recently	19 1.1	22 1.3	47 2.8	163 9.8	212 12.7	400 24.0	803 48.2	1666
Most days I feel a sense of accomplishment from what I do	35 2.1	56 3.4	65 3.9	294 17.7	255 15.3	441 26.5	517 31.1	1663
(R) In my life I do not get much of a chance to show how capable I am	283 17.0	321 19.3	236 14.2	400 24.0	169 10.2	115 6.9	140 8.4	1664
(R) I often do not feel very capable	601 36.4	391 23.7	191 11.6	281 17.0	82 5.0	64 3.9	39 2.4	1649

\*An (R) next to an item indicates it has been reverse coded  
Indexed competence scale:  $\alpha = .72$ ,  $M = 32.52$ ,  $SD = 5.83$

In addition to the three constructs of self-determination theory, this study also explored the role of empathy through the Interpersonal Reactivity Index (Mark H. Davis, 1983). This scale was found in question seven of the Feedback Survey and consisted of 11-items, where respondents addressed the question *This last question of this section discusses your perspective on what happens to other people, how strongly do you agree or disagree with the following statements?* Respondents addressed the question in a five-point Likert scale where 1= Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, and 5 = Strongly Agree. The overall responses to the Interpersonal Reactivity Index can be found in Table 4.9. When all 11-items were tested for reliability in addressing the construct of *empathy* they received an alpha score of  $\alpha = .73$ . This is considered within an acceptable reliability range (Ursachi et al., 2015) and is similar to the alpha score associated with empathy which had an alpha score of  $\alpha = .77$  when Odera (2018) utilized the same scale with the same Youth as Researchers program, however with a different population.

**Table 4.9***Independent Variable: Empathy*

Survey Question: When Thinking about your life:	Strongly Disagree (1)	Disagree (2)	Neither Agree/Disagree (3)	Agree (4)	Strongly Agree (5)	n
I try to look at everybody's side of a disagreement before I make a decision	18 1.1%	43 2.6%	172 10.3%	728 43.4%	716 42.7%	1677
When I see someone being taken advantage of, I feel kind of protective towards them	18 1.1	63 3.8	186 11.2	752 45.1	647 38.8	1666
I sometimes try to understand my friends better by imagining how things look from their perspective	5 0.3	16 1.0	93 5.6	785 47.2	763 45.9	1662
(R*) Other people's misfortunes do not usually disturb me a great deal	526 31.8	549 33.2	322 19.5	191 11.5	67 4.0	1655
(R) If I'm sure I'm right about something, I don't waste much time listening to other people's arguments	333 19.9	632 37.8	301 18.0	268 16.0	136 8.1	1670
(R) When I see someone being treated unfairly, I sometimes don't feel very much pity for them	840 50.4	559 33.5	102 6.1	103 6.2	63 3.8	1667
I am often quite touched by things that I see happen	22 1.3	71 4.3	241 14.5	786 47.3	542 32.6	1662
I believe that there are two sides to every question and try to look at them both	9 0.5	18 1.1	119 7.2	679 41.2	825 50.0	1650
I would describe myself as a pretty soft-hearted person	14 0.8	60 3.6	322 19.4	676 40.7	590 35.5	1662
When I'm upset at someone, I usually try to "put myself in his shoes" for a while	39 2.3	103 6.2	305 18.4	772 46.5	443 26.7	1662
Before criticizing somebody, I try to imagine how I would feel if I were in their place	7 0.4	43 2.6	191 11.5	778 46.7	647 38.8	1666

\*An (R) next to an item indicates it has been reverse coded

Indexed empathy scale:  $\alpha = .73$ ,  $M = 45.07$ ,  $SD = 5.02$

The independent variables in this study consisted of demographic characteristics (age, gender, home area, community interaction), the three constructs of self-determination theory (autonomy, relatedness, competence), and the construct of empathy, all of which were analyzed individually and across each other, to better understand the dependent variable of personal motivation. Personal motivation was assessed through questions ten and eleven in the Feedback Survey. Question ten consisted of an 11-item scale developed by the UNESCO team and partners and asked respondents to address the statement *We're looking to understand your motivation to participate in the Youth as Researchers program, when thinking about why you want to participate in the program, please indicate how strongly you agree or disagree with the following statements*, five items from this scale were used to assess personal motivation, the remaining six items were used to assess motivation to participate with others and will not be addressed in this study. Respondents addressed the question in a five-point Likert scale where 1= Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, and 5 = Strongly Agree.

Question eleven in the Feedback Survey (Table 4.10) consisted of a 12-item scale developed by the UNESCO team and partners and asked participants to respond to the following statement, *You probably also have expectations for the Youth as Researcher's program, in this question we'd like to understand what those are. Please indicate how strongly you agree or disagree with the following statements about your expectations of the Youth as Researchers program*. Respondents addressed the question in a five-point Likert scale where 1= Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, and 5 = Strongly Agree. Six items from this scale were used in conjunction with the five items from question ten, to create the 11-item scale used to identify personal motivation. The remaining five items from question eleven were used to assess motivation to participate with others and will not be discussed in this study.

Further specific details on how items were developed by the UNESCO team and partners can be found in the Methods Section of this dissertation. When all 11-items were tested for reliability in addressing the construct of *personal motivation*, they received an alpha score of  $\alpha = .82$ . This is considered within an acceptable reliability range (Ursachi et al., 2015). Please see Table 4.10 for details. In general, respondents tended to lean towards a higher *personal motivation* score across all 11-items, indicating that respondents had higher levels internal motivation at the time of the Feedback Survey.

**Table 4.10***Dependent Variable: Personal Motivation*

Survey Question: When thinking about why you want to participate in the program:	Strongly Disagree (1)	Disagree (2)	Neither Agree/Disagree (3)	Agree (4)	Strongly Agree (5)	n
I want to improve my research skills	9 0.6%	7 0.5%	16 1.0%	275 17.8%	1238 80.1%	1545
Being a YAR participant would benefit me personally	11 0.7	31 2.0	120 7.8	502 32.8	865 56.0	1529
Being a YAR participant was a way to take action in response to COVID-19	6 0.4	13 0.8	95 6.2	456 29.7	965 62.9	1535
I saw the benefit UNESCO programs have offered others	31 2.0	76 5.0	261 17.1	478 31.3	682 44.6	1528
I want to improve my networks with like-minded young people	2 0.1	3 0.2	38 2.5	380 24.7	1114 72.5	1537
I would use the skills gained during my YAR experience in my personal life	6 0.4	10 0.5	45 2.9	445 28.7	1046 67.4	1552
The YAR experience would be personally challenging	21 1.4	71 4.6	199 12.9	529 34.4	720 46.8	1540
The YAR program would increase my confidence in myself	4 0.3	15 1.0	62 4.1	409 26.6	1045 68.15	1535
I would be more connected to my family	24 1.6	83 5.4	408 26.6	530 34.6	487 31.8	1532
The YAR international networks would benefit me personally	12 0.8	23 1.5	114 7.4	538 34.9	853 55.4	1540
The YAR national networks would benefit me personally	12 0.8	24 1.6	119 7.7	521 33.9	861 56.0	1537

Indexed personal motivation scale:  $\alpha = .82$ ,  $M = 48.68$ ,  $SD = 5.03$

### **Bivariate Analysis**

After describing the descriptive statistics for each of the main variables in the study, the researcher established a conservative rule on what respondent cases were to be considered for further statistical analysis. Therefore, the following analysis consists of respondents who completed at least 75% of each of the four key independent variables (autonomy, relatedness, competence, and empathy) and the dependent variable (personal motivation). In the descriptive analysis section in this chapter, the total number of responses analyzed consisted of  $n=1953$ , after the conservative rule was applied the total number of responses analyzed was  $n=1546$ . The responses were left in throughout the descriptive analysis to provide an accurate depiction of overall responses to all variables analyzed. After the conservative rule was in place, descriptive analysis was run again and the mean difference for each of the main indexed independent variables and indexed dependent variable was within a tenth decimal percent (0.1%) of prior to the conservative rule. This approach follows Babbie (2016)'s suggestion in cleaning data and allowing for enough cases to remain present in the analysis.

With the conservative rule in place, statistical tests were run to explore the relationships between the independent variables and the dependent variable. To meet the statistical assumptions of the bivariate and multivariate analysis, four outlier cases were removed due to their notably lower scores across key variables, thus creating a total respondent list of  $n=1542$ . Table 4.11, demonstrates the indices created for each appropriate construct in this study. The items that created each index had a strong Cronbach's Alpha that, when applicable mirrored many of the results of past studies indicating strong reliability between items that were consistent with previous research. This measure supports the indexed scales being used for variable comparison and for these scales being consistent throughout usage.

**Table 4.11***Indexed Items: Independent and Dependent Variables*

	n	Summated Mean Score	Theoretical Midpoint	Standard Deviation	Mean Statement Score	Mean Statement SD
DV: Personal Motivation (11-55)*	1423	48.68	33	5.03	4.43 <sup>A</sup>	0.74
Autonomy (7-49)	1471	35.74	28	6.08	5.11 <sup>B</sup>	1.58
Relatedness (8-56)	1488	43.55	32	7.26	5.45 <sup>B</sup>	1.51
Competence (6-42)	1476	32.52	24	5.83	5.42 <sup>B</sup>	1.51
Empathy (11-55)	1476	45.07	33	5.02	4.09 <sup>A</sup>	0.89
Community Interaction (7-21)	1298	14.84	14	2.47	2.12 <sup>C</sup>	0.35

\*Numbers in parenthesis indicate theoretical range of scores for each question

<sup>A</sup> Scale range:1-5

<sup>B</sup> Scale range:1-7

<sup>C</sup> Scale range:1-3

### ***Pearson's Correlation***

Correlations were performed to establish a relationship between the independent variables of *autonomy*, *relatedness*, *competence*, *empathy*, and *community interaction* and the dependent variable of *personal motivation*. Independent variable indices were used for the analysis and can be seen in Table 4.12.

**Table 4.12***Pearson's Correlation Independent Variables to Dependent Variable*

Self-Determination Concept	n	Summated Mean Score	Standard Deviation	Pearson Correlation
DV: Personal Motivation (11-55) *	1423	48.68	5.03	1
IV: Autonomy (7-49)	1471	35.75	6.08	.084**
IV: Relatedness (8-56)	1463	43.55	7.26	.158**
IV: Competence (6-42)	1488	32.52	5.83	.112**
IV: Empathy (11-55)	1476	45.07	5.02	.240**
DC: Community Interaction (7-21)	1298	14.84	2.47	.092**

\*Numbers in parenthesis indicate theoretical range of scores for each question

\*\*Correlation significant at the  $p < 0.01$  level

Further tests of association were completed exploring all items that created each of summated scales and the majority of each item was found to be significant at the  $p < 0.01$  level. From the seven-questions addressing *autonomy* all were found to be significant at the  $p < 0.01$  level, excluding question 20 (significant at the  $p < 0.05$  level), and question four (not significant).

Of the eight items assessing *relatedness*, question 18 was found to be significant at the  $p < 0.05$  level, while questions seven, and 16 were found to not be significant. In terms of *competence* two of the six items assessing this construct were found to have no significance to the dependent variable of persona motivation. It is worth noting that all of the afore mentioned questions were negatively worded questions within the self-determination scale, it is also worth noting that there were two negative wording questions from the self-determination scale that were significant at the  $p < 0.01$  level. In terms of the construct of empathy, all eleven items were analyzed for correlations to the dependent variable and were found to be significant at the  $p < 0.01$  level, with two exceptions; question five was significant at the  $p < 0.05$  level, and question four was found to not be significant. It is of worth here that these two questions were two out of the three negatively worded questions for this construct.

#### ***T-Tests Analysis:***

To better understand the demographic characteristics an independent t-test was conducted to compare the dependent variable of *personal motivation* between the two genders of *female* and *male*. Of note, *gender* was recoded into two variables (male and female), to allow for enough cases for statistical tests. The dependent variable of *personal motivation* was non-significant when compared between genders. Further tests were run to compare gender against the independent variable indices of *autonomy*, *relatedness*, *competence*, *empathy*, and *community interaction*. *Autonomy* and *relatedness* were non-significant when compared against gender, however the remainder independent variable indices were statistically significant.

When considering *competency* and *gender*, there was a significant difference in the scores for female ( $M=32.24$ ,  $SD=5.84$ ) and male ( $M=32.97$ ,  $SD=5.79$ ); ( $t(1434) = -2.34$ ,  $p=.020$ ).

Indicating that males demonstrated higher scores in *competency* than females. When considering *empathy* and *gender*, there was a significant difference in the scores for female ( $M=45.46$ ,

SD=4.75) and male (M=44.72, SD=5.29); (t (1423) = 2.77,  $p=.006$ ). Indicating that females demonstrated higher scores in *empathy* than males. When considering demographic characteristics *age* there was a significant difference in the scores for female (M=1.60, SD=.70) and male (M=7.92, SD=.75); (t (1484) = -8.24,  $p=.000$ ). This indicates that there were a greater number of males in the younger age categories within this study. When *home area* was compared with *gender* there was a significant difference in the scores for female (M=3.37, SD=.96) and male (M=3.19, SD=1.04); (t (1442) = 3.55,  $p=.000$ ). Based on how *home area* was coded this is indicative of females living in increasingly urban settings when compared to males. The final demographic characteristic compared with *gender* was that of the *community interaction* index. When considering *community interaction* and *gender*, there was a significant difference in the scores for female (M=14.51, SD=2.37) and male (M=15.23, SD=2.50); (t (1250) = -5.26,  $p=.000$ ). Indicating that there is less *community interaction* for males when compared to females.

**Table 4.13**  
*T-Tests of Gender and Independent Variables*

Construct	Gender	n	M	SD	F	T
Competency	Female	795	32.24	5.79	0.039	-2.34*
	Male	641	32.97	5.84		
Empathy	Female	786	45.56	4.75	8.978	2.77**
	Male	639	44.72	5.29		
Age	Female	824	1.60	0.70	2.992	-8.24***
	Male	662	7.92	0.75		
Home Area	Female	797	3.37	0.96	9.634	3.55***
	Male	647	3.19	1.04		
Community Interaction	Female	669	14.51	2.37	0.655	-5.26***
	Male	583	15.23	2.50		

\*indicates significance at the  $p<.05$  level

\*\*indicates significance at the  $p<.01$  level

\*\*\*indicates significance at the  $p<.001$  level

### *Analysis of Variance (ANOVA)*

When considering the demographic characteristics and how they related to the dependent variable of *personal motivation* an ANOVA statistic was computed. The demographic characteristics explored were those of *age*, *region*, *home area*, and *community interaction*. To assess these with the appropriate number of cases, *age* was recoded into three variables (18-24 years, 25-30 years, and 31-36 years), *region* maintained the same categories as has previously been stated (Africa, Arabic Nations, Asia, Europe/North America, Latin and Central America, and Refugees/Other). *Home area* was recoded into four variables (village, rural, suburban, and city), and *community interaction* was recoded into three variables (not at all/monthly interaction, weekly interaction, and daily interaction).

Of all demographic variables explored with the dependent variable, only two were statistically significant. Table 4.14 demonstrates the scores for *personal motivation* and demographic characteristics with all the mean scores being above the theoretical midpoint of *personal motivation* (as noted in Table 4.11, the theoretical range for *personal motivation* is 11-55, with a theoretical midpoint of 33). The two variables that were statistically significant ( $p < 0.001$  level) were *age* and *region*. As there was a statistically significant difference between *age* groups as determined by one-way ANOVA ( $F(2,1405) = 7.596, p = 0.001$ ), a Tukey post hoc test revealed that youth aged 18-24 years had statistically higher *personal motivation* scores ( $49.14, \pm 4.64, p = .000$ ) when compared to youth aged 31-36 years. Furthermore, youth aged 25-30 years had statistically higher *personal motivation* scores ( $48.67, \pm 4.93, p = .024$ ) when compared to older youth aged 31-36 years.

Additionally, as there was a statistically significant difference between *region* groups as determined by a one-way ANOVA ( $F(5,1396) = 4.486, p = .000$ ), therefore a Tukey post hoc test

was run. The Tukey post hoc test revealed that *personal motivation* scores were statistically lower for Latin and Central America (LAC) when compared with Africa (49.16,  $\pm$  4.58,  $p=$  .008), Arabic Nations (49.50,  $\pm$  4.29,  $p=$  .008), and Asia (48.96,  $\pm$  5.18,  $p=$  .003). This is indicative of respondents who identified with a LAC country being less *personally motivated* when compared to their peers in *Africa, Arabic Nations, and Asia* regions. See Table 4.14.

**Table 4-14**

*ANOVA of Personal Motivation and Demographic Characteristics*

		n	M*	SD	F
Age	^18-24 years	603	49.14	4.64	7.596***
	^25-30 years	549	48.68	4.93	
	31-36* years	256	47.70	5.71	
Region	^Africa	251	49.16	4.58	4.486***
	^Arabic N.	127	49.50	4.29	
	^Asia	611	48.96	5.17	
	ENA	45	47.58	6.57	
	∇ LAC	339	47.73	4.82	
	Other/Refuge	29	48.58	4.89	

^ indicates statistically higher scores in post hoc analysis, see text above for details

∇ indicates statistically lower scores in post hoc analysis, see text above for details

\*\*\*significant at the  $p<0.001$  level

To further assess the relationships between demographic characteristics and the remaining independent variables, additional analysis was run. When considering *gender*, analysis can be found in Table 4.13, additional ANOVA test were run comparing *age* and the remaining independent variables. Consistently across *autonomy, competency, and relatedness* the younger age group (18–24-year-olds) were statistically more likely to score higher scores in each area compared to older age groups.

As region will not be explored in further analysis, an in-depth look at the ANOVA results comparing regions with each of the independent variables is provided. When considering *autonomy* scores and how they compared across regions, a one-way ANOVA ( $F(5,1431) = 12.543, p= .000$ ) was run. A Tukey post hoc revealed that Arabic Nations ( $33.91 \pm 6.45, p= .000$ )

and Asia ( $34.75 \pm 5.98, p = .000$ ) scored statistically lower *autonomy* scores when compared to Africa ( $37.53 \pm 5.71, p = .000$ ) and Latin and Central America ( $35.90 \pm 5.89, p = .000$ ). When considering *competence* scores and how they compare across regions, a one-way ANOVA ( $F(5, 1446) = 12.405, p = .000$ ) was run. A Tukey post hoc revealed that Africa's ( $34.40, \pm 5.29$ ) *competence* scored was statistically higher compared to Arabic Nations ( $31.41, \pm 5.65, p = .000$ ), Asia ( $31.55, \pm 5.94, p = .000$ ), and European/North American ( $31.68, \pm 6.086, p = .032$ ). Additionally, Latin and Central American ( $33.45, \pm 5.61$ ) *competence* scores were statistically higher than those of Arabic Nations ( $31.41, \pm 5.65, p = .008$ ) and Asia ( $31.55, \pm 5.94, p = .000$ ).

When considering *relatedness* scores and how they compare across regions, a one-way ANOVA ( $F(5, 1423) = 7.120, p = .000$ ) was run. A Tukey post hoc revealed that Africa ( $44.04, \pm 7.03$ ) had statistically higher *relatedness* scores when compared to Asia ( $42.54, \pm 7.45, p = .050$ ). Arabic Nations ( $42.44, \pm 6.71, p = .004$ ) and Asia ( $42.54, \pm 7.45, p = .000$ ) scored statistically lower *relatedness* scores compared to Latin and Central America ( $45.16, \pm 6.94$ ). When considering *empathy* scores and how they compare across regions, a one-way ANOVA ( $F(5, 1433) = 10.496, p = .000$ ) was run. A Tukey post hoc revealed that Africa ( $46.61, \pm 4.83$ ) *empathy* scores were statistically higher than Arabic Nations ( $43.91, \pm 4.63, p = .000$ ), and Asia ( $44.38, \pm 5.01, p = .000$ ). Furthermore, Latin and Central America ( $45.74, \pm 4.78$ ) scores statistically higher *empathy* scores than Asia ( $44.38, \pm 5.01, p = .001$ ) and Arabic Nations ( $43.91, \pm 4.63, p = .005$ ).

When exploring *home area* and regions, a one-way ANOVA ( $F(5, 1455) = 10.556, p = .000$ ) was run. A Tukey post hoc revealed that Africa ( $2.93, \pm .93$ ) was statistically more rural when compared to all other major regions; Arabic Nations ( $3.56, \pm .98, p = .000$ ), Asia ( $3.35, \pm 1.02, p = .000$ ), and Europe and North America ( $3.40, \pm .90, p = .029$ ). The final variable explored with *regions* was that of *community interaction*. To assess this relationship a one-way ANOVA ( $F(5, 0,$

1258), = 10.301,  $p = .000$ ) was run. A Tukey post hoc test revealed that Africa (15.52,  $\pm 2.52$ ) had statistically higher community interaction when compared with Arabic Nations (14.51,  $\pm 2.22$ ,  $p = .003$ ), Asia (14.53,  $\pm 2.49$ ,  $p = .000$ ), and Europe and North America (13.37,  $\pm 2.40$ ,  $p = .000$ ).

Furthermore, Asia (14.53,  $\pm 2.49$ ) had statistically higher *community interaction* scores compared to Europe and North America (13.37,  $\pm 2.40$ ,  $p = .030$ ), but statistically lower *community interaction* scores compared to Latin and Central America (15.17,  $\pm 2.13$ ,  $p = .004$ ). Finally, Europe and North America (13.37,  $\pm 2.40$ ) had statistically lower *community interaction* scores when compared to Latin and Central America (15.17,  $\pm 2.13$ ,  $p = .000$ ). See Table 4.15 for details.

Across the board, index measures lean towards Africa scoring higher in *autonomy*, *relatedness*, *competency*, and *empathy*, notably in comparison to Asia and Arabic Nations. Additionally, Africa was found to be more rural *home area* in comparison to other regions, and Africa was found to be higher in *community interaction* in comparison to other regions. See table 4.15 for details.

**Table 4.15**  
*ANOVA of Region and Independent Variables*

Index	Region	n	M	SD	F
Autonomy	^Africa	266	37.53	5.71	12.543***
	∨ Arabic N.	127	33.91	6.45	
	∨ Asia	629	34.75	5.99	
	ENA	49	36.45	6.45	
	^LAC	336	36.70	5.89	
	Other/Refuge	30	35.90	5.83	
Competence	^Africa	264	34.40	5.29	12.405***
	∨ Arabic N.	128	31.41	5.65	
	∨ Asia	640	31.55	5.93	
	∨ ENA	47	31.68	6.09	
	LAC	344	33.44	5.61	
	Other/Refuge	29	32.17	5.63	
Relatedness	^Africa	267	44.04	7.13	7.120***
	∨ Arabic N.	125	42.45	6.71	
	∨ Asia	621	42.54	7.45	
	ENA	48	45.02	6.47	
	LAC	338	45.17	6.95	
	Other/Refuge	30	43.67	7.84	
Empathy	^Africa	266	46.61	4.83	10.496***
	∨ Arabic N.	125	43.91	4.64	
	∨ Asia	631	44.38	5.01	
	ENA	47	45.21	4.78	
	∨ LAC	339	45.74	4.62	
	Other/Refuge	31	44.39	4.99	
Home Area	^Africa	272	2.93	0.93	10.268***
	Arabic N.	131	3.56	0.98	
	Asia	636	3.35	1.02	
	ENA	47	3.40	0.90	
	LAC	344	3.35	0.95	
	Other/Refuge	31	3.06	1.21	
Community Interaction	^Africa	238	15.52	2.53	10.301***
	∨ Arabic N.	114	14.41	2.22	
	∨ Asia	559	14.53	2.49	
	∨ ENA	43	13.37	2.40	
	LAC	286	15.17	2.14	
	Other/Refuge	24	15.13	3.63	

^ indicates statistically higher scores in post hoc analysis, see text above for details

∨ indicates statistically lower scores in post hoc analysis, see text above for details

\*\*\*significant at the  $p < 0.001$  level

### **Multi-Variate Analysis**

Following the bi-variate exploration, a series of multiple regression analysis were conducted which explored the relationship between the dependent variable of *personal motivation* and the independent variables of *demographic characteristics, autonomy, relatedness, competence, and empathy* (Bordens & Abbott, 2018).

#### ***Multiple Regression:***

To conduct this exploration, the appropriate statistical assumptions were tested for and met. These included checking for collinearity through reviewing the Variance Inflation Factors (VIF), were all individual items as well as summated scores received VIFs above 1 and below 2, which is well within range to meet this assumption, as well as tolerance scores above 0.2. Furthermore, the values of residuals were independent as their Durbin-Watson scores for all individual items and summated scores were close to but below 2. P-P and Q-Q plots were run, and outliers were removed as indicated until the plots demonstrated a linear relationship, only four total cases were removed to meet this as well as the Durbin-Watson assumption. Finally, Cook's Distance values were all under 1, suggesting individual cases were not unduly influencing the model (Babbie, 2016; Urban, 2010).

To assess the broad relationships between the dependent variable and the multiple independent variables, the index of items for each independent variable was run with the dependent variable. In doing so, the researcher was able to determine what the relationship of the index for each independent variable was when explore with the dependent variable. This was followed by a full model that demonstrates how much prediction variation is explained by each of indexed variable against the dependent variable when viewed together. Following the full model, a reduced backwards regression model was run to determine the minimum indexed

variables that were statistically significant in predicting the dependent variable of *personal motivation* (Salkind & Frey, 2020).

### ***Indexed Model: Indexed Independent Variables***

When considering the three self-determination theory constructs as indices, as seen in models one through three, *autonomy* accounts for 0.6% of the variation in the model ( $R^2 = .006$ ),  $p < .001$  (.000), *relatedness* accounts for 2.4% of the variation in the model ( $R^2 = .024$ ),  $p < .001$  (.000), and *competence* accounts for 1.2% of the variation in the model ( $R^2 = .012$ ),  $p < .001$  (.000). Model four demonstrates the indexed independent variable of *empathy* accounts for 5.7% of the variation in the model ( $R^2 = .057$ ),  $p < .001$  (.000). Demographic characteristics, as seen in model five, account for 1.6% of the variation in the model ( $R^2 = .016$ ),  $p < .001$  (.000). *Age* is significant at the  $p < .001$  level with a negative association with *personal motivation*, and *community interaction* was statistically significant at the  $p < .01$  level.

When places together creating the overall model, the indices of the independent variables in this study accounted for 7.5% of variation of the model ( $R^2 = .075$ ),  $p < .001$  (.000), where *relatedness* was statistically significant at the  $p < .05$  level. *Empathy* and *age* were statistically significant at the  $p < .001$  level. *Age* maintained its negative association with *personal motivation*. A final backwards regression model was run to examine which variables were to be removed for understanding the maximum variation in the model. In this final model, four items remained accounting for 7.5% of the variation of the model ( $R^2 = .075$ ),  $p < .001$  (.000). All four remaining items were statistically significant, *relatedness* was statistically significant at the  $p < .05$  level, *empathy* and *age* were statistically significant at the  $p < .001$  level, *age* maintaining a negative association with the dependent variable, and finally *community interaction* was statistically significant at the  $p < .05$  level. Please see Table 4.16.

**Table 4.16**  
*Multiple Regression with Indexed Scores*

	Model 1	Model 2	Model 3	Model 4	Model 5	Full Model	Reduced Model
<b>Standard Coefficient Beta</b>							
Summated Autonomy	.084***					-.047	
Summated Relatedness		.158***				.079*	.067*
Summated Competence			.112***			.027	
Summated Empathy				.240***		.217***	.213***
DC: Gender					-.006	-.027	
DC: Age					-.098***	-.113***	-.106***
DC: Home Area					-.043	-.038	
DC: Community Interaction					.082**	.049	.056*
R <sup>2</sup> Adjusted	.006	.024	.012	.057	.016	.075	.075
F Value	9.728**	34.932***	17.437***	83.815***	5.915***	13.233***	25.324***
Cases	1361	1358	1379	1370	1207	1207	1207

\*Significant at the  $p < 0.05$  level

\*\* Significant at the  $p < 0.01$  level

\*\*\* Significant at the  $p < 0.001$  level

After indexed independent variables were assessed individually with the dependent variable, new regression models were run to explore the relationship of the individual items that created each index of the independent variables against the dependent variable. In Table 4.17. the first five models reflect these regressions and are discussed below. Following this an overall model was run to determine the relationships of all individual items of all independent variables relate to the dependent variable. The final model run, the reduced model, was a backwards regression that allowed for the researcher to determine the most finite number of items necessary from the independent variables that were statistically significant to the dependent variable. Thus, the following sub-sections analyzed

the data found in Table 4.17, through reporting the findings associated with each model run in the multiple regression.

***Individual Items Regression: Model 1: Autonomy***

The first linear regression model was completed by looking at the self-determination theory construct of *autonomy*. The construct of *autonomy* consisted of seven items and accounted for 3.8% of the variation ( $R^2 = .038$ ),  $p < .001$  (.000). Five individual items in the model showed statistical significance *I feel pressured in my life* showed a negative relationship and was significant at the  $p < .05$  level. This demonstrates that those that felt pressure in their lives were more likely to be less personally motivated. Item number three, *In my daily life, I frequently have to do what I am told* showed a negative relationship and was significant at the  $p < .001$  level, demonstrating that respondents who feel that they are told what to do in their daily lives are less personally motivated than those who feel they more autonomy in their daily life choices. *People I interact with on a daily basis tend to take my feelings into consideration*, item number four, was statistically significant at the  $p < .01$  level, thus indicating that those that who interact with others who are considerate of their feelings are more inclined to be personally motivated. Item number six, *I feel like I can pretty much be myself in my daily situations*, was statistically significant at the  $p < .01$  level. Which is indicative of respondents who feel they can be themselves in their daily situations are more personally motivated. The final item with statistical significance with the construct of *autonomy*, was item number seven, *There is not much opportunity for me to decide for myself how to do things in my daily life*. This item was statistically significant at the  $p < .05$  level and demonstrates that individuals who do not have much opportunity to decide things for them to daily are more personally motivated.

### ***Model 2: Relatedness***

The second linear regression model run was focused on the self-determination construct of *relatedness*. This construct consisted of eight items that were each analyzed against the dependent variable of *personal motivation*, accounting for 3.8% of the variation ( $R^2 = .038$ ),  $p < .001$  (.000). Three of the eight items in the construct of *relatedness* were significant. Item number one *I really like the people I interact with* was statistically significant at the  $p < 0.05$  level, indicating that if a respondent likes the people they interact with then their personal motivation increases. Item number four, *I consider the people I regularly interact with to be my friends* was statistically significant at the  $p < .001$  level and indicates that friend based regular interaction is associated with an increase in personal motivation. The final item in the construct of *relatedness* that had statistical significance was that of item number five, *people in my life care about me*. This item was significant at the  $p < 0.01$  level and indicates that having people in your life that care about you is associated with an increase in personal motivation.

### ***Model 3: Competence***

The third and final construct from self-determination theory is that of *competence*. This construct contains six items and accounts for 3.9% of the variation in the model, ( $R^2 = .039$ ),  $p < .001$  (.000). Four out of the six items in *competence* were statistically significant, the first being item one, *Often I do not feel very competent*. This item had a negative association with personal motivation and was significant at the  $p < .001$  level. Item number three, *I have been able to learn interesting new skills recently*, was significant at the  $p < .001$  level and indicates as respondents recently learnt new skills their personal motivation has increased. Item number four, *Most days I feel a sense of accomplishment from what I do*, was statistically significant at the  $p < .01$  level. This item indicates that as sense of accomplishment increases as does personal motivation. The

final item within this construct to be statistically significant was item number six, *I often do not feel very capable*. This item was statistically significant at the  $p < .05$  level.

#### ***Model 4: Empathy***

The construct of *empathy* was measured through the use of the Interpersonal Reactivity Index (Davis, 1983), and consisted of eleven items and accounts for 8.3% of the variation in the model, ( $R^2 = .083$ ),  $p < .001$  (.000). Seven of the eleven items from the construct of *empathy* were statistically significant. Item number two, *When I see someone being taken advantage of, I feel kind of protective towards them*, was statistically significant at the  $p < .05$  level, and indicates that being protective towards someone is associated with an increase in personal motivation. Item three, *I sometimes try to understand my friends better by imagining how things look from their perspective*, was statistically significant at the  $p < .001$  level and is indicative of an increase in personal motivation when imagining a friend's perspective. *Other people's misfortunes do not usually disturb me a great deal*, was item number four, statistically significant at the  $p < .05$  level and has a negative association with personal motivation. This is suggestive that respondents who are not bothered by other's misfortunes have a decrease in personal motivation.

Item number seven, *I am often quite touched by things that I see happen* was statistically significant at the  $p < .01$  level and indicates that being impacted by things happening increases personal motivation. Item number eight was statistically significant at the  $p < .001$  level and indicates that those who believe there are two sides to every story are more personally motivated (item eight: *I believe that there are two sides to every question and try to look at them both*). Item nine, *I would describe myself as a pretty soft-hearted person*, was statistically significant at the  $p < .01$  level and is indicative of an increase in personal motivation when someone describes themselves as soft-hearted. The final item that was statistically significant in the construct of

*empathy* was item number ten, *When I'm upset at someone, I usually try to "put myself in his shoes" for a while*. This item was statistically significant at the  $p < .05$  level and indicates perspective taking is associated with an increase in personal motivation.

***Model 5: Demographic Characteristics:***

Four demographic characteristics were examined in this multiple regression, *gender, age, home area, and community interaction variables*. Demographic characteristics consisted in total of ten items and accounted for 2% of the variation in the model ( $R^2 = .020$ ),  $p < .001$  (.000). *Age* was significant at the  $p < .001$  level and had a negative association with *personal motivation*. This indicates that the younger a person is in our model, the less personally motivated they are. Within the construct of *community interaction* the item number 4 – *immediate Family* was statistically significant at the  $p < .05$  level, and item number nine – *people you work with* was statistically significant at the  $p < .01$  level. Both items indicating that the more interaction one has with their *immediate family* or *workmates* the higher their *personal motivation* will be.

***Overall Model:***

A model with all independent variable items was run in a regression exploring how all items worked together. This was done to understand the interaction that the predictor variables have with the criterion variable when all combined together, as the conceptual model is suggestive of (Salkind & Frey, 2020). In this capacity, all items run together account for 11.4% of the variation in this study ( $R^2 = .114$ ),  $p < .001$  (.000). In this overall model, item number four– *In my daily life I frequently have to do what I am told* from the construct *autonomy* was statistically significant at the  $p < .01$  level, with a consistent negative association to *personal motivation*. No items in the construct of *relatedness* were statistically significant. From the construct of *competency*, items number 16 – *Often I do not feel very competent* and number 21 – *I often do not*

*feel very capable* were statistically significant at the  $p < .05$  level, both items had a negative association with the dependent variable.

Item number 24– *I sometimes try to understand my friends better by imagining how things look from their perspective* and item number 28 – *I am often quite touched by the things that I see happen* were statistically significant at the  $p < .05$  level, both were from the construct of *empathy*. Items number 29 – *I believe that there are two sides to every question and try to look at them both* and item 30 – *I would describe myself as a pretty soft-hearted person* were statistically significant at the  $p < .01$  level and were both from the construct of *empathy*. Age was the final statistically significant item at the  $p < .001$  level with a negative association to *personal motivation*, indicative of younger individuals in our model being less motivated. Please see Table 4.17 for details.

### ***Reduced Model***

As the purpose of running a multiple regression with all independent variable items was to understand how much the independent variables predict the dependent variable when analyzed together, a final multiple linear regression model run with all items from the independent variables in this study was a backwards reduced model. This allowed for the researcher to understand the minimum number of items from all independent variables that were statistically significant in predicting the dependent variable of *personal motivation* while accounting for the maximum variation (Salkind & Frey, 2020). Thus, the 42 items that are represented in the overall model account were reduced to 12-items and account for 12% of the variation in the model ( $R^2 = .120$ ),  $p < .001$  (.000). In this reduced model, item number four– *In my daily life I frequently have to do what I am told* from the construct *autonomy* remained statistically significant at the  $p < .001$  level, with a consistent negative association to *personal motivation*. No items in the construct of *relatedness* were statistically significant. From the construct of *competency*, item

number 16 – *Often I do not feel very competent* was statistically significant at the  $p < .05$  level. This item also maintained a negative association with the dependent variable throughout all regression models. Additionally, item number 19 – *Most days I feel a sense of accomplishment from what I do* and item number 21 – *I often do not feel very capable* were statistically significant at the  $p < .05$  level, however item number 21 had a negative association with the dependent variable.

Item number 24 – *I sometimes try to understand my friends better by imagining how things look from their perspective*, was statistically significant at the  $p < .01$  level and was from the construct of *empathy*. Further items from *empathy* include item number 28 – *I am often quite touched by the things that I see happen* was statistically significant at the  $p < .05$  level. Items number 29 – *I believe that there are two sides to every question and try to look at them both*, item 30 – *I would describe myself as a pretty soft-hearted person*, and item 31 – *When I'm upset at someone, I usually try to "put myself in his shoes" for a while*, were statistically significant at the  $p < .01$  level.

The final items run in this reduced model were centered around demographic characteristics. Of these items age remained statistically significant at the  $p < .001$  level with a continued negative association to *personal motivation*, indicative of younger individuals in our model being less motivated. Please see Table 4.17 for details.

**Table 4.17**  
*Multiple Regression of Itemized Independent Variables*

	Model 1	Model 2	Model 3	Model 4	Model 5	Full Model	Reduced Model
<b>Standard Coefficient Betas</b>							
(R <sup>A</sup> ) I feel pressured in my life	-.065*					-.049	-.048
I feel like I am free to decide how to live my life	.038					.007	
I generally feel free to express my ideas and opinions	.012					-.021	
(R) In my daily life, I frequently have to do what I am told	-.107***					-.091**	-.093***
People I interact with on a daily basis tend to take my feelings into consideration	.086**					.001	
I feel like I can pretty much be myself in my daily situations	.090**					.040	
(R) There is not much opportunity for me to decide for myself how to do things in my daily life	.059*					.027	
I really like the people I interact with		.077*				.051	.054
I get along with the people I come into contact with		.016				-.030	
(R) I pretty much keep to myself and don't have a lot of social contacts		.008				.012	
I consider the people I regularly interact with to be my friends		.101***				.050	.049
People in my life care about me		.085**				.024	
(R) There are not many people that I am close to		.010				-.022	
(R) The people I interact with regularly do not seem to like me much		-.042				-.006	

People are generally pretty friendly towards me	.017		-.014	
(R) Often I do not feel very competent		-.104***	-.074*	-.071*
People I know tell me I'm good at what I do		.042	-.010	
I have been able to learn interesting new skills recently		.103***	.023	
Most days I feel a sense of accomplishment from what I do		.096**	.044	.059*
(R) In my life I do not get much of a chance to show how capable I am		-.031	-.013	
(R) I often do not feel very capable		.077*	.068*	.072*
I try to look at everybody's side of a disagreement before I make a decision			.023	.010
When I see someone being taken advantage of, I feel kind of protective towards them			.056*	.035
I sometimes try to understand my friends better by imagining how things look from their perspective			.095**	.076*
(R) Other people's misfortunes do not usually disturb me a great deal			-.069*	-.020
(R) If I'm sure I'm right about something, I don't waste much time listening to other people's arguments			.020	.022
(R) When I see someone being treated unfairly, I sometimes don't feel very much pity for them			.010	.015
I am often quite touched by things that I see happen			.076**	.066*
I believe that there are two sides to every question and try to look at them both			.097***	.077**
				.090**

I would describe myself as a pretty soft-hearted person				.080**		.074**	.077**
When I'm upset at someone, I usually try to "put myself in his shoes" for a while				.066*		.055	.069**
Before criticizing somebody, I try to imagine how I would feel if I were in their place				.033		.031	
Gender					-.014	-.025	
Age					-.123***	-.128***	-.119***
Home Area					-.047	-.034	
Community Interaction (CI): Immediate Family					.066*	.033	
CI: Extended Family					.031	.026	
CI: Friends In-Person					.005	.001	
CI: Friends Online					.021	.010	
CI: Classmates					-.033	-.047	
CI: Workmates					.080**	.052	.052
CI: Acquaintances					.027	.030	
R <sup>2</sup> Adjusted	.038	.038	.039	.083	.020	.114	.120
F Value	8.609***	7.761***	10.238***	12.316***	3.750***	5.043***	13.876***
Cases	1361	1359	1380	1371	1320	1320	1320

<sup>A</sup> An (R) next to an item indicates that it is reverse coded

\*indicates significance at the p<.05 level

\*\*indicates significance at the p<.01 level

\*\*\*indicates significance at the p<.001 level

## Summary

The analysis presented in this chapter was used to understand the population, explore the theoretical model, and resolve the research questions for this study. The findings in the reduced regression model (Table 4.16) indicate the most important items to be considered when understanding this population's relation to motivation to engage. For this population it is evident that items from *competency* and *empathy* as well as participants' *age* are some of the key factors in participants' motivation to engage. This reduced regression model suggests that participants who are more competent in their everyday tasks and are more empathetic to the needs of their peers, as well as being younger (ages 18-24 years), are more likely to be motivated to be engaged in the activities of the YAR program. In Chapter 5 of this study, these findings of descriptive, bivariate, and multivariate analysis are interpreted and discussed, and recommendations for future YAR programs and similar programs are made.

## CHAPTER V:

### SUMMARY, CONCLUSION, AND FUTURE PROGRAM RECOMMENDATIONS

This descriptive-correlational survey study was designed to provide a more in-depth understanding of the global Youth as Researcher (YAR) participants' personal motivation to participate in the YAR program. Through understanding what motivates young people to participate in a community driven, youth-led, global, and virtual research program, researchers can be prepared in ways to increase interest and understand better ways to support those that are invested in programs such as YAR.

The programmatic setting of this study is the youth-led (ages 18-35 years) Youth as Researchers program, designed to study the impacts of the COVID-19 pandemic on young people around the world. The program is an international collaboration between UNESCO chairs at The Pennsylvania State University, the University of Ireland-Galway, UNESCO affiliates in S.E. Asia and the European organizations headquarters in France, as well many partnering organizations located around the globe. This international virtual programmatic approach to the pandemic was unique and created a unique population to explore. The program was initiated in the Summer of 2020, with a convenience sample of over 6,000 applicants. Once this data was cleaned, it became the sample population of this study, providing a population of 5,581 individuals, representing 92 countries.

To address the overarching research question of understanding what personally motivated young people to apply to this program, all 5,581 YAR applicants were sent a Feedback Survey in the winter of 2020. Within this survey the researcher was able to collect valuable demographic data, responses to the three components of self-determination theory -a motivational theory,

responses to an empathy scale, and respondents' perspective on what personally motivated them to apply to the program. These elements were collected in order to ultimately understand the research question of determining to what extent self-determination theory and empathy describe one's personal motivation to join the program at this time.

In total, the Feedback Survey used in this study had response rate of 27% (1,546), representing 73 countries, and while not generalizable to a global youth audience, responses are indicative to a global youth audience. To assess the independent variables (demographics, self-determination theory constructs of autonomy, relatedness, and competency, and empathy), multiple bivariate and multivariate tests were run. The final test explored was a reduce model regression that took the 40-items that collectively made up the independent variables and identified the specific items needed to best understand the personal motivation of the population in this study. The findings in this study demonstrate which components of self-determination theory are most applicable to personal motivation of the population, which components of empathy are most applicable, and when analyzed together, how much all independent variables account for respondents' personal motivation. The results of this study will be discussed based on the research questions respondents answered.

**RQ 1: Determine to what extent youth participants' demographic characteristics predict respondents' personal motivation in the YAR program.**

This study explored several different demographic characteristics and how they may or may not act as predictors to understanding respondents' personal motivation to join the YAR program. These demographic characteristics included *gender, age, region, home area, and community interaction*. Of these characteristics, *age* was the only one that remained statistically significant in identifying respondents' personal motivation, this aspect will be discussed at the

end of this segment. While they were not statistically significant items in the reduced regression model, the remaining demographic characteristics remain important factors in understanding the population who participated in this study and in the interpretation for this study.

To understand respondents' demographic characteristics and the roles that they played with the dependent variable of *personal motivation* several tests were run. While more respondents identified as female (54.2%) compared to male (44.2%) this played little effect in their relationship with the dependent variable of *personal motivation*, as this item was a non-significant factor in determining personal motivation, thus gender was not a factor determining respondents' personal motivation to participate in the YAR program. This is interesting but not surprising in that males are traditionally more motivated in content topics such as science and mathematics, and females are associated motivated in content topic of reading and writing partnered with a stronger appreciation towards interpersonal connections (Meece et al., 2006). Furthermore, when exploring positive youth development (PYD) programs, it is suggested that males tend to have higher scores in competence and confidence while females score higher in connection and caring attributes (Gomez-Baya, Reis, & Gaspar De Matos, 2019). However, if a program, such as YAR were to offer both PYD attributes and broad content topics as options for young people to explore, then gender would not be a decisive factor in their motivation to participate. Thus, future programs should aim to ensure there is equal opportunity for interpersonal connections and displays of confidence as well as having content that is appealing to traditional gender stereotypes.

The remaining demographic variables including *age, region, home area, and community interaction*, were then examined with the dependent variable via an ANOVA statistic. Only two

of these variables were statistically significant, *region* and *age*. Regional divides were established through individual country responses and assigning regional labels to each country represented. With that in mind, it is important to note that these regions are not broadly representative of the countries that represent each region, however they are representative of the regions that respondents identified as home. In terms of analysis, Africa was identified as being statistically significant as having higher personal motivation scores when compared to Arabic Nations and Asia, furthermore, individuals who identified a Latin America and Caribbean country has statistically lower personal motivation scores. These regional differences are noteworthy in understanding how the YAR program and therefore other programs of a similar nature are shared around the world.

The YAR program is characterized as a program designed where young people, who are capable of speaking English or French, are provided the opportunity to join a group in a youth-led research initiative addressing the challenges they have faced from the COVID-19 pandemic. There are a few options as to why Africans had higher motivation scores, one such could be their capacity to speak one of the two languages the program was communicated in, with many African nations having either English or French as one of their nation's official language (FOCAC, 2012). Furthermore, it could be associated with their regions' more uplifting response to the pandemic at the time of data collection. For example, across Africa the continent's response included quick action, unified approach from the African Union Center for Disease control, public support, and most pertinent to this study – the continent's younger population (Soy, 2020; Signe, & Treacy, 2020). All factors that allow for the population in this study to feel supported in their motivation to understand the unique challenges faced in their home areas and thus participate in a unified global response. Asia and Arabic Nations which, both scored

statistically lower personal motivation scores compared to Africa, but statistically higher personal motivation scores compared to Latin America and the Caribbean. Arabic Nations management of COVID-19 has placed a tremendous strain on their health care system, a factor that could cause strain in considering YAR responses to personal motivation (Hasan, 2021). Meanwhile, Latin America and the Caribbean could be experiencing cultural challenges (associated with the languages the survey was conducted in) as well difficulties in managing the virus across the many countries encompassing the region (Garcia et al., 2020).

*Home area* as a demographic characteristic was not significant when looking at respondents' personal motivation. *Community interaction*, specifically *immediate family* and *workmates*, were significant when comparing only demographic characteristics with personal motivation (see Table 4.17). These two community factors could be relevant in maintaining a sense of belonging and shared togetherness. Furthermore, social support as one could receive through family and workmates is essential to building resilience in high stress times, and has been found to be stronger for the age group of this study within the confounds of the pandemic (Li et al., 2021).

When all demographic characteristics were collectively compared in a regression model with personal motivation, they accounted for 2% of the overall variation explaining personal motivation. Furthermore, when demographic characteristics were collectively compared with all other independent variables in a reduced regression model, only *age* remained statistically significant. What this tells us, is that when compared with all other constructs, there is a statistical difference in the age of participants and the best way to identify their personal motivation. Future studies will need to be mindful of the age breakdown and the role that young adults, particularly those aged 30 years or younger and how they are impacted by programs.

It was found that younger participants, aged 18-24 years and those aged 25-30 years were more personally motivated than their peers aged 31-36 years. Thus, those participants that were a part of the study's younger age groups were more motivated than those in the study's oldest age group. One of the challenges in motivation literature is the ability to capture minute demographic differences including that of age. In this case, it is challenging to find literature that explores adolescents that are not explicitly in a university setting. Predominant literature focuses on broad scale "younger" age ranges, typically 20-40 years, while "older" populations include those over the age of 50 years. In the case of our study the minute differences between the younger population (aged 18-30 years) being more motivated to participate in the YAR program is suggestive that this population is looking for an outlet that they are unable to find elsewhere, particularly as early career individuals.

This population, those 18 – 30 years, encompasses Arnett (2000)'s age range of emerging adults and what is considered the youth bulge in Africa where 60% of the population is under 25 years (Ibrahim Forum, 2019), where the *waithood* concept for youth is common. This population, pre-pandemic, was already noted for being in a transition period with heavy undertones of being dismissed and undervalued by society (Arnett, 2000; Kovacheva et al., 2018). The youth participatory action research (YPAR) nature of the YAR program, partnered with the gravity of the pandemic, could act as an amplified motivator for this population, who has been dismissed in the traditional manner, to be more motivated to participate in a program that adheres to youth voice. The waithood population, which is already suffering consequences from social, political, and economic challenges, in this study, is motivated to participate in a program that could challenge the norm that has settled onto them. More programs that take a strengths-based approach to youth, could be a wanted avenue for these youth.

**RQ 2: Determine to what extent youth participants' autonomy scores predict respondents' personal motivation in the YAR program.**

Self-determination theory is a motivational theory that posits individuals are intrinsically motivated by three core concepts, autonomy, relatedness, and competency. To understand the personal motivation to join the YAR program, this study had respondents complete the Basic Psychological Needs (Deci et al., 2001). The first construct being explored was that of *autonomy*; “the need to regulate one’s experiences and actions” (Ryan, & Deci, 2017, pg. 10). Autonomy consisted of seven items and was compared against personal motivation in a number of ways. When all seven items are combined they created an indexed score. This singular score was then analyzed in a regression analysis with personal motivation and found to explain 0.6% of the variation of personal motivation, however it was statistically significant at the  $p < .000$  level. Yet when placed in a reduced regression with all other indexed scores, *autonomy* was no longer a viable option to explain personal motivation (see Table 4.16).

To investigate further, a regression analysis exploring all seven individual items against personal motivation was conducted (see Model 1, Table 4.17), and it was found that four of the seven-items were statistically significant, explaining 3.8% of personal motivation. What this tells us that the construct of *autonomy* is an element in understanding personal motivation when considered on its own. So much so that future programmers should find ways to create programmatic spaces that allow for reduced pressures in participants lives, allow participants to choose aspects of their programs, take program participants feelings into consideration, and provide structure so that while choices can be made there is direction coming from program leaders. These brief recommendations stem from the singular items identified in the regression analysis conducted solely with *autonomy* items (Model 1, Table 4.17), what’s interesting though,

is that these items match many of the same sentiments in Extension education when working with young adults. The Journal of International Agricultural and Extension Education, highlighted key characteristics that mirror the same *autonomy* interest of our participants that had been identified for non-formal education. It is noteworthy that these might vary in the different international context they are found, but they include (1) learner-centered teaching, (2) cafeteria curriculum where participants have options and variety in the curriculum, (3) informal human relations, where there is mutual respect, (4) reliance on local resources, (5) immediate usefulness, and (6) a lower level of structure, where there is still structure presented but it is decentralized (Etling, 1994). These items have been supported over the years in international contexts including a handbook for non-formal learning for volunteers based in Bolivia (ICYE International Office, 2017) and the Non-Formal Education Manual for the Peace Corps (Peace Corps, 2011).

Out of the initial 40 items explored in the multiple linear regression, the final reduced model with the maximum amount of explained variance (12.0%), included 10- items that were statistically significant at the  $p < .05$  level or lower. These items included one within the construct *autonomy*; *In my daily life, I frequently have to do what I am told* ( $p < .000$ ). This item was reverse coded and had a negative correlation with personal motivation. When interpreted it indicates that the less someone is told what to do the more personally motivated they are, or when someone has more decision making power in their daily actions, they are more personally motivated to participate in the YAR program. This is an essential element of the YAR program and supports existing concepts around YPAR programs including within international settings (Kong et al., 2020; Starodub, 2019; Walsh, 2018). Furthermore, in considering the context of the study, throughout the COVID-19 pandemic, elements of choice have repeatedly been sacrificed

for individuals in the name of collective safety (Martela et al., 2021). When thinking about the specific item of *being told what to do* and how that could reduce one's personal motivation to join the YAR program paired with a lack of choice in everyday lives due to global safety concerns, creating a space where young people are able to make their own choice in what to participate in is an essential aspect of this iteration of the YAR program. More specifically this is seen through participants' choices in signing up for the program, their choice in overall topic to explore, and then keeping in line with YPAR practices, participants are co-creators in the knowledge around their topics. While some expert guided structure has been provided in the context of tools in how to complete the tasks of the program, youth are the primary choice-makers throughout the program.

This element of choice-making is rooted to the core concept of what *autonomy* identifies as (specifically within the self-determination theory constructs). Ryan and Deci (2017) related *autonomy*, specifically as it connects to different cultures, as connected to individuals' choice in how they relate, embrace, and counter different values they interact with. In the case of the YAR program, creating a space for young people to choose their values and thus their motivations in ways to participate in the program, is essential to self-determination theory and the success of the program.

**RQ 3: Determine to what extent youth participants' relatedness scores predict respondents' personal motivation in the YAR program.**

The second self-determination theory construct that was examined was *relatedness*; “relatedness is also about belonging and feeling significant among others” (Ryan & Deci, 2017, pg. 11). Much like autonomy, relatedness was compared against personal motivation in a number of different ways. The first being an indexed score (Table 4.16) where the indexed score of all

eight relatedness items were compared against the indexed score of personal motivation, this indicated a statistically significant positive relationship, so much so that when all independent variable indexed scores were compared in the full and reduced model regressions (Table 4.16), relatedness continued to have a statistically significant positive relationship with personal motivation. However, while statistically significant, relatedness on its own explained 2.4% of the variation in personal motivation. When applied in the reduced regression model, the four indexed items that remained in the reduced model accounted for 7.5% of personal motivation, compared to the 12% explained when examining individual construct items (Table 4.17). This suggests that the indexed score of relatedness is a key factor when trying to understand personal motivation, but does leaves gaps in understanding.

After exploring the indexed independent variable scores, a regression analysis was run with all items from each independent variable compared to the dependent variable of personal motivation. In this instance (see Model 2, Table 4.17), relatedness consisted of 8- items, three of which were statistically significant, and in total the eight items explained 3.8% of the variation of personal motivation. These three items, liking the people you interact with, interacting regularly with friends, and having people in your life that care for you are important when considering personal motivation only from a relatedness lens. Thus when considering how to create a sense of belonging towards others, programmers should consider creating frequent positive interactions between participants, and exercises where program participants can identify and connect with those they feel are important in their lives (Allen, 2019). These simple actions, when applied consistently, can create a safe sense of belonging to participants and thus increase their personal motivation to participate in a program through relating to their peers.

However, in both the full and reduced regression models exploring all independent variable items no items from relatedness were found. What that tells us is, that while liking the people you interact with, interacting regularly with friends, and having people in your life that care for you are important and have explanatory power in understanding respondent's personal motivation to join the YAR program, these items and others within relatedness do not have as much explanatory weight when combined with all other independent variables in this study. So while elements of relatedness are noteworthy for programmers they are not key, within the items explored in this study, to the personal motivation of this study population.

An interesting note to explore in future studies related to relatedness, is associated with gender. When the researcher explored the two main genders (male and female) and which of the independent variable items were statistically significant when looking at personal motivation from a gendered perspective, relatedness as a concept was much more prevalent for females ( $R^2 = .061$ ),  $p < .001$  (.000). than it was for males ( $R^2 = .035$ ),  $p < .001$  (.000). While gender itself was not statistically significant an item in terms of personal motivation, when the data is explored through a gendered lens new results are evident. As this also reduces the number of cases from  $n=1,546$  to  $n=685$ , this was not further explored in this study. However, if a future iteration of the YAR program were to be more heavily gendered, it would be important to explore these data with that lens in mind.

**RQ 4: Determine to what extent youth participants' competency predicts respondents' personal motivation in the YAR program.**

The third and final self-determination theory construct that was examined was *competency*; "our basic need to feel effectance and mastery. People need to feel able to operate effectively within their important life contexts" (Ryan, & Deci, 2017, pg. 11). Competency was

compared against personal motivation in the same three ways autonomy and relatedness were. The first being an indexed score (Table 4.16) where the indexed score of all six competency items was compared against the indexed score of personal motivation, this indicated a statistically significant positive relationship, explaining 1.2% of the variation of personal motivation, however when all independent variable indexed scores were compared in the full and reduced model regressions competency no longer held a statistically significant relationship with personal motivation. This is interesting when considering how consistent competency remained a factor when examined at the individual item level.

When further explored, a regression with all six individual items was conducted (see Model 3 Table 4.17), explaining 3.9% of the variation of personal motivation. Furthermore, it found out four of six of the items were statistically significant. These four items indicate that, when looking solely at competency, respondents feel the most personally motivated when they feel competent, when they learn a new skill, when they feel a sense of accomplishment, and when do not feel capable. Unique to this set of items is learning new skills, suggesting that respondents are motivated when they can add to their skillset (Springer, 2013). Furthermore, adding skillsets is a unique attribute of YPAR and participatory action research (PAR) projects, in that researchers within the projects learn broad scales skills associated with research and with communication, but possibly more importantly, they also learn new skills that pertain to their specific research circumstances. For example, when discussing a PAR pilot research project with aboriginal peoples in Australia, Dudgeo et. al (2017) took note of “It (PAR pilot study) is also demonstrated that participation in research can itself be an end through which people are empowered as they develop their skills, knowledge, and confidence to improve and gain control over the conditions that affect their lives.” Here we see where participants learn new skills that

pertain specifically to their community circumstance that their PAR projects are focused on. For programmers moving forward, encouraging the development of new skills and the understanding of their application to real-life circumstances of program participants is an element in attaining program motivation.

The remaining three items within competency are exceptional in that when the final reduced regression model was run, all three items remained statistically significant and thus explained nearly one-third of variation in personal motivation when compared against all items from all independent variables. The first competency item explored was *Often I do not feel very competent*. This item was reverse coded and had a negative correlation with personal motivation, when interpreted, this item indicates that when a respondent does not feel very competent they are less personally motivated, or when a respondent feels supported in their capacity to learn they are more personally motivated to participate in the YAR program. When reflecting back on the construct of *competency* a core element is the sense of feeling capable of operating successfully in everyday tasks. While this seems straightforward, many individuals are told what they cannot do compared to reminders about their capabilities. A programming approach that challenges this is PYD, which focuses on a strengths-based approach to engage with young people (Lerner, Almerigi, et al., 2005). In the context of competency both as PYD and SDT assess the construct, programmers who focus on what participants can do, can be a successful approach to increasing competency and increasing personal motivation to participate in a program (Lerner & Chase, 2019). An example of connecting the practice and theory was explored in a Chinese study where Hui and Tsang (2012), found a PYD approach to increase academic competency in Chinese youth, and as a general approach to youth development programs in Hong Kong (Hui & Tsang, 2012).

The second competency item explored is *Most days I feel a sense of accomplishment from what I do*. This item had a positive association with personal motivation and indicates that when a respondent is able to feel a sense of accomplishment they are more personally motivated to participate in the YAR program. Much like explorations in youth feeling competent, a PYD approach to program participants can enhance a sense of accomplishment, thus enhancing personal motivation in our study participants. This is perhaps more salient considering the context around this study and the different ways the global pandemic has impacted youth participants. As the pandemic stretches on from weeks, to months a Covid-19 fatigue is a real concern. Researchers out of Italy identified the power of having a sense of personal accomplishment throughout the pandemic as being a factor in mitigating and reducing stress caused by the pandemic (Vagni et al., 2020). In terms of programming, recognizing and celebrating accomplishments, particularly in stressful times could be a useful technique in ensuring participants maintain motivation.

The final competency item explored was *I often do not feel very capable*. This is an interesting item, as it was reverse coded but maintained a positive association with personal motivation. Thus this item indicates that when an individual does not feel as though they are very capable they still showed statistical significance in being personally motivated to participate in the YAR program. Ryan and Deci (2017) found that competence feedback, when conducted in a supportive way, was very effective in sports, with the idea being that cultures have structured this task to be a place where constructive feedback is a way to grow and improve vs be overwhelmed and discouraged. While someone might not in the moment feel very capable of completing a task, that doesn't imply that they do not have the capacity to complete the tasks. For YAR programs moving forward, this is the audience that was attracted to the program, by

design. The call for applicants specifies that there isn't a distinct need for existing skills, rather the interest and willingness in learning.

**RQ 5: Determine to what extent youth participants' empathy scores predict respondents' personal motivation in the YAR program.**

In addition to self-determination theory, this study aimed to explore the role of *empathy* in personal motivation particularly as the participants of this study were experiencing stressful global phenomenon, the COVID-19 pandemic, yet were interested in a community driven program. To explore this variable, a definition is needed, "Empathy allows us to understand the intention of others, predict their behaviors, and experience an emotion triggered by their emotions" (Baron-Cohen & Wheelwright, 2004). For this study, participants responded to 11-items measuring empathy, five items examined *empathetic concern* and six items examined *perspective taking*. Two of the four dimensions outlined in the Interpersonal Reactivity Index (Mark H. Davis, 1983). These two dimensions were explicitly used as they are most associated with affective empathy and cognitive empathy, two of the primary domains, additionally these two measures were explicitly used in a previous YAR study (Odera, 2018), and were the two most common in a synthetic review of empathy measures consisting of 400 studies across a decade (Hall & Schwartz, 2018). What's interesting is that when exploring the results of this study and determining how empathy is a predictive element of personal motivation to participate in the YAR program, respondents scored nearly equally for both empathetic concern and perspective taking, or affective and cognitive empathy. In fact, three of the ten statistically significant items measuring personal motivation to participate in the YAR program in the reduced regression model (Table 4.17) examined *perspective taking*, or cognitive empathy, while two of the ten statistically significant items measuring personal motivation identified as

*empathetic concern* or affective empathy. Collectively *empathy* accounted for one-half of the predictive items accounting for personal motivation.

Breaking some of these characteristics down further, Davis (1983) explored the nature of *perspective taking* with his audience of college student in the U.S. His correctly proven hypothesis was that individuals who score high on *perspective taking* would also score high on self-esteem. While our study did not assess self-esteem, it did assess competence, which has been likened to self-efficacy and self-esteem (Bandura, 1986). So much so that in the final reduced regression model to determine the finite number of items and subsequent concepts needed to understand personal motivation in our population, three out of the ten items, were associated with competency. This provides an interesting avenue for future research to see if in a program such as this, if there is a correlation between *perspective taking* scores and *competency* scores.

Furthermore, Davis (1983) also correctly proved the hypothesis that individuals with higher *empathetic concern* scores would be correlated with those who had higher social anxiety but whom were still negatively impacted by loneliness. What this tells us in the case of the Youth as Researchers program, is that those that were personally motivated by *empathetic concern* are emotionally anxious about their peers but might also be benefitting from the fact the program is considered to be hands-off and fully virtual while still being rich in peer discussions, thus reducing both negatives from social anxiety and loneliness which might be experienced by those with higher *empathetic concern* scores.

When considering the five specific items from the reduced regression model we can first explore *I sometimes try to understand my friends better by imagining how things look from their perspective*. This item was positively associated with personal motivation and is considered a

perspective taking dimension of empathy. When interpreted this item indicated that the more programs support peers understanding peer's friends through perspective taking, the more intrinsically motivated individuals will be to participate in that program. When considering the YAR program population, we're considering a population of individuals who are interested in participating in a global program, thus they will be interacting with people from around the world whom each experience life in a differently. This item's significance is important because it demonstrates that this population of youth change makers are empathetically motivated by looking at peer's perspective on the world. Thus to engage more change makers, programmers should engage in activities that promote perspective taking, and exploration of what life is like for someone else, particularly in a stressful scenario such as the COVID-19 pandemic.

The second statistically significant item also had a positive association with personal motivation and is representative of an empathetic concern dimension of empathy; *I am often quite touched by things that I see happen*. This is suggestive that the more programs support recognition and expression of one's emotions in challenging situations the more they create a space for young people to be "touched by the things they see happen." This is especially pertinent to situations where programs are addressing challenging and emotional topics. Berardi (2020) discusses the role that creating a safe space for emotions, is essential during empathetic growth. This program setting, and thus the framework for the participants who responded to this research, was centered around the COVID-19 pandemic. If the program didn't create space for people to express their emotions, their capacity to be motivated to participate in the program would be greatly reduced.

*I believe that there are two sides to every question and try to look at them both*, was the third item of significance and is a perspective taking dimension of empathy. When interpreted,

this item is indicative of the need for programmatic support that provides an outlet for young people to explore both sides of a story or question. It is important to remember that these items are in conjunction with that of *autonomy*, thus I think it's important that the program operates where the youth have the opportunity to choose to see two+ sides to every story. Both the perspective of choice and multiple sides of a story are represented in the YPAR design. First in the sense that YPAR programs, such as YAR, are centered around youth voice and the authenticity of youth voice. This is suggestive that every young person's experiences are real, equating to every young person's "side of the story" is valid. Odera (2018) identified this element in her study of U.S. undergraduate youth participating in the YAR program. Programmers who provide a space for youth to acknowledge the power of their story and recognize the need to examine other sides of the story can be a powerful tool in enhancing empathy and motivation for program participants.

The final empathetic concern item was *I would describe myself as a pretty soft-hearted person*. Merriam-Webster dictionary describes "soft-hearted" as "having or marked by sympathy and consideration for others" (Merriam Webster, 2021). This partnered with the nature of this item being an *empathetic concern* element of empathy, suggests that individuals who are sympathetic or considerate for others are more likely to be intrinsically motivated to participate in this program. As the pandemic has continued to wreak havoc across the globe, a number of leading organizations have praised the benefit of assessing and embracing mental health in this time of global stress. One such continued praise is the need to be compassionate and kind (Kumar & Nayar, 2020). When thinking about the item of soft-heartedness, it is imperative that program participants remain humans that have consideration for others and are compassionate. The consequences of the pandemic are going to be felt for years to come, supporting and

engaging with participants' capacity to be considerate of others is essential in ensuring that these consequences can be addressed by a youth population such as YAR participants. The final perspective taking item was *when I'm upset at someone, I usually try to "put myself in his shoes" for a while*. The YAR program offers young people the opportunity to take on someone else's perspective, an element of cognitive empathy. In doing so, it draws the attention of individuals who are open to understanding a different perspective.

When considering all five empathy items collectively and how they related to personal motivation, if a program leader wants participants to become intrinsically involved or interested in the program, targeting participants' empathetic nature is a way to potential do so. In this case if a program host activities and thought sessions that provide a setting for empathy to be explored, there is a greater chance of personal motivation to participate in that program. Exploring stressful concepts like the Covid-19 pandemic with a population that is often dismissed, is complex but can also be safe haven. Youth-led research can create a space where youth voice is heard and through the process of research, young people can find an outlet to safely explore and express cognitive and affective empathy.

## **Discussion and Recommendations**

This study aimed to explore the personal motivation of youth to participate in a global youth-led research initiative exploring the impacts of the Covid-19 pandemic on young people. The researcher specifically examined the three core pillars of self-determination theory as they pertained to personal motivation, and the researcher explore the role of empathy as it pertained to personal motivation. Findings suggest that these four constructs paired with youth's age can help inform respondents motivation. Furthermore, individuals in this study indicated that there were ten-items from a 40-item survey that accounted for 12% of the variation in their personal

motivation to participate in the YAR program. One of those items represents autonomy, three items represent competency, five of those items were accounted for in the construct of empathy, and the final item was an association with age.

What's perhaps most interesting about this study is the role that PYD played, YPAR played, and how self-determination theory and empathy are intermingled within both PYD/YPAR and motivation. PYD is centered around a strengths-based approach to engaging with young people. The concept focuses on what young people can contribute to society opposed to the negative variables associated with them. In practice, PYD is exemplified through the 5 C's of PYD, competency, character, connection, caring, and confidence (Lerner, 2005), which then produce an outcome of a 6<sup>th</sup> 'C', contribution. The action portion of YAR and similar YPAR programs, exemplify, at the end of the program, the potential behind this 6<sup>th</sup> C. In the context of the COVID-19 pandemic, PYD can be seen through young people demonstrating their resiliency and ways that the youth population can contribute to maintaining social safety measures and socially supporting those in need. This is in opposition to assuming young people are causing illness flare ups through partying and reckless behavior. A strengths-based approach, as seen with PYD, suggests that youth are essential to the solution. Providing programmatic opportunities where youth and communities can exemplify these strengths is a needed strategy to engage youth and reduce societal stresses associated with the pandemic.

Evidence from this research demonstrates that young people, around the world, are motivated to participate in a program where their voice can be heard and they can be seen as part of the solution to this global threat. In order to help foster more programs like YAR, it is essential to understand what drew participants to apply, what motivated applicants when considering the program. With this valuable information, the YAR program can ensure these

variables are met and other programs like YAR can absorb these variables into their design. With this in mind the following are concepts and suggested actions, from this study, that were most associated with *personal motivation* within the boundaries of the constructs discussed in the conceptual model.

The emerging adult, waithood, or even ‘bamboccioni’ population of young people are motivated to participate in youth-led, community action programs, thus future programmers should consider ways to involve youth aged 18-30 years. This is likely more salient considering the stressful everyday situations that this population is experiencing due to the pandemic. Pre-pandemic, this age range faced economic and identity challenges causing a sense of limbo, providing a program that allows youth to put their energies towards something they’re engaged with and impacts their environment can be an intrinsically way to motivate this group into community action.

The YAR program is centered around the concept of youth choice. Young people within the program are told, at the onset, that this is their program to run. This element of youth choice is essential in engaging this population. The more choice that participants have the more autonomous motivation they’ll likely have to participate. In the time of the COVID-19 pandemic, the element of choice has been drastically challenged in everyday society. What activities can be conducted, what social circles you converse with, and your capacity to keep yourself safe, has all been reduced to strict pre-ordained rules. Programmatic leaders and developers should consider systematic ways for youth voice to not just be a token of the program but to influence the outcomes of the program. In the case of the YAR program, youth identify all key elements of the research to be undertaken, and whether they are “successful” or not, youth

have agency over the final products produced from their work. In times like this, programs that create space for autonomy can be a game changer in motivating people to participate.

While providing space for young people to have ownership and agency over their actions is essential to engaging this population, there is also a need to partner this with structure. Programs moving forward should consider ways for young people to be in charge of key decisions occurring with a program, but should also look for ways to support those decisions in a concrete manner. In the YAR program, this is included with the training enabling youth the capacity to create youth-led structure including elements around understanding group dynamics, developing comprehensive group timelines with deadlines, and establishing a group-identify platform for meetings (in a virtual space). This element of ownership over these structural components allows for great youth motivation through autonomy, while also encompassing the need for structure to complete given tasks. This can be complimented by having addition adult/an external group member to ensure that the group-identified logistics are maintained.

With youth agency towards their programmatic task partnered with structure, youth are motivated to participate in programs, especially if those programs can provide participants with new skills. Explicit skills are relevant to the program; however, this research suggests that emphasizing to young people that they have the capacity to learn skills is essential. In the YAR program, it is advertised that training will be provided to those that do not currently excel in research (the skill associated with the program), what this enabled youth applicants to understand is that they would be given the opportunity and the tools to develop a skill. Thus, youth applicants were supported in the knowledge that they had the capacity to grow their skills. Programmers moving forward should look for ways to demonstrate they can support the learning of new skills to interested youth. With this capacity building it is essential for programmers to

remember and to the support and remind participants that skills building takes time and all youth are capable of developing the skills needed to complete a task. This is heavily cautioned with realism for future programmers. If the tools for skill development are not provided and expectations about youth outcomes at the completion of a program are deceptive, then intrinsic motivation to participate in a program might be present at the onset, but would likely decrease as the program continued.

The above discussion points are centered around the significant items of age, autonomy, and competency. It is important to remember the interconnectivity of these items and the way they are discussed for application in future programs. This study demonstrated the way all ten items in the final reduce regression model were needed to explain personal motivation, thus compartmentalizing each item has the potential to reduced personal motivation. This nest test keeps these aspects in mind while discussing the remainder five items associated with empathy.

Youth in this study expressed a strong connection to perspective seeking empathy, indicating that there is an interest understanding the “other,” whom or whatever, that might be. In the case of the COVID-19 pandemic, working with people outside of ones’ social circle is both a necessary aspect of ensuring community resilience to the external stressor and is something that this study’s population was interested in. The YAR program advertised that this was a global program, therefore bringing together youth from every corner of the world to analyze on central challenge. While not everyone who applied to the program was able to work together, this does demonstrate to program designers that there is an interest in working with others and exploring others’ perspectives. Future programmers should consider ways to incorporate the others side of the story to any issues that is being discussed. Concrete ways of doing this is to play devils’

advocate, introducing learning materials that promote an external viewpoint, and providing the space for youth participants from different backgrounds to engage with one another.

This final point is both salient to perspective taking, but it needs to be conducted in regards to the second side of empathy noted in this study, empathetic concern. While youth applicants demonstrated a connection to empathetic concern and personal motivation, this is in conjunction with perspective taking. What all this means is that young people want to be exposed and incorporate other's perspectives, but they also want to be able to do so in a safe space where theirs and other's feelings can be accounted for. For future programmers, this is indicative of establishing ground rules – with youth input as youth agency is still relevant, that allow for participants to express a range of emotions and know that they will not be considered outside of the norm of the group. The consequences of the pandemic are going to be felt for years to come, supporting and engaging with participants' capacity to be considerate of others is essential in ensuring that these consequences can be addressed by a youth population. In short, the following programmatic recommendations, discussed above, are suggested, see Table 5.1

**Table 5.1***Programmatic Recommendations*

Programmatic Recommendations	
Demographics	➤ Incorporate YPAR and PYD programmatic approaches with youth aged 18-30 years.
Autonomy	<ul style="list-style-type: none"> <li>➤ Increase opportunities for program participants to have authentic choice in the direction of the program.</li> <li>➤ Provide structure and clear understanding in what choice outcomes can be for participants.</li> <li>➤ Implement learner-centered teaching, variety in program delivery, mutual respect within the program, use of local resources, and identify program usefulness (Etling, 1994).</li> </ul>
Relatedness	➤ Further work is needed exploring gender and demographic differences associated with relatedness.
Competency	<ul style="list-style-type: none"> <li>➤ Maintain a consistent focus and support on skills participants already have, bolstering confidence in their competency of said skills.</li> <li>➤ Celebrate accomplishments in maintaining challenging skills, developing new skills, and overcoming obstacles within skillsets, particularly in stressful situations (the COVID-19 pandemic).</li> <li>➤ Create an open environment where structured constructive feedback is understood as positive component of skills that can enable someone to grow in a field.</li> </ul>
Empathy	<ul style="list-style-type: none"> <li>➤ Engage in activities that actively support the exploration of someone else's perspective. Reading and hosting discussions that incorporate outsider perspectives on issues and create a positive space to engage in these external viewpoints.</li> <li>➤ When discussing others' perspectives and recounting program participants' perspectives, create a space for emotions to be expressed. Allowing for positive and negative emotions to be voiced and discussed, but not negatively critiqued can be a powerful tool in understanding one's emotions associated with impactful topics.</li> </ul>

**Conclusions**

This study aimed to explore the personal motivation of youth to participate in a global youth-led research initiative exploring the impacts of the Covid-19 pandemic on young people. The researcher specifically examined the three core pillars of self-determination theory as they pertained to personal motivation, and the researcher explore the role of empathy as it pertained to personal motivation. The languages the study was implemented in and the distinct population

analyzed were out of the researchers control as she studied a program that set those boundaries. Furthermore, the researcher is biased in her interpretations of the study results due to her inherent cultural background that does not match many of the study participants, thus the researcher provided a positionality statement. However, findings from this study suggest that these four constructs paired with youth's age can help inform respondents motivation. Furthermore, individuals in this study indicated that there were ten-items from a 40-item survey that accounted for 12% of the variation in their personal motivation to participate in the YAR program. One of those items represents autonomy, three-items represent competency, five of those items were accounted for in the construct of empathy, and the final item was an association with age.

What's perhaps most interesting about this study is the role that PYD played, YPAR played, and how self-determination theory and empathy are intermingled within both PYD/YPAR and motivation. PYD is centered around a strengths-based approach to engaging with young people. The concept focuses on what young people can contribute to society opposed to the negative variables associated with them. In the context of the COVID-19 pandemic, this can be seen through young people demonstrating their resiliency and ways that the youth population can contribute to maintaining social safety measures and socially supporting those in need. This is in opposition to assuming young people are causing illness flare ups through partying and reckless behavior. A strengths-based approach, as seen with PYD, suggests that youth are essential to the solution. Providing programmatic opportunities where youth and communities can exemplify these strengths is a needed strategy to engage youth and reduce societal stresses associated with the pandemic.

Evidence from this research demonstrates that young people, around the world, are motivated to participate in a program where their voice can be heard and they can be seen as part

of the solution to this global threat. In order to help foster more programs like YAR, it is essential to understand what drew participants to apply, what motivated applicants when considering the program. With this valuable information, the YAR program can ensure these variables are met and other programs like YAR can absorb these variables into their design. With this in mind the following are concepts and suggested actions, from this study, that were most associated with *personal motivation* within the boundaries of the constructs discussed in the conceptual model.

The emerging adult, waitthood, or even ‘bamboccioni’ population of young people are motivated to participate in youth-led, community action programs, thus future programmers should consider ways to involved youth aged 18-30 years. This is likely more salient considering the stressful everyday situations that this population is experiencing due to the pandemic. Pre-pandemic, this age range faced economic and identity challenges causing a sense of limbo, providing a program that allows youth to put their energies towards something they’re engaged with and impacts their environment can be an intrinsically way to motivate this group into community action.

The YAR program is centered around the concept of youth choice. Young people within the program are told, at the onset, that this is their program to run. This element of youth choice is essential in engaging this population. The more choice that participants have the more autonomous motivation they’ll likely have to participate. In the time of the COVID-19 pandemic, the element of choice has been drastically challenged in everyday society. What activities can be conducted, what social circles you converse with, and your capacity to keep yourself safe, has all been reduced to strict pre-ordained rules. Programmatic leaders and developers should consider systematic ways for youth voice to not just be a token of the program

but to influence the outcomes of the program. In the case of the YAR program, youth identify all key elements of the research to be undertaken, and whether they are “successful” or not, youth have agency over the final products produced from their work. In times like this, programs that create space for autonomy can be a game changer in motivating people to participate.

While providing space for young people to have ownership and agency over their actions is essential to engaging this population, there is also a need to partner this with structure. Programs moving forward should consider ways for young people to be in charge of key decisions occurring with a program, but should also look for ways to support those decisions in a concrete manner. In the YAR program, this is included with the training enabling youth the capacity to create youth-led structure including elements around understanding group dynamics, developing comprehensive group timelines with deadlines, and establishing a group-identify platform for meetings (in a virtual space). This element of ownership over these structural components allows for great youth motivation through autonomy, while also encompassing the need for structure to complete given tasks. This can be complimented by having addition adult/an external group member to ensure that the group-identified logistics are maintained.

With youth agency towards their programmatic task partnered with structure, youth are motivated to participate in programs, especially if those programs can provide participants with new skills. Explicit skills are relevant to the program; however, this research suggests that emphasizing to young people that they have the capacity to learn skills is essential. In the YAR program, it is advertised that training will be provided to those that do not currently excel in research (the skill associated with the program), what this enabled youth applicants to understand is that they would be given the opportunity and the tools to develop a skill. Thus, youth applicants were supported in the knowledge that they had the capacity to grow their skills.

Programmers moving forward should look for ways to demonstrate they can support the learning of new skills to interested youth. With this capacity building it is essential for programmers to remember and to the support and remind participants that skills building takes time and all youth are capable of developing the skills needed to complete a task. This is heavily cautioned with realism for future programmers. If the tools for skill development are not provided and expectations about youth outcomes at the completion of a program are deceptive, then intrinsic motivation to participate in a program might be present at the onset, but would likely decrease as the program continued.

The above discussion points are centered around the significant items of age, autonomy, and competency. It is important to remember the interconnectivity of these items and the way they are discussed for application in future programs. This study demonstrated the way all ten items in the final reduce regression model were needed to explain personal motivation, thus compartmentalizing each item has the potential to reduced personal motivation. This nest test keeps these aspects in mind while discussing the remainder five items associated with empathy.

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the story to any issues that is being discussed. Concrete ways of doing this is to play devils' advocate, introducing learning materials that promote and external viewpoint, and providing the space for youth participants from different backgrounds to engage with one another.

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## **Future Work**

This study explored the personal motivations of YAR applicants to join the program, the results presented in this work are focused on self-determination theory's aspects of autonomy, relatedness, and competency, the incorporation of empathy into a motivational model, as well as demographic characteristics. Therefore, the discussion points and recommendations are centered around those independent variables relationship with personal motivation. Future research has much to consider from the data available in this study as well as future new research that should be explored.

Based on the data in study, interpreters of this work should be mindful of the broad demographic considerations. This study consisted of youth from over 70 countries and is not generalizable to each of those areas. Thus, while the general recommendations should still be considered when making programmatic decisions, it is also suggested that a regional or country specific perspective should be examined more in-depth. The same note of concern should be given for gender. This data did not show statistically significant differences in gender when considering personal motivation, however it was evident that there are differences in how motivation aspects, such as relatedness, could be accurate when considering gender. Future work that deals with a gendered lens should take this into consideration.

Empathy was a component added into this motivational work and proved to be an important predictor variable for this population. Future work should include ways to support empathy in this population, and ways to promote empathetic responses in times of stress. The recommendations stemming from this study provide tools on ways to engage empathetic youth but more work is needed. Furthermore, this study identified the age group of 18-30 year olds as being more personally motivated within this population. Future work should consider identifying more minute details within this age range, as well as consider the developmental differences that exists within individuals in this age range. The same components of developmental differences should be considered when making considerations about regional variables and how an individual related to the notions of *waithood*, *emerging adult*, and *bamboccioni* for a few examples. Understanding how individuals related, developmentally, to the socio-cultural changes around them, particularly in a stressful time such as the COVID-19 pandemic, will be informative in understanding their motivations.

Finally, it is suggested that qualitative work be carried out to understand the stories, similarities, and differences from the diverse population of this study. While this study was conducted to understand the broad implications of the YAR program, qualitative work following up with key themes and demographic differences would provide a wealth of understanding how PYD and YPAR programs can be adjusted to best suit different community needs. This study offers the first glimpse of an international program, set in unprecedented times, and the population of individuals who were intrinsically motivated to be seen as change-makers. Further research in the connection of self-determination theory and empathy in extreme times is warranted, as is further work on these constructs in informal education opportunities.

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## APPENDIX A: UNESCO Youth as Researchers Leadership Team

Pat Dolan: Professor and UNESCO Chair. Founder and Director of the UNESCO Child and Family Research Centre. National University of Ireland, Galway. Founder of Youth as Researchers (YAR)

Mark Brennan: Professor and UNESCO Chair in Community, Leadership, and Youth Development. Director of Graduate Studies, Agricultural and Extension Education and Applied Youth, Family, and Community Education, Penn State University. Established YAR in the U.S.A.

Sue Vize: UNESCO Regional Adviser for Social and Human Sciences in Asia and the Pacific. Sue has a background in community natural resource management and working with youth. Coordinated the YAR program in Vietnam and Myanmar.

Maria Kyriotou: Youth development specialist at UNESCO. Key YAR liaison with UN

Danielle Kennan: Lecturer in the School of Political Science and Sociology; Assistant Programme Director for the BA in Child, Youth and Family: Policy and Practice.

Assisted Pat Dolan in founding the YAR program, key trainer with the YAR program.

Kaila Thorn: PhD Candidate, Youth and Community Development, Penn State University.

Program director of YAR in the U.S., main trainer for YAR in Vietnam and Myanmar.

David Young: Youth Programme Specialists at UNESCO Bangkok, lead in YAR in Laos.

Jack Gaffey: UNESCO Child and Family Research Centre Youth Researcher, NUI Galway.

Laura Guay: UNESCO Fellow, Penn State University, U.S. Former YAR researcher, Global YAR communications director.

Hai Ha Vu Thi: JPO Programme Analyst, young leader at Women Deliver. Programme leader of YAR in Vietnam.

Helette Pieterse: Make a Difference Leadership Foundation, South Africa. YAR leadership team.

Ella Anderson: UNESCO Child and Family Research Centre Youth Researcher, NUI Galway. YAR steering committee member.

Mohsen Gul: Sustainability Governance Advisor at Asian Development Bank, UNDP Pakistan, National Police Academy Pakistan. YAR steering committee member.

Nephtaly Andoney: UNESCO Inclusive Policy Lab focus on international education and youth empowerment development in Haiti. YAR steering committee member.

Moneera Yassien: Youth Mentor for the Youth Leadership Programme with UNDP, young leader in Women Deliver, workshop associate at Nesta UK and British Council East Africa. YAR steering committee member.

Nhial Deng: young leader in Women Deliver, Consultant with Take Action Global, Chair of Refugee Youth Peace Ambassadors. YAR steering committee member.

Navarat Veerawongchai: UNESCO Inclusive Policy Lab. YAR steering committee member.

## APPENDIX B: IRB approval and Exemption Determination

## APPROVAL OF SUBMISSION

Date: December 22, 2020

From: Michelle Covert,

To: Kaila Thorn

Type of Submission:	Initial Study
Short title	Evaluating the Youth as Researchers program
Full title of Study:	Evaluating the impacts of the Youth as Researchers program
Principal Investigator	Kaila Thorn
Study ID	STUDY00016525
Submission ID:	STUDY00016525
Funding:	Not Applicable
IND, IDE, or HDE:	Not Applicable
Documents Approved:	<ul style="list-style-type: none"> <li>• Consent form (5), Category: Consent Form</li> <li>• Interview protocol (2), Category: Data Collection Instrument</li> <li>• IRB Protocol V4 (4), Category: IRB Protocol</li> <li>• Recruitment email (1), Category: Recruitment Materials</li> </ul>
Review Level:	Expedited

On 12/22/2020, the IRB approved the above-referenced Initial Study. This approval is effective for one year from date of approval. You will be required to submit an annual administrative review form through CATS IRB. You will receive reminders prior to the administrative review form due date.

## APPENDIX C: Youth as Researchers Call for Applicants

### Take a Stand on COVID-19

#### Be part of the solution!

Join with other young people to be part of a new research project on Youth and COVID-19.

Want to know how young people are being affected by the pandemic, show the world how young people are responding to COVID-19, or just to join in and do something positive? The Youth as Researchers (YAR) project, supported by UNESCO, the National University of Ireland Galway and Penn State University, is forming a global initiative to answer questions like these.

Young people aged 18-35 will form research teams that answer questions like these. This research is designed and conducted by young people, as well as being about young people. The youth researchers will collaborate with like-minded young people, receive training, and be supported by a mentor to assist with the research.

UNESCO is seeking applicants from interested youth who meet the following criteria:

- Aged 18-35 years
- Previous research experience, as part of a previous Youth as Researchers project, through your university studies or through volunteer work with an NGO, or an interest in learning about and conducting research
- Have internet access
- Willing to commit up to 10 hours per week from July to October (tentative)
- Have an interest in development issues
- Work efficiently in English or French

#### What does a youth researcher do?

Each researcher will be part of a small research team. After completing a series of trainings, your team will design and deliver your research. This means identifying your research question, developing your methodology, collecting and analyzing data, and communicating what you found. Each group will have a mentor who will assist with technical questions and advice, and guide you through the process. Even without previous experience you'll be successful.

#### How can I collect data in lockdown?

As COVID-19 is highly contagious and spread by human contact, we don't want you to be put at risk. The training sessions, group work and data collection will all take place virtually. You can do this from your home and there is no risk you will be exposed to the virus.

#### How will the research be used?

The results of the research will be published by the partners as a series of policy briefs and articles to be widely circulated within the United Nations, with Governments, academia, development actors and through the media. You can also use the research for your studies, work or local advocacy.

#### What will I get out of being part of this?

In addition to meeting new like-minded young people that also want to be part of the solution to COVID-19, the programme offers the following benefits:

- Recognized training program endorsed by UNESCO
- New technical and interpersonal skills you will be able to apply in your studies, work or community action
  - Co-authorship of policy briefs and articles published by UNESCO

If you would like to apply please complete the [online application](#) or send the word version to [yar@unesco.org](mailto:yar@unesco.org)

<b>First/personal Name:</b>	<b>Family/Surname:</b>
<b>Date of birth:</b>	<b>Gender: M / F / O</b>
<b>Email:</b>	<b>Phone/What's App: +</b>
<b>Place of Residence</b> (full address):	
<b>Languages:</b> Please circle 1 fluent, 2 working knowledge 1 2 Arabic                      1 2 French                      1 2 Other: _____ 1 2 Chinese                      1 2 Russian                      1 2 Other: _____ 1 2 English                      1 2 Spanish	
<b>Educational qualifications</b> (this is not a requirement but will help us to know more about you): <input type="checkbox"/> High School <input type="checkbox"/> Bachelor's Degree: major _____ <input type="checkbox"/> Master's Degree or PhD: major _____ <input type="checkbox"/> Other: please specify _____	
<b>Research experience:</b> Please describe any research you have done previously, including links to any papers, websites or other. This can include what you do/have done as part of your studies. Again this is not a requirement but will help us to know more about you.	

**Motivation:**

Please tell us in 300 words or less why you want to be part of the YAR programme.

**Select the research topic you would like to explore. A global survey was conducted to gather information on young peoples' views on priority topics for YAR. Over 700 responses provide a snapshot of the experiences of young people from 102 countries. This data will be shared during the research design phase to help you define your research questions based on the five topics below. Please rank 1 first preference, 2 second preference, 3 third preference:**

Topic 1: Youth and well-being <sup>4</sup> during the pandemic	Topic 2: Learning during the COVID-19 pandemic	Topic 3: Youth taking action during the pandemic	Topic 4: Youth and Human Rights during the pandemic	Topic 5: Using technology during the pandemic

You can add a CV or letter of recommendation if you have one

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<sup>4</sup> Well-being is defined as being happy and healthy. It covers all aspects of life. In the youth survey aspects of well-being youth were asked to consider were mental, social, financial, physical, community and career.

## APPENDIX D: Youth as Researchers Feedback Questionnaire

### **Youth as Researchers COVID Response!**

#### **Feedback Questionnaire**

Thank you for taking the time to fill out this questionnaire! The goal of this is to better understand who you are and why you applied to the Youth as Researchers program, so that similar programs can continue to be offered in the future. Which means, your feedback is essential! This five section questionnaire should take you about 10-15 minutes to complete and is designed to inform future youth-led programs for UNESCO and partners. Any information you provide in this questionnaire will remain confidential to the select UNESCO team of practitioners and researchers working with the Youth as Researchers program. By submitting this questionnaire, you are agreeing to allow the UNESCO research team to use your responses in our work. Additionally, we want to assure you that your contact information will only be collected if you agree at the end of the questionnaire, and that you are welcome to skip questions you do not feel comfortable with.

Your feedback is essential to the continuation of this program and the creation of others like it, we appreciate your honest responses and willingness to share your opinions!

#### **To get us started we have a three questions:**

**When you applied to the Youth as Researchers program, what was the topic you selected for your 1<sup>st</sup> research topic:**

- Youth and Well-Being
- Using Technology
- Learning
- Youth taking action
- Youth and Human Rights

**This program is dedicated to addressing young people. To help us understand your perspective, please select the option that best fits your definition of “youth”.**

- People aged 14-18 years
- People aged 16-24 years
- People aged 18-24 years
- People aged 18-30 years
- People aged 18-35 years
- Other: \_\_\_\_\_

**This last question before begin is related to your experiences with the COVID-19 pandemic and how you are currently spending your time. Please tell us the extent to which you agree or disagree with the following statements:**

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>N/A</b>
I have a lot free time	<input type="checkbox"/>					
I am able to maintain the same relationship with my friends	<input type="checkbox"/>					
I am able to create new friendships						
I have time to be creative	<input type="checkbox"/>					
I have enough energy to be creative	<input type="checkbox"/>					
I am able to continue my work	<input type="checkbox"/>					
I have found it easy to explore new ways to use technology for my work/study	<input type="checkbox"/>					
My education has been disrupted	<input type="checkbox"/>					
There is a reduction in my current employment						
There is a reduction in my future employment opportunities	<input type="checkbox"/>					
I have a lot time with family						
I have time to pursue hobbies	<input type="checkbox"/>					
I have energy to pursue hobbies	<input type="checkbox"/>					
My community has poor access to the internet						
I have heard of an increase in food shortages in my community	<input type="checkbox"/>					
I have heard of an increase in domestic violence in my community	<input type="checkbox"/>					
I can easily access support services if I feel like I am at risk (physical or mental health risk)	<input type="checkbox"/>					
I am taking actions to help my community	<input type="checkbox"/>					
Other (please specify)	<input type="checkbox"/>					

## Section

### I: Community Interactions

In this first section, we're exploring the different exchanges and relationships you have with people in your community.

**When thinking about your interactions with people, please describe how frequently you interact with the following:**

	<b>Daily</b>	<b>Weekly</b>	<b>Monthl y</b>	<b>Not at All</b>
Immediate Family (parents, siblings)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extended Family (cousins, aunts, uncles, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Close Friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acquaintances (people you know but aren't close with)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Friends you <u>only</u> know online (social media, online gaming sites etc.)				
Classmates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
People you work with	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**For this next question, think about your current relationships with friends, family members, co-workers, community members, and so on, with that in mind how strongly do you agree or disagree with the following statements?**

	Strongly Disagree	Disagr ee	Neither Agree nor Disagre	Agree	Strongl y Agree
There are people I can depend on to help me if I really need it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel that I do not have close personal relationships with other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is no one I can turn to for guidance in times of stress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are people who depend on me for help	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are people who enjoy the same social activities I do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other people do not view me as competent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel personally responsible for the well-being of another person	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel part of a group of people who share my attitudes and beliefs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I do not think other people respect my skills and abilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If something went wrong, no one would come to my assistance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have close relationships that provide me with a sense of emotional security and well-being	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is someone I could talk to about important decisions in my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have relationships where my competence and skills are recognized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is no one who shares my interest and concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is no one who really relies on me for their well-being	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is a trustworthy person I could turn to for advice if I were having problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel a strong emotional bond with at least one other person	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is no one I can depend on for aid if I really need it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is no one I feel comfortable talking about problems with	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are people who admire my talents and abilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I lack a feeling of intimacy with another person	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is no one who likes to do the things I do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are people who I can count on in an emergency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No one needs me to care for them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**When thinking about your relationship with your community and those within it, how strongly do you agree or disagree with the following statements?**

	<b>Strongly Disagree</b>	<b>Disagre e</b>	<b>Neither Agree nor Disagre</b>	<b>Agree</b>	<b>Strongl y Agree</b>
I feel I have a voice in what goes on in my community.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel that adults take me seriously when I have something to say.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am able to express my thoughts confidently with adults.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have a strong sense of what I value in life.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have a group of friends who I feel safe to express my opinions with.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If I spoke out about an issue in my community, others would listen to me.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If I started a project to change something in my community, others would join me...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**This section discusses your perspective on what happens to other people, how strongly do you agree or disagree with the following statements?**

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither Agree nor Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>N/A</b>
I try to look at everybody's side of a disagreement before I make a decision.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
When I see someone being taken advantage of, I feel kind of protective towards them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I sometimes try to understand my friends better by imagining how things look from their perspective.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other people's misfortunes do not usually disturb me a great deal.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
When I see someone being treated unfairly, I sometimes don't feel very much pity for them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am often quite touched by things that I see happen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I believe that there are two sides to every question and try to look at them both.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I would describe myself as a pretty soft-hearted person.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
When I'm upset at someone, I usually try to "put myself in his shoes" for a while.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Before criticizing somebody, I try to imagine how I would feel if I were in their place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### Section III: Civic Engagement

Up next in this section, we'd like to ask you what you think about young people being involved in civic organizations and in the community. When we say "civic organizations" we mean any organization with social good as its goal (for example, social justice, religious, political, or educational organizations, including different types such as social start-ups).

With the section description of civic organizations in mind, we'd like to ask about the connection between youth and civic organizations, how strongly do you agree or disagree with the following statements?

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Youth participation in how civic organization are managed can make civic organizations better.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lots of positive changes can happen in civic organizations when youth work together.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Organizing groups of youth to express their opinions could help solve problems in civic organizations.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All civic organizations should have youth input.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Youth can have more influence on what happens in civic organizations if they act together rather than alone.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Youth participation in <u>community decision making</u> can make communities better.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lots of positive changes can happen in <u>communities</u> when youth work together...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Organizing groups of youth to express their opinions could help solve problems in <u>communities</u> .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All <u>communities</u> should have youth input and active involvement.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Youth can have more influence on what happens in <u>communities</u> if they act together rather than alone.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is a need for more young people in leadership roles					

**Now, imagine that there is a problem within your community, that you want to do something about. How well do you think you would be able to do the following activities?**

	<b>Definitel y Can't</b>	<b>Probably Can't</b>	<b>May be</b>	<b>Probably Can</b>	<b>Definitel y Can</b>	<b>N/ A</b>
Create a plan to address the problem...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Get other people to care about the problem.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Organize and run a meeting.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Express your views in front of a group of people.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Identify individuals or groups that could help you with the problem.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Write an opinion letter to a local/national newspaper.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Call someone on the phone that you have never met before to get their help with the problem.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Contact an elected official about the problem.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Organize a petition.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### Section IV: Motivation

We're almost done! In this section we'd like to ask about your motivation to participate in a program such as Youth as Researchers

**For each of the statements below, please indicate how strongly you agree or disagree with the following statements about your motivation to participate in the Youth as Researcher (YAR) program:**

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither Agree nor Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>N/A</b>
I want to improve my research skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The YAR international network is something I want to be a part of for professional reasons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The YAR local network is something I want to be a part of for professional reasons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Being a YAR participant would benefit me personally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
My YAR experience would benefit my local community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Being a YAR participant would benefit me professionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Being a YAR participant was a way to take action in response to COVID-19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The YAR program was a way to serve my local community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The YAR program was a way to serve my national community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I saw the benefit UNESCO programs have offered others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I want to improve my networks with like-minded young people						

**As you probably also have expectations when applying for the Youth as Researchers program, we'd like to understand what those were. Please indicate how strongly you agree or disagree with the following sta**

**tements about your expectations of the Youth as Researchers (YAR) program:**

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither Agree nor Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>N/A</b>
I would use the skills gained during my YAR experience in my personal life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I would use the skills gained during my YAR experience in my professional life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I would use the international networks from YAR in my professional life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I would use the national networks from YAR in my professional life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The YAR experience would be personally challenging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The YAR program would increase my confidence in myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The YAR program would increase my empathy towards others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I would be more connected to my family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I would be more connected to my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I would personally grow from working with people different from me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The YAR international networks would benefit me personally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The YAR national networks would benefit me personally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**In case there is anything we've missed, can you share why did you decide to get involved in the Youth as Researchers program?**

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### Section V: About You

**In this final section we'd like to ask a few questions to better understand who you are as a research applicant.**

**What was the email address you used in your original application?**

Your name and all contact information will remain confidential to the UNESCO team and we will only contact you further if you indicate so at the end of this questionnaire:

\_\_\_\_\_

**What country do you call home? (pull down list)**

**How would you describe your home area?**

- Village
- Rural
- Suburban
- Urban
- City
- Other:

**How old are you?**

- 18-24 years
- 25-30 years
- 31-35 years
- Other: \_\_\_\_\_

**To help us better understand your immediate community, how many people live in your household?**

\_\_\_\_\_ # of people

**Of these, how many are:** (drop down)

- below the age of 16
- Between the ages 16-40
- 41 or older

**What is your gender?**

- Female
- Male
- Other

**Would you be willing to participate in a follow-up interview?**

- Y/N

**Would you like to participate in future UNESCO opportunities?**

Y/N

## **VITA of Kaila Thorn**

Kaila Thorn is a dynamic and engaged scholar with a strong record in developing, implementing, and evaluating engaging academic and practitioner focused programs for diverse audiences. Thorn earned her PhD. in Agricultural and Extension Education from The Pennsylvania State University in August 2021, her M.S. in Agricultural and Extension Education from The Pennsylvania State University in August 2017, and her B.A. in International Studies and Environmental Studies from Hollins University in May 2011.

In addition to her academic success, Thorn has experience in implementing and improving programs in youth leadership development, environmental education, and youth behavioral change. She has worked alongside the United Nations Educational, Scientific, and Cultural Organization, as a UNESCO Fellow in Community, Leadership, and Youth development. Through this work, she has been a key practitioner and leader in the development and implementation of the Youth as Researchers program. Where she has been engaged as a program trainer, led curriculum adaptations for the diverse global audience, conducted program evaluations, and been instrumental to the development of a strategic plan for the international program.

Thorn aims to continue working in the field of applied youth and community leadership and development. Where she intends to continue providing scientifically based tools to youth to assist in raising the voices of young people around the world.

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