Research Report

Measuring the Experience of God's Love in Children

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CENTER FOR SPIRITUALITY, THEOLOGY AND HEALTH
DUKE UNIVERSITY

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RESEARCH SCHOOLS INTERNATIONAL

spiritualcare partners

World Vision

Measuring the Experience of God's Love in Children

Ethics Approval and Consent to Participate

This research protocol was reviewed and approved by the University of East London's (UEL) Institutional Review Board (IRB), protocol number UEL-IRB-ETH2324-0242. All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee. Informed consent was obtained from all individual participants included in the study.

The Harvard University Institutional Review Board (IRB24-1042) granted approval for Harvard affiliated researchers to collaborate on this project under an Institutional Affiliation Agreement with UEL. Principal Investigator: Jennifer Wortham.

The Duke University Health System (DUHS), Institutional Review Board declaration has determined that the following protocol does not meet the definition of engagement of DUHS or its employees and agents in research, as defined in OHRP's "Guidance on Engagement of Institutions in Human Subjects Research" dated October 16, 2008. Protocol ID: Pro00116355 Reference ID: Pro00116355-INIT-1.0. Protocol Title: Love and hope measurement for children Principal Investigator: Harold Koenig

For questions, or permission to use this material for other purposes or in any other form, please contact Jennifer Wortham, Dr.PH, at jwortham@fas.harvard.edu.

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Overview

This landmark research initiative, *Measuring the Experience of God's Love in Children,* was funded by World Vision International. The study was managed by Spiritual Care Partners, which assembled a multidisciplinary team comprised of specialists in human flourishing, child development, research methodology, theology, statistical analysis, evaluation science, and related disciplines.

Its design and empirical-theological framework were developed in collaboration with leading theologians from various faith traditions and in consultation with subject-matter experts at World Vision.

Research Team and Consultants

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Ariola Kallçiu, Monitoring and Evaluation Senior Advisor, Faith & Development.

We would like to extend our deepest gratitude to the theologians whose extraordinary scholarship and insight have profoundly informed this work, including:

- Rev. Dr. Rohan P. Gideon, Church of South India

- Dr. Tim J. Davy, Evangelical Church and Interdenominational Seminary, United Kingdom

- Dr. Rosalind Lim, Tan Malaysian Baptist Church

- Rev. Dr. Šimo Maršić, Catholic Church, Bosnia, and Herzegovina

- Rev. Dr. Jason Foster, Orthodox Church in America

- Rev. Dr. Seyram B. Amenyedzi, Global Evangelical Church, Ghana, and Germany

- Fr. Lenin Cruz, Catholic Arquidiócesis de Tegucigalpa Honduras (in an advisory role, joining the group officially in 2024)

In 2022, World Vision convened our first meeting with these scholars, charged with the primary objective of establishing a clear, measurable definition for the Child Well-Being Objective: "Children report an increased awareness of God's love." From that initial gathering, the working group's mandate soon broadened to embrace a more expansive aspiration: "Girls and boys experience the love of God and neighbors."

Throughout this process, the theologians' feedback underscored the necessity of anchoring our measures in lived experience. In response, our development team implemented a "Voice of the Customer" (VoC) exercise using narrative inquiry, a qualitative listening method that empowers children to share their stories in their own words. By capturing and analyzing children's needs, preferences, and feedback, we ensured that the metric would genuinely reflect how young people themselves perceive and articulate God's love in their lives.

Their collective wisdom, blending theological depth with practical guidance, has been instrumental in shaping both our conceptual framework and our approach to measurement. We are profoundly grateful for their partnership, which has allowed us to bridge ancient spiritual insight with contemporary, child-centered research.

Thank you.

Table of Contents

Executive Summary

Children encounter God's love in the quality of their interactions within various circles of care. This can occur in the context of transformative development, and humanitarian programs that generate community-wide impact or even in the simple, heartfelt affirmation of an adult who believes in them and wishes them well. Sometimes, the most profound expression of love is simply being present with a child, as reflected in Job 2:13.

World Vision believes that children experience God's love most profoundly through human relationships. Its staff and partners, along with parents and care

givers, not only tell children about love but actively embody it, creating environments where love is experienced firsthand. Adults, whether they are parents, NGO staff, faith leaders, community leaders, or other influencers, serve as vital vessels for expressing God's love. Thus, World Vision's approach seeks to understand how children experience love holistically by considering multiple dimensions:

- **World Vision Programs:** Integrating faith models and spiritual nurture within broader community programming.

- **Sponsors:** Recognizing that sponsors influence children's lives through prayers, letters, and encouragement.

- **World Vision Staff:** Emphasizing a dual commitment to Christian ethos and technical excellence in witnessing the love of Christ.

- **Community Partners:** Engaging church leaders and local influencers who support children both materially and spiritually.

- **Parents and Caregivers:** Empowering families to create a loving home environment, essential for children's experience of God's love.

A key element of World Vision's mission is enabling children to encounter and embrace the love of God through its programs. To capture this spiritual dimension, World Vision defined Child Well-Being Aspiration 1 (CWBA1) as ensuring that girls and boys "experience the love of God and their neighbors."

Despite the challenges of measuring such an abstract and culturally variable construct, a comprehensive process was initiated to develop robust indicators. A set of indicators that was developed in 2017, refined through extensive literature reviews, qualitative insights, and quantitative testing across diverse contexts, aimed to measure children's reported awareness of God's love, their engagement in spiritual practices, and their sense of hope for the future.

However, practical challenges emerged that limited the effectiveness of this measure. Despite the strategic mandate to adopt relevant indicators, few baselines and evaluations were conducted, resulting in limited data to assess their impact. A systematic review conducted in FY23 revealed that the original indicators struggled to meet the organization's needs for decision-making and accountability. Moreover, they lacked alignment with a meaningful, child-focused theology of change.

Further, predominantly framed from a narrow Christian perspective, these indicators proved less relevant in culturally diverse contexts, particularly in regions where Catholic, Orthodox, or other faith traditions predominate. Consequently, only 11 out of 70 + Field Offices measured indicators related to God's love and hope, mostly in majority-Christian countries, while none adopted the indicator on spiritual practices.

In response, the Faith & Development team, in collaboration with the Evidence and Learning teams (referred to as the Development Team), conducted a series of semi-structured interviews with field staff and theologians specializing in child spirituality to identify the barriers to the effective utilization of these measures. Key issues identified included:

- **Challenges in Measurement:** The subjective and fluctuating nature of children's experiences of God's love made it difficult to capture meaningful change.
- **Risk of Misinterpretation:** Indicators that did not account for diverse interpretations of God's love across different faith traditions risked being seen as either promoting a specific interpretation of Christianity or, alternately, a narrow humanistic view of hope.
- **Contextual Variations:** Indicators did not feel relevant in many contexts.

Given World Vision's extensive operational context, spanning over 70 countries and diverse humanitarian and development settings, there was an urgent need to refine the CWBO1 indicators to address these deficits. The refined measure must be both culturally sensitive and adaptable, and more closely aligned with World Vision's ecumenical Christian identity while providing meaningful data to support decision-making, accountability, and improved programmatic outcomes.

The main outcome of this project is, therefore, a globally applicable indicator that captures children's experience of God's love, regardless of their cultural or religious background. The decision was taken to focus on "hope" as a measurable outpouring of God's love in the life of a child. Hope was identified as a key indicator of children's transformational experience of God's love because hope blossoms in the life of a child as they experience the love of God through relationships.

Considering World Vision's focus on serving the most vulnerable children, it is the hope that is fueled by a genuine experience of true love that enables children to live life in all its fullness, regardless of their circumstances.

This comprehensive indicator, in turn, is designed to guide strategic efforts to foster spiritual well-being and ensure that children across all programmatic contexts may truly experience the transformative power of God's love in their lives.

The Development Team launched a rigorous mixed-methods, multi-disciplinary study for the measure refinement/development process. The study was guided by a working group of diverse Christian theologians with expertise in child spirituality, to ensure that the new measure was both empirically grounded and theologically sound. In addition, leading academicians were consulted throughout the process to guarantee that the measure met the highest standards of scientific validity, reliability, and cultural sensitivity.

Results

By rigorously applying psychometric validation procedures recommended by Koenig (2009) and Koenig & Zaben (2021), this study successfully developed a robust, empirically validated survey instrument that measures children's experiences of hope as a reflection of God's love. The validation process included comprehensive expert reviews, pilot testing across culturally and religiously diverse groups, exploratory and confirmatory factor analyses, and reliability testing to ensure both scientific rigor and cultural sensitivity. Active engagement of children themselves significantly contributed to shaping the tools, ensuring the measure reflected their authentic experiences and insights. Additionally, extensive feedback from World Vision field office staff in the eight pilot countries, who possess deep local expertise, further strengthened the instrument's cultural and contextual relevance.

The finalized survey reliably captures the multidimensional nature of hope and its connection to perceptions of God's love, enabling meaningful cross-cultural and longitudinal assessments. "This instrument equips researchers and practitioners with a robust measure to assess how children's experiences of God's love manifest through six interconnected signs of hope: Compassion, Joy, Purpose, Resilience, Wisdom, and Spirituality, providing a comprehensive view of holistic child flourishing rooted in God's love."

This particular tool does this via a robust measure designed to assess how children's experiences of God's love is manifest through six interconnected signs of hope: Compassion, Joy, Purpose, Resilience, Wisdom, and Spirituality. It also positions World Vision and its partners to effectively track and report on children's spiritual well-being globally, strengthening their capacity to nurture hope and foster deeper experiences of God's love among the populations they serve.

Introduction

World Vision's vision is that children experience life in all its fullness, which should encompass physical, emotional, and spiritual well-being. This approach is rooted in the idea that human relationships are a primary conduit for experiencing God's love. Its staff, partners, parents, and caregivers embody this love in everyday interactions, whether through transformative community development programs or simple affirmations of belief in a child's potential. As echoed in Job 2:13, sometimes the most profound expression of love is simply being present with a child.

The Measure of God's Love research project was formally launched in 2024, with the aim of revising World Vision's existing measures of God's love to better reflect ecumenical Christian theological values across diverse contexts.

The initiative focused on several key areas:

- Crafting a narrative about hope and God's love that accurately captures World Vision's Christian ethos and technical expertise.
- Understanding the internal changes in children's hearts as they grow in hope.
- Assessing whether sponsored children and other beneficiaries understand that they are loved by God.
- Evaluating the contributions of various actors, parents, World Vision staff, sponsors, and community partners, in nurturing children's experiences of God's love and hope.

Measuring a child's experience of God's love is not merely a monitoring exercise; it is an expression of World Vision's commitment to honoring the whole child, body, mind, and spirit, as created in God's image. In a landscape where faith-based agencies increasingly seek evidence of spiritual impact, this research serves both to affirm World Vision's Christian identity and to provide rigorous, actionable data. By articulating how hope and love manifest in a child's inner life, the project elevates spiritual well-being to the same level of programmatic priority as physical health, education, and protection.

Underpinning this initiative is a conceptual framework that links spiritual development with psychosocial growth. Drawing on child development theory, the measure theorizes that as children come to sense God's love, they can flourish in terms of thinking, feelings and behavior. Defining "hope" is inherently complex, its depth and spiritual nuance resist a single, universal definition. Rather than offering a fixed interpretation, this report approaches hope through a theologically grounded understanding shaped by sustained reflection and dialogue. Hope, understood as confident expectation rooted in God's faithful presence and promises, is both the fruit of experiencing God's transformative love and an active participation in God's Kingdom, enabling relational, emotional, moral, and spiritual flourishing toward reconciliation and restoration.

Framing hope this way ensures that the indicators speak directly to the dynamic, ongoing process by which children integrate faith or a sensitivity to a deeper reality into their everyday lives.

Prior measurement efforts encountered limitations: instruments were often rooted in a single denominational tradition, insufficiently sensitive to cultural nuances, and reliant on untested items that conflated spiritual practices with spiritual experiences. Recognizing these gaps, the 2024 project set out to reground the indicators in ecumenical theology and established psychometric methods. This dual emphasis guarantees that each item not only resonates with children across Catholic, Orthodox, Protestant, Evangelical and other Christian contexts, as well as non-Christian children including children of different religious traditions, -but also meets rigorous standards of reliability and validity.

To achieve these aims, World Vision convened a multi-disciplinary coalition of theologians, child psychologists, monitoring and evaluation specialists, and frontline staff. Through a series of workshops, focus groups, and Delphi rounds, stakeholders co-created narrative vignettes, refined item wording, and defined thresholds for meaningful change. This collaborative process ensured that the resulting measures are theologically robust, culturally resonant, and practically useful, equipping field offices with tools they can adapt to local languages, practices, and programmatic realities.

The final objective of this project was to develop a globally applicable indicator that captures children's experience of God's love, enabling World Vision to report on this aspect of well-being and strategically design programming that nurtures it.

Background and Context

World Vision's emphasis on holistic child well-being has long included spiritual nurture as a key component. In its global strategy, World Vision defined Child Well-Being Aspiration 1 (CWBA1) as ensuring that girls and boys "experience the love of God and their neighbors," an aspiration rooted in the organization's Christian identity. However, translating this spiritual aim into a measurable indicator posed significant challenges. Capturing a child's awareness of God's love meant grappling with intangible personal experiences and cross-cultural differences, while also avoiding the assumption that any growth in a child's faith or hope could be directly attributed to World Vision's programs alone. Furthermore, World Vision works with children of all religious backgrounds and none, but has also committed to the humanitarian principles that dictate that the organization should not seek to convert children to Christianity; a measure of this aspiration, therefore, must somehow bear relevance to children of all backgrounds.

A previous attempt to measure this aspiration statement was made in 2017. To develop a robust measure for Child Well-Being Objective 1 (CWBO1) "children report an increased awareness of God's love", World Vision undertook a comprehensive literature review on children's spirituality. This review identified several core dimensions of how children experience faith and meaning, including their relationship to self, their relationships with others, their connection to

the natural environment, their sense of the transcendent (relationship with God), and their sense of purpose in life. These insights affirmed that a child's experience of God's love is multifaceted. It involves a personal connection with God, supportive relationships with people around them, and an emerging sense of hope and purpose for the future, all of which needed consideration in the indicator's design.

Building on these conceptual foundations, World Vision's Faith & Development and Evidence and Learning teams collaborated to design indicators. The development process combined qualitative insights with rigorous quantitative testing. World Vision adapted established scales such as the Daily Spiritual Experience Scale, the Religiosity and Spirituality Scale for Youth, and the Religious Well-Being Scale. Each was refined to focus on key indicators that reflect children's reported awareness of God's love, their engagement in spiritual practices, and their sense of hope for the future. The resulting set of indicators was tested and validated across four culturally diverse contexts, Albania, Indonesia, Lesotho, and Nicaragua, to ensure both relevance and statistical reliability.

In 2017, the CWBO1 indicator framework was formally adopted, focusing on adolescents aged 12–18. Emphasizing this age range was intentional, since reliable methods for gauging spiritual awareness (especially abstract concepts like sensing God's love) were not developmentally appropriate for younger children. The finalized indicators consisted of three survey measures that capture key signs of spiritual well-being in a young person's life: whether children personally experience God's love, whether they engage in regular spiritual practices, and whether they express hope for the future.

These indicators were intentionally designed to be flexible, allowing Field Offices to integrate them into technical programs or position them as a broader meta-objective that aligns with strategic priorities. Where offices worked primarily with non-Christian children, they could consider using the "hope for the future" measure but not the other two. By grounding the indicator in both conceptual understanding and robust testing, World Vision ensured it could credibly measure an important aspect of children's well-being across diverse contexts.

Problem Statement and Cross-cultural Need

Building on World Vision's long-standing commitment to children's spiritual well-being, the CWBO 1 indicators were introduced to measure children's increased awareness of God's love. While these indicators reflected World Vision's vision for "life in all its fullness," practical challenges emerged during implementation that limited their effectiveness. Few offices adopted use of the indicators, and as a result few baselines and evaluations were conducted which resulted in limited data to assess their impact.

A systematic review conducted in FY23 revealed that the original indicators struggled to meet the organization's needs for decision-making and accountability. They also lacked alignment with a meaningful, child-focused theology of change. The indicators were designed with a

relatively narrow Christian framing, limiting their relevance in culturally diverse contexts, especially in regions where Catholic, Orthodox, or other faith traditions are more prominent. This resulted in low adoption rates, with only 11 out of 70 Field Offices choosing to measure indicators related to God's love and hope, primarily in countries with majority-Christian populations, while none adopted the indicator on spiritual practices.

The complexity of World Vision's operational context further compounded these challenges. With programming spanning over 70 countries and working across both humanitarian and development settings, the indicators needed to be flexible enough to apply to a wide range of cultural, religious, and programmatic realities. Additionally, measuring a child's experience of God's love proved highly subjective and variable, making it difficult to capture meaningful change over time. Similarly, the existing Hope indicator risked being interpreted narrowly, focusing only on optimism and positive life perspectives while overlooking the deeper spiritual dimensions that World Vision aims to nurture.

These challenges underscored the need to refine the CWBO 1 indicators to ensure they are both culturally sensitive and adaptable across World Vision's diverse operational contexts. The revised indicators must align more closely with World Vision's ecumenical Christian identity while providing meaningful data that supports decision-making, accountability, and improved programmatic outcomes.

Human Subjects Protection

The study received approval from the University of East London (Application ID: ETH2324-0242), and Harvard University Institutional Review Board's (IRB), ensuring strict adherence to ethical guidelines. Informed consent was obtained from parents/guardians, and assent was secured from child participants, using the consent form provided by WV. Consistent with Koenig's recommendations, the study design was critically reviewed to ensure cultural sensitivity and respect for diverse religious beliefs. Confidentiality and the right to withdraw were maintained throughout the study.

This research had particular ethical considerations due to its international nature, with data collection taking place in 8 different countries and led by local World Vision offices in each country (Albania, Bolivia, Iraq, Lesotho, Senegal, Sri Lanka, Thailand and Uganda). Furthermore, participants were children ages 10-18. To mitigate risk, World Vision used existing data protection protocols developed locally to address contextual dynamics, and all participants were either directly involved in World Vision programming, or their family members were.

The study followed World Vision's safeguarding and informed consent policies, as well as the standards set by the University of East London. World Vision policy is to ask for all children to sign a consent/assent form after their parents have given signed consent, and as the participants were already connected to World Vision programming we followed this procedure. As the study involved children under the age of, as per GDPR, children under 13 gave assent, while older

children gave consent. For the qualitative data consent/assent was written in all instances; for the tool validation exercise consent was either written or thumbprint.

We were aware that the nature of the questions had potential to be sensitive and therefore could evoke community or local government push-back. To mitigate this, all tools were tested three times before full data collection took place: first, national staff reviewed the questions and proposed revisions that were contextually appropriate; second, local partners (faith leaders and officials) were be asked to review the questionnaire; third, the tools were piloted with a small number of children before rolling out to the wider community.

In many cases, the topics discussed in the interview/survey evoked an emotional response in the child; knowing that this was a likely occurrence, the project team set certain provisions in place when planning data collection. First, data was collected only with children who were themselves participating in World Vision activities, or whose parents are participating, which allowed for follow-up and meant participants could contact the local World Vision office easily in case of any concerns.

Data collectors were also given a resource sheet with contact details for World Vision staff and partners who are experts in child emotional support, as well as for both safeguarding and counselling support. Data collectors received a thorough safeguarding training and as part of the data collection orientation were encouraged to make referrals themselves or offer other options to children or their parents as appropriate. Field offices reported that such emotional responses were indeed common and that they were equipped to handle them; in fact, many children and their parents reported appreciating the opportunity to talk about something personal and emotive in a safe space.

The project adhered to the data protection policies and guidance of both World Vision and University of East London. As participants were recruited from existing participants (or children of participants) in World Vision programming, personal data was already available to WVI. This data was used to identify and contact the participants, but once identified each participant was numbered using a simple coding system as per local WVI office practice; identifying data was be maintained by the project staff who identified the participants and no longer accessed by the research team unless a participant elected to withdraw from the study (there were no reports of withdrawal). Once sampled and interviewed, all identifying information was stored separately from interview or survey data, in different locations, each distinctively password-protected and available only to core research team personnel.

Please note that data is stored on World Vision's servers (based in the USA) on the MS Teams structure. The servers are secure and password protected; data was only downloaded for analysis then immediately deleted from individual devices. Only members of the research team have access to the raw data, but access may be granted by permission of the Director of the SREI Research Team. Qualitative data was transcribed then translated to English. Only the English

transcripts are stored by World Vision globally. Recording and local language transcriptions are kept within local office structures, which also adhere to international WVI data governance policy; they are the intellectual property of the respective offices which collected the data. Quantitative data was collected by Kobo Toolbox and uploaded directly to the global servers.

Project Team

This research was carried out in close collaboration with leading experts in spirituality and child wellbeing. In particular, we worked with scholars from the Human Flourishing Program at Harvard University, the Institute for Spirituality, Theology, and Health at Duke University, and the Evaluation Center at Claremont Graduate University, alongside practitioners and evaluation specialists from World Vision International's Strategy Realization and Evidence of Impact team and Faith & Development team, as well as World Vision US office.

Their combined theological, methodological, and field-level expertise- was instrumental in shaping the study's design, data collection, and interpretive framework.

Executive Sponsors

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Study Design and Methodological Overview

Study Aims

The aim of the study is to engage in a reflective and integrative process that weaves together a Biblically based, theologically informed narrative with emerging best practices in child psychosocial wellbeing to develop more robust, culturally sensitive measures of 'hope' as an expression of experiencing God's love.

Study Question

The central study question was: To what extent is World Vision contributing to children's experience of God's love, using hope as a key indicator of transformation?

Further inquiry focused on:

- Crafting a narrative about hope and God's love that accurately captures World Vision's Christian ethos and technical expertise in the development field.

- Understanding the internal changes in children's hearts as they grow in hope.

- Assessing whether sponsored children and other beneficiaries of World Vision's programming understand that they are loved (and, with Christian children, specifically by the Christian Triune God).

- Evaluating the contributions of various actors (parents, World Vision staff, sponsors, and community partners) in nurturing children's experience of love and hope.

Study Approach

To systematically guide the development of a new measure of God's love, World Vision adopted evidence-based methodological approaches that integrated rigorous quantitative methods with reflective, hermeneutical, and contextual considerations. This multifaceted approach was essential for capturing the rich, subjective nature of spiritual experiences while also ensuring empirical robustness. The development process was structured into four distinct phases:

Phase I: Voice of the Customer – Listening Exercise

In this initial phase, the focus was on capturing the authentic experiences of children. Through narrative inquiry (Pino Gavidia, 2022) and other qualitative techniques, children were given the opportunity to share their stories in their own words. This "voice of the customer" exercise ensured that their personal insights and lived realities formed the foundation of the new measure, positioning them as experts on their own experiences of hope and God's love.

Phase II: Establishing a Theologically-Based Framework for the New Measure for Children's Experience of God's Love

Building on the qualitative insights gathered in Phase I, the next phase involved convening a working group of diverse Christian theologians with expertise in child spirituality. This group was tasked with developing a comprehensive, biblically grounded framework that would inform the construction of the new measure. Their work ensured that the measure was not only empirically sound but also theologically robust, capturing the depth and nuance of children's spiritual experiences across diverse contexts.

Phase III: Development of Culturally Sensitive Items for the New Measure

Once the theoretical framework was established, the focus shifted to creating specific measurement items that reflected the diverse ways children experience God's love. This phase involved adapting and refining existing scales, and developing new items, through iterative consultations with both field experts and target populations. Special emphasis was placed on ensuring cultural sensitivity, so that the items could resonate with children from a wide range of cultural, denominational, and geographical backgrounds.

Phase IV: Psychometric Validation and Final Selection of the New Items

In the final phase, the refined items underwent rigorous psychometric testing. This involved pilot testing in various contexts, applying statistical analyses such as factor analysis and reliability testing, and validating the measures against established criteria for validity, reliability, and cultural relevance. The iterative process of testing and refinement ensured that the final set of items robustly captured children's experiences of God's love and could be confidently used in global programming.

This robust, phased process was necessary to adequately address the complexities inherent in measuring spiritually informed constructs. By combining quantitative rigor with qualitative depth and contextual sensitivity, World Vision ensured that the new measure would not only capture the subjective nature of spiritual experiences but also accommodate the vast range of theological interpretations across cultures and faith traditions.

Phase I: Development of a Framework for a New Measure for Children's Experience of God's Love

Prior to commencing this project, a preparatory piece of work in 2023 drafted a framework for understanding how children experience of God's love through humanitarian or development programming, across diverse religious contexts. This preliminary piece of work convened a working group of subject matter experts. Given the project's stated aims, the study team determined that the most effective approach to creating a biblically grounded measure was to engage theologians with deep expertise in child spirituality. This collaboration not only ensured that the measure would reflect sound theological principles but also resonate with the authentic spiritual experiences of children.

The Theologian Working Group was carefully curated to ensure a diversity of perspectives, with an emphasis on denominational diversity but also ensuring geographical and gender diversity. The group was formed of:

- Rev. Dr. Rohan P. Gideon, Church of South India
- Dr. Tim J. Davy, Evangelical Church and Interdenominational Seminary, United Kingdom
- Dr. Rosalind Lim, Tan Malaysian Baptist Church
- Rev. Dr. Šimo Maršić, Catholic Church, Bosnia, and Herzegovina
- Rev. Dr. Jason Foster, Orthodox Church in America
- Rev. Dr. Seyram B. Amenyedzi, Global Evangelical Church, Ghana, and Germany
- Fr. Lenin Cruz, Catholic Arquidiócesis de Tegucigalpa Honduras (in an advisory role, joining the group officially in 2024)
- Dr. Kathryn Kraft, World Vision International Senior Research Advisor for Faith and Development, convenor

The primary objective of forming this working group was to establish a clear, measurable definition for the Child Well-Being Objective: "Children report an increased awareness of God's love." In 2022, World Vision convened the first meeting with the theologians, and the working group soon expanded its focus to embrace the broader aspiration statement: "Girls and boys experience the love of God and neighbors."

Further, in response to the theologians' feedback, the development team recognized the critical importance of incorporating children's own perspectives. Accordingly, we conducted a "Voice of the Customer" (VoC) exercise using narrative inquiry, a qualitative listening method that enables children to share their stories in their own words. VoC is the process of capturing and analyzing the needs, preferences, and feedback of those directly affected by a service or product.

This method positions children as experts on their personal experiences of hope and love, embracing a child-centered approach that honors the inherent dignity of their voices. By engaging them directly in the conversation, rather than simply presenting pre-packaged theology, we ensured that the new measure was deeply informed by their real-life experiences and needs.

VOC Sampling and Data Collection

Data collectors engaged in the VoC received comprehensive training via MS Teams, covering qualitative interviewing techniques, narrative inquiry, data saturation, child-friendly language adaptation, as well as child safeguarding and data protection protocols.

Interviews typically lasted 15–25 minutes. The semi-structured guide began by inviting children to recount an emotionally significant experience from the past year. Follow-up questions explored the role of relationships, their understanding of hope, and their interpretations of love. Notably, Christian children were asked specifically about God's love, while non-Christian children were invited to speak more generally about "love" to ensure cultural sensitivity. All interviews were recorded, transcribed, and translated into English for global analysis.

Eight countries with active World Vision programming were selected. National offices oversaw sampling under these criteria:

- Interviewing between 40 and 100 children per country, continuing until data saturation was achieved.
- Selecting at least two contrasting locations per country (ideally one urban and one rural).
- Ensuring that participants or their parents were directly involved in World Vision programs.
- Maintaining an even distribution by gender, age (10 to 18 years), and religious diversity reflective of each country's context.

The following table documents the distribution of interviews across countries, detailing demographics such as gender, age, and religious affiliation, as well as the program modality (long-term Area Programs versus grant-funded contexts).

Country	Total Children	Male	Female	Age 10-11	Age 12-13	Age 14-15	Age 16-18	Christian	Muslim	Buddhist	Hindu	Other	Area Program	Grant funded
Albania	99	47	52	22	37	27	13	20	76	0	0	3	67	32
Bolivia	73	33	40	20	13	16	24	73	0	0	0	0	73	0
Iraq	100	29	71	23	29	30	18	20	80	0	0	0	0	100
Lesotho	95	46	49	28	29	27	11	95	0	0	0	0	95	0
Senegal	91	48	43	10	23	30	28	26	65	0	0	0	100	0
Sri Lanka	60	26	34	0	21	21	18	1	8	11	40	0	58	0
Thailand	79	36	43	16	20	20	23	26	0	53	0	0	91	0
Uganda	43	19	24	3	14	23	3	43	0	0	0	0	43	0
Total	640	284	356	122	186	194	138	324	229	64	20	3	528	132

Analysis and Theological Reflection

The analysis began with a grounded theory approach at the individual country level initially. While this exercise was not pure narrative inquiry since an interview guide was in place which drew attention to the themes of emotions, hope and love, the initial coding was based on themes emerging from the data. This was done initially using the AtlasTI AI-assisted coding utility. Each country's set of transcripts was uploaded to AtlasTI and the software was prompted to produce a list of proposed codes.

Codes which were irrelevant to the analysis (for example, interview notes such as "timestamp" or "child age") were removed and then the remaining codes were grouped thematically. In this way, a list of 15-20 codes was developed for each country. Coding was manual but AI-assisted (the software proposed possible codes for text which the researcher could accept or reject), and codes were added and modified as needed throughout the process.

For each country, then, a country-specific report was developed. Across all eight datasets, human relationships and connectivity emerged as a key theme, so the reports were divided into two sections: "Types of Changes in Children" and "the role of different people in children's lives." For the first section, after grouping common themes which contained similar data and deleting themes which had insufficient data, each country had a final list of between 8 and 11 themes. In the second section, relationships were grouped by types of people (friends and peers, parents and family members, teachers or other influential community members, and World Vision and sponsors). Each thematic section included a brief AI-generated summary of all the coded content and some sample quotes to illustrate the theme.

Qualitative findings

A single overarching theme emerged across all the data, and that is the importance of human connectivity. This theme emerged as important to children across all 8 countries, with two themes in Iraq, Sri Lanka and Thailand speaking to the overall thematic area of human connectivity. "Human connectivity" was conceptualized as the importance of love, trust, and support from family, friends, and community, which play a crucial role in their emotional well-being, resilience, and personal growth. Despite facing challenges, they find strength and comfort in these relationships, highlighting their universal value.

- In Iraq, children emphasize the importance of family support, forgiveness, and collaboration, drawing strength from religious faith and family unity. They value the role of their parents in fostering resilience and hope, particularly in challenging times.
- In Thailand, children cherish the warmth of family and community bonds, associating love with understanding, affection, and mutual support, although some face challenges like loneliness and familial discord.
- In Uganda and Senegal, children value social connectivity, seeing love as rooted in mutual respect and the support from friends, family, and community. They discuss overcoming hardships through these connections, fostering personal growth.
- Children in Bolivia and Lesotho reflected on trust and sociability, with children

describing how building relationships and valuing loved ones has positively impacted their lives.

- Data from Albania highlights the significance of maintaining healthy, reciprocal relationships, where children find comfort and growth through genuine connections and support from family and friends.

"Many times, we do not value the people we have around us and, honestly, just the idea crossing my mind that I might lose my mother or that something might happen to my mother, was something that made me reflect. Knowing that I have to take advantage of the time I spend with her, more, every day, is something that has had a big impact on my life. It is something that I have started to value more about my beloved ones." Bolivia

The thematic analysis revealed ten other areas in which children find hope and seek nurture through loving relationships. These thematic groupings are described below along with data on their prevalence.

	Theme	TOTAL	Albania	Bolivia	Iraq	Lesotho	Senegal	Sri Lanka	Thailand	Uganda
1	**Empathy, Caring for others, Compassion**	8, 100%... *2 countries had 2 related themes	X	X	2	X	2	X	X	X

Children in all countries emphasized the importance of love, empathy, and compassion, highlighting the significance of family support, kindness, and a strong desire to help others in fostering personal growth and community well-being. They expressed aspirations to give back through caring professions and actions, deeply valuing the support they receive from their loved ones.

- Children from Sri Lanka view love as care and support from others, reflected in actions that demonstrate kindness and empathy.
- Senegal data emphasizes commitment to doing good, with children aspiring to help others through their future careers, valuing kindness, respect, and solidarity.
- In Lesotho and Uganda, children focus on compassion, trust, and caring for others, with a strong emphasis on community support and faith.
- Albania and Bolivia highlight the importance of family support and empathy, with children aspiring to give back and support their communities.
- Children in Iraq reflected concern for family and the desire to achieve personal success to support loved ones.
- Thailand data underscores the significance of parental sacrifices and the aspiration to help others through future profession.

"Love is the understanding of the care and compassion we have for another, the affection we have for them, and how to help them through this affection. I expect more love from human beings. In other words, we can help someone else when they are in trouble, or we can say two words of comfort when they are in a sad situation. I have realized that I am loved by others. I mean when my mother loves me. If I were worried about something, she would spend time with me and talk to me for an hour to make me feel her love. When those whom I do not love me I don't want love that I don't receive." Sri Lanka

	Theme	TOTAL	Albania	Bolivia	Iraq	Lesotho	Senegal	Sri Lanka	Thailand	Uganda
2	**Persisting, becoming stronger, learning from adversity – Resilience**	7, 88%... *1 country had 3 related themes	X	X	X	3	X	X		X

Children for the most part exhibited remarkable resilience in overcoming adversity, drawing strength from family, community, and faith. They faced challenges like displacement, poverty, trauma, and loss, but were able to find hope and support through perseverance, self-belief, and the love and protection of those around them.

- In Iraq, children navigate challenges such as displacement, family loss, and illness with the support of family and faith.
- Senegal narratives focus on the impact of poverty, with children aspiring to improve their circumstances and community through education and positive change.
- In Lesotho and Albania, the emphasis is on coping with fear, trauma, and mistrust, developing resilience and hope through perseverance and self-belief.
- Sri Lanka and Uganda data reflect on the importance of safety, protection, and the role of family and community support in overcoming hardships.
- Children in Bolivia highlight the significance of faith and God's love in finding strength and confidence during difficult times.

"I didn't have school shoes for a long period of time and that made me feel uncomfortable at school. My principal promised to buy me school shoes but till today she hasn't bought them… This affected me negatively because I don't have happiness at school. This taught me that life is not easy." Lesotho

"Hope is for example you have nothing and a person tells you that he is going to give you something and it comes to you. Hope is what you hope for." Senegal

	Theme	TOTAL	Albania	Bolivia	Iraq	Lesotho	Senegal	Sri Lanka	Thailand	Uganda

	Theme	TOTAL	Albania	Bolivia	Iraq	Lesotho	Senegal	Sri Lanka	Thailand	Uganda
3	**Motivation, Ambition, Drive, Participation**	6, 75%... *1 country had 2 related themes	X		X		X	X	X	2

Many children expressed strong hope and determination to achieve their dreams, emphasizing the importance of education, perseverance, and family support. Despite challenges, they remain motivated by their aspirations and believe in their ability to succeed and contribute positively to their communities.

- Children in Sri Lanka, Iraq, and Senegal emphasize the importance of education, perseverance, and family support in pursuing their dreams, often overcoming emotional setbacks.
- Thailand data highlights participation in community activities and leadership roles as part of personal growth.
- Albania and Uganda narratives focus on motivation, optimism, and the belief in becoming successful professionals through hard work and faith.

    "I had a hope in life to be the top student in my school, and I achieved that goal. I am now looking forward to becoming a doctor in the future, and I hope that this goal will be realized. There are obstacles that can make one lose hope, but God brings me back to hope once again."
    Iraq

	Theme	TOTAL	Albania	Bolivia	Iraq	Lesotho	Senegal	Sri Lanka	Thailand	Uganda
4	**Gratitude, appreciation, simple joy**	6, 75%	X	X		X	X	X		X

Children often expressed deep gratitude for the love, support, and faith they receive from God, family, and organizations like World Vision, which provide them with hope, strength, and happiness. They value the acts of kindness and care that bring joy and reinforce the importance of love and community in their lives.

- In Bolivia, Uganda, and Sri Lanka, children express thankfulness for God's love, the guidance from organizations like World Vision, and the support from their families, which provide them with hope, strength, and happiness during challenging times.
- In Lesotho, Albania, and Senegal, children emphasize the joy and well-being brought by receiving gifts, family care, and community support, which reinforce the importance of love, respect, and mutual aid in their lives.

"When I was reporting to school at the beginning of this year, I never had a mattress yet it was a key requirement at school. Mr. Jeremiah (grandfather) surprisingly bought it for me… I realized that God loves his people that he cares for us even in times of need he appoints people to help. Also stealing is bad, God will bring that thing you need at a right time." Uganda

	Theme	TOTAL	Albania	Bolivia	Iraq	Lesotho	Senegal	Sri Lanka	Thailand	Uganda
5	**Right and Wrong – being good and looking for good**	6, 75%	X	X		X		X	X	X

Children reflected on morals and ethics for their personal growth. Across these regions, children prioritize love, respect, and moral integrity as guiding principles in their lives.

- Children in Albania emphasize the importance of maintaining healthy relationships, learning from mistakes, and standing up against injustice.
- Bolivia data focuses on disciplined behavior, with children valuing positive influences and striving to stay true to their values.
- In Lesotho and Uganda children stressed the importance of self-improvement, trust, and ethical behavior, with a strong emphasis on education and faith.
- Thailand and Sri Lanka narratives discuss the significance of attitude, good behavior, and trust in relationships, with children sharing personal experiences of growth, forgiveness, and resilience.

"I hope to become someone, more or less like my parent, who loves people, understands what is good and what is bad in life. Stays away from the bad and sticks with the good, I mean. But what I think is, I would like to start a business in life and get involved in business." Albania

	Theme	TOTAL	Albania	Bolivia	Iraq	Lesotho	Senegal	Sri Lanka	Thailand	Uganda
6	**Self-confidence, self-esteem, feeling of being proud**	5, 62%... *3 countries had 2 related themes	2	2	X				2	X

Children across most countries highlight the growth of their self-confidence and self-esteem through the support of family, personal achievements, and overcoming challenges. They emphasize the importance of perseverance, support, and faith in achieving their goals and building a strong sense of self.

- Children in Albania describe how support from family and personal achievements in areas like sports and academics have bolstered their self-confidence.
- In Thailand and Bolivia there was emphasis on the importance of self-fulfillment, overcoming challenges, and the pride of academic and personal achievements in building a strong sense of self.
- Uganda and Iraq narratives focus on how overcoming academic struggles and personal difficulties, with the help of family and community, has led to increased confidence and a sense of accomplishment.

"Yes, ehh, before I didn't speak with this security that I speak now and I was more shy. Going out on the street is a big step forward for me, being able to express myself or speak in public and develop myself, right?, emotionally with God… Well, when I started to connect a little more with my father. He helped me a little more with my self-esteem and, and there I was able to change and talk a little more." Bolivia

	Theme	TOTAL	Albania	Bolivia	Iraq	Lesotho	Senegal	Sri Lanka	Thailand	Uganda
7	Emotional well-being and self-regulation	5, 62%	X	X	X		X	X		

Children were generally very reflective and aware of their emotional growth, emphasizing the importance of family support, faith, and self-awareness in regulating their emotions and improving their relationships. They highlight the role of trust, self-reflection, and community in overcoming challenges and fostering personal development.

- Children in Bolivia reflect on how family support, faith, and personal experiences have helped them improve their behavior, relationships, and outlook on life.
- In Iraq children shared how they have learned to regulate their emotions and behaviors through guidance from family and faith.
- Albania and Senegal data highlights the importance of emotional expression, trust, and self-reflection in building healthy relationships and self-confidence.
- Sri Lanka's discussion explored how children cope with anxiety, sadness, and pressure, finding support in family, community programs, and religious practices to manage their emotions and personal challenges.

"I think they need to give you that closeness, to allow you to trust them. They allow you to feel good around them because some people don't allow you to enjoy yourself in their presence, and you can't love those people. That's why." Albania

If one is alone, one should not let oneself be carried away by the bad moments. One should always remember the good moments, the moments in which one has felt inner warmth with someone and focus on that, not on the bad." Bolivia

	Theme	TOTAL	Albania	Bolivia	Iraq	Lesotho	Senegal	Sri Lanka	Thailand	Uganda
8	**"Growing up" or Maturing**	4, 50%		X	X			X	X	

Children commented on their growing maturity, responsibility, and self-understanding, often spurred by family support and personal challenges. They express a strong sense of purpose and motivation, driven by hope and the desire to succeed and contribute positively to their families and communities.

- Children in Iraq discuss how family support and personal experiences have helped them develop maturity and better coping mechanisms.
- Thailand data emphasizes the significance of self-understanding and maturity gained through dealing with family struggles and personal challenges.
- In Bolivia there was focus on a sense of purpose, with children expressing their aspirations and the motivation they derive from hope and support systems.
- Sri Lanka narratives highlight growing responsibility and leadership, as children take on greater roles within their families and communities, driven by personal development and the desire to succeed.

"I am trying to change, and the ones who support me are my mother and sister, who encourage me to read. The changes I plan to make to achieve good results include leaving my mobile phone aside during exams and only going out when necessary to avoid wasting time." Iraq

	Theme	TOTAL	Albania	Bolivia	Iraq	Lesotho	Senegal	Sri Lanka	Thailand	Uganda
9	**Knowledge, learning, awareness**	4, 50%		X			X		X	X

Children shared about how knowledge and awareness gained through education, extracurricular activities, and life experiences have shaped their behaviors and ambitions. These insights help them navigate challenges and guide their future aspirations.

- Children in Bolivia and Senegal emphasize the importance of environmental awareness, survival skills, and understanding their rights, which have led to positive behavior changes.
- Uganda data highlights the role of education and religious guidance in overcoming challenges and staying focused on academic goals.
- Children in Thailand discuss how life lessons and academic choices influenced their

career aspirations and worldview, with support from family, friends, and teachers playing a crucial role in their development.

"The monitor called us to a meeting and made us aware of children's rights. I was present at the meeting. Yes! and he made us aware of ourselves and several children. Yes, the monitors taught us how to behave with our parents. They told to us about our rights." Senegal

	Theme	TOTAL	Albania	Bolivia	Iraq	Lesotho	Senegal	Sri Lanka	Thailand	Uganda
10	Faith and Spirituality	4, 50%		X	X	X	X			

Many children expressed deep faith and hope in God, viewing prayer, religious practices, and trust in divine guidance as central to overcoming challenges and finding strength.

- Children in **Iraq**, **Lesotho**, **Bolivia**, and **Senegal**, this emerged as a distinct theme, while it was mentioned occasionally in other countries.
  "Hope is, for example; if I say I trust God because when I pray, He answers my prayers. Yes, it's something I feel because in most cases I pray God. When I pray if I were to make an example and say I am sent where there are dogs and there is no one who can hear me there. I normally pray first and then enter the yard and the dogs won't buck at me." Lesotho

Children emphasized the importance of maintaining a close relationship with God through prayer, religious teachings, and community activities, believing that faith helps them navigate life's difficulties and achieve their goals. It is worth noting that although in children's narratives this thematic area only emerged as particularly strong in four of the eight countries, the theologians posited that in order to have a holistic Christian understanding of hope, this element is incomplete.

However, the theologians also observed that, much like human connectivity, faith and spirituality can be nurtured and expressed through all the other areas of a child's life.

Summary of Qualitative Analysis

Whether they acknowledge it or not, we start with the assumption that, as human beings, a fundamental aspect of a child's life is their spirituality. In one sense, a child's 'spiritual life' cannot be isolated and separated out from other aspects of their personhood. Such a compartmentalized view reflects a Western way of isolating aspects of a person's life that are actually integrated.

Therefore, each of the signs explored in this research should be seen in the context of the spiritual dimensions of a child's life. To that end we suggest that any child – whether they have an acknowledged faith or not, whether that faith is Christianity or not – can experience and

display signs of hope that can be understood in relation to their spirituality as human beings. Whether acknowledged and understood or not, World Vision can make the bold claim that the Christian triune God is the ultimate source of all hope because a Christian understanding of God is that he is the God of hope and we are made in his image.

Once analysis at the country-level was complete for all eight countries, a total of 11 themes were identified that crossed at least half of the countries. The global report, which was used to inform the second step in the process, included AI-generated summaries for each of the themes that were identified across all countries, and sample quotes for each theme from all countries where this emerged as a theme. It also included a section on children's feedback on World Vision, as this was a topic of interest to World Vision colleagues.

Since human connectivity emerged as the most dominant theme across all countries, findings about the various types of relationships were integrated into this theme and "human connectivity" became the means by which all other themes are supported rather than a theme in its own right.

The grounded theory method allowed the themes that emerged from children's own accounts of their own experiences to become the basis for a theoretical framework defining Hope from a Christian perspective in the context of World Vision's programming reach, which in turn could be used for developing the new indicator. The theologians supported this approach within the principles of a child-centered theology.

Once the framework was agreed (Phase II), the qualitative data was re-analyzed for sense-making and testing the theoretical framework against the original dataset. In the second analysis, the codes were the agreed signs of hope (which will be explained in the subsequent section): for each sign there were two codes (children demonstrate this sign, and children express that this is important to the child. Considering possible moral concerns about judging a child's expression of a sign of hope through their own narrative only, the analysis coded both for children who demonstrate the sign and for children who say the sign is important.

The following table shows the total of both, confirming that this re-analysis affirmed that at least half of children see the value of the components of the proposed framework.

Sign	Prevalence
Resilience	83%
Compassion	72%
Purpose	65%
Spiritual Life	62%
Joy	55%

| Wisdom | 51% |

Phase II: Establishing a Framework for a New Measure of Children's Experience of God's Love

Following the voice of the child listening exercise, the research team reconvened the theologian working group.

The definition was completed in two stages. The first stage was the preliminary work referenced at the beginning of Phase 1. In this stage, there were three steps:

- Step 1: The theologians met with World Vision staff, including representatives from the global Faith and Development team as well as various field offices. Based on the insights gleaned, each participant prepared a paper addressing the question: "How do children experience the love of God in the context of a development or humanitarian program?" The working group was instructed to ensure their papers were intended to be uniquely Christian yet accessible to children of all religious backgrounds. Step 2: Each paper was subsequently reviewed by three respondents: a member of the focus group, an external subject matter expert in child spirituality/theology, and a World Vision leader. These responses were then discussed during a series of reflective meetings held throughout 2022 and 2023, which included contributions from global World Vision staff and a select group of external researchers.
- Step 3: The final step of this initial project was a week-long workshop, during which the focus group and World Vision staff engaged in intensive dialogue, using an adapted Delphi process. Over three days, they achieved consensus on a shared definition for the aspiration statement and produced a two-page document that defined key terms ("Children," "Experience," "Love," "God," "Neighbors"). Among the actionable conclusions were:
  - Recognizing the Triune God as central to World Vision's Christian identity while acknowledging that non-Christians may not share this perspective, yet affirming that the doctrine that God is love and the ultimate source of all expressions of love, remains integral.
  - Understanding that children may experience God's love through varied dimensions, sometimes without conscious recognition of its source.
  - Emphasizing that human relationships within humanitarian and development programs are the primary conduits through which children experience God's love, evidenced by transformational change in thoughts, feelings, and behaviors.
  - Providing World Vision with a comprehensive list of tangible and observable behaviors and characteristics evident in children's lives, reflecting their experience of God's love. This list was intentionally developed to ensure relevance within both humanitarian and development programming and applicability across diverse faith traditions.

Findings and Discussion

The preparatory work of theologians, along with a careful internal review of the observable expressions provided by the theologians and the existing programmatic indicators, led to a

helpful realization: "Hope" serves as a tangible expression of how Children experience God's love, and a potentially powerful way for World Vision to articulate how its Christian identity impacts on the lives of vulnerable children. Furthermore, in crisis situations where despair can be overwhelming, hope serves as a critical buffer.

Previous research suggests that nurturing hope, even in the most challenging circumstances, can lead to observable improvements in children's well-being and social engagement (c.f. Montgomery 2017, Sparks 2021, Scioli 2023). This strong empirical link between hope and flourishing makes it an effective proxy for understanding the transformational impact of God's love.

As a Christian organization committed to embodying an ecumenical spirit, World Vision is grounding the new indicator to measure "Children experience the love of God and neighbors," in a robust Christian theological framework. Although we engaged broadly with the humanities and social sciences, Christian theology served as our foundational perspective throughout the process. Recognizing that no single "Christian" theology exists, World Vision intentionally sought input from theologians representing diverse Christian traditions.

This approach ensured that the insights reflected the broad geographical and denominational tapestry of God's global church family. The theologians, united by their passion for child spirituality in the context of development and humanitarian programming, collaborated to articulate an understanding of "the Kingdom of God" that promotes love, justice, and peace through a dynamic engagement with World Vision International.

This collaborative dialogue was not an exercise in theological syncretism; rather, it was a focused effort to identify common ground among diverse perspectives. As a result, the process generated a document enriched with shared experiences, illuminated by Sacred Scripture and the lived experience of Christ, grounded in the reality of World Vision programming and the children it serves, which speaks directly to the role of children as signs of hope in their communities.

In order to develop this statement, individual team members contributed unique questions, perspectives, and emphases, while remaining true to their convictions. Through consensus decision-making, a process with deep roots in Christianity through the model set by the Early Church Councils, as well as in other religious traditions such as early Islamic ijma' (Kamali, 1996, p.23) and the Quaker understanding of divine guidance (Kauffman, 2015, p.7), we were able to build confidence in the reliability and relevance of the agreed theoretical framework. Furthermore, the theologians embraced a 'child-attentive' or 'child-centered' approach, acknowledging the importance of incorporating children's voices directly into our theological reflections. By drawing heavily on qualitative data obtained directly from children in World Vision's sphere of influence, we positioned children as catalysts in the dialogue, ensuring that their experiences and perspectives shaped the discourse rather than being treated as an afterthought.

This commitment is deeply rooted in Biblical teaching. The narratives of Creation and Redemption provide a compelling rationale for a child-centered theology on "Hope and Love." God's command to "be fruitful and increase in numbers; fill the earth…" (Gen. 1:28) implies a responsibility toward future generations, even though children are not explicitly mentioned in the Creation account.

The inherent design of human relationships, as seen in the interactions between the Creator and humanity (Gen. 1:27, 31; 2:23-25), coupled with the promise of redemption (Gen. 3:15; Isa. 9:6), underscores the belief that every child carries the potential for transformative hope within their community. Thus, the theological group embraced the challenge to view children and childhood as central to understanding and practicing our ministries.

Justification for Hope as a Means of Measuring the Love of God in Children

Hope is a key indicator of children's transformational experience of God's love because hope blossoms in the life of a child as they experience the love of God through relationships. So many of the children with whom World Vision works live in complex and challenging circumstances that could lead to despair, but it is the hope that is fueled by a genuine experience of true love that enables children to live life in all its fullness, regardless of their circumstances.

Children are a hopeful gift from God and therefore may be seen as both a sign and source of hope (Ps 127:3-5). They demonstrate signs of hope and participate significantly in the unfolding of love, justice, peace, and compassion, which we believe will one day be fully realized. Children's hope is their belief in a better, more promising future that starts here and now, even in the face of a seemingly hopeless present.

In times of despair, hope is the vital resource that keeps children moving forward, holding onto the belief that things will get better. For children, hope is the understanding that they have value and inherent dignity, are deeply loved even if they don't realize it, and are worthy of human love. This hope empowers them to overcome present challenges, fostering both their inner and outer lives as they grow into agents of change who help recreate environments of love and justice.

Definition of Hope

"Hope" is extremely difficult to define, so rather than offer a single simple definition of Hope, the working group agreed on a list of descriptors of hope that capture a uniquely Christian understanding of what hope is. It is important here to emphasize that the theological definition of hope rooted in God's love is not intended to offer an interpretation of the Christian creed but rather offer an understanding of hope which is both deeply Christian and specifically relevant to World Vision's role in the lives of children in the context of its strategic programming approaches.

It is also not intended to replace definitions of hope developed in academic disciplines. The team reviewed other conceptions of Hope, and reflected on measures used in other disciplines such as that developed by Snyder and the Positive Youth Development perspective (Bowers and Bowers, 2023), but then chose Christian doctrine as its starting point rather than these mainstream definitions and measures of hope.

This process allowed World Vision to develop its own definition of hope as specifically linked to the love of God. Therefore, while there may be significant overlap between this conception of Hope and that found outside of a Christian theological dialogue, these descriptors constitute a specifically Christian understanding of hope which nonetheless is accessible to all children, not only children who follow the Christian religion.

- Hope is a loving gift of the triune God rooted in an experience of God's love.
- Hope assures us that, being made in the image of God, we are not alone, and our lives are purposeful.
- Hope is participation in the Kingdom of God, which is worked out in the here and now, and realized fully in the future.
- Hope is an essential conviction that, despite the harsh realities and disappointments of the world, good will ultimately triumph over evil.
- Hope is a resource and a virtue that moves us towards flourishing, resilience, and reconciliation in a broken world.
- On the one hand, hope is always present; on the other hand, *how* we hope can be varied and complex.

Hope ultimately comes from God, but is also mediated and modelled through relationships. It must be inclusive so efforts at accessibility on behalf of vulnerable children are also a source of hope.

The manifestation of hope through "signs"

The working group concluded that as children experience the love of God, in particular when mediated through loving human relationships, the resulting transformation is witnessed through various signs of hope, particularly: compassion, resilience, purpose, joy, wisdom, and spiritual life.

- **Compassion** affirms and nurtures life. It also sees people's dire needs. Compassion flows from God, the Nurturer and protector of life (Isaiah 31:5, Matthew 14:14, 15:23). Children who exercise compassion can build a better humanity and reciprocate on both sides- giving and receiving in shared hope. Therefore, a hopeful child is empathetic towards and aware of the needs of others, exercising kindness, care, and compassion, even when it might be difficult to do so. (Note that compassion is linked to joy in that a compassionate child also demonstrates gratitude and appreciation when compassion is shown to them.)

- **Resilience** enables a person to withstand shock, return to form, maintain strength, and

engender a sense of resolve. This virtue is reflected in Christ's journey towards His Passion where he was not detoured by other influences from his saving work (Matt 4:1-11; Matt 16:21-23). Resilience in children reflects a driving hope that is not static but progressing towards a desired end. Therefore, a hopeful child has both the capacity and willingness to face life challenges with courage, growing from adversity while maintaining a positive outlook on life. Spiritual resilience also emphasizes the ways in which children gain this capacity through nurturing relationships.

- **Purpose** is the ongoing process of discovery and learning that gives children a sense of meaning and direction. Jesus infused his disciples with a sense of purpose for the here and now (Luke 2:52; Matt 4:19) and the promise of the possibility of transformation (2 Peter 1:4). Moreover, purpose is a sign of hope in children as they see themselves as an active part of a greater and meaningful plan for all creation. Therefore, a hopeful child pursues their dreams and aspirations, working to make the world a better place and constantly improving their capacity to do so.

- **Joy** brings out the innate exuberance of children. This spirit of joy is set in children by God in Jesus, who is the epitome of Joy (Heb.1:9; Ps 45:6 7; Matt 11:17). Joyous children reflect the image of their Creator. Therefore, a hopeful child has a grateful heart, allowing them to enjoy simple experiences and appreciate the kindness and love of others.

- **Wisdom** facilitates moral and ethical decision-making, and recognizes and accepts personal strengths and weaknesses. It is the capacity to understand oneself, the world around us, and how to navigate the complexities of life. Jesus, the wisdom and divine incarnate, chose to take the form of a human, journeying from childhood to adulthood (John 1:1-15). Children's hope of a better life motivates them to pursue wisdom and discernment (Prov 1:2-7). Therefore, a hopeful child understands their inherent value, reflects on life, and demonstrates strong character, exhibiting a willingness and ability to act in accordance with what they believe is right, even in challenging circumstances.

- **A spiritual life** nurtures wonder and awareness of self, others, the environment, and transcendence/God. The analogy of the sheep and the Great Shepherd affirms that God calls, and the children hear His voice (John 10:14). Childhood spirituality finds meaning in rituals and spiritual practices like prayer and worship. A healthy spiritual life is a sign of hope in children because they are open to a greater source of help. While a spiritual life is an important sign of hope for all children, World Vision only seeks to proactively support activities that nurture a spiritual life in Christian children. Therefore, the definition agreed on for a child who demonstrates a healthy spiritual life is that a hopeful child trusts in and feels loved by God, experiencing a personal relationship with Jesus and gratitude for the work of the Holy Spirit, finding strength and meaning in spiritual practices and rituals, a more Christian focused definition.

Phase III: Development of Items for the Measure

In the summer of 2024, World Vision partnered with multi-disciplinary team of experts in child development, spirituality, flourishing and measurement development from the Human Flourishing Program, at Harvard University, and the Duke University Center for Spirituality, Theology, and Health, to assist in the development of a globally applicable indicator, based on the overall framework and the six specific 'signs' identified by the theologian working group.

A member of the consulting team attended the final session of the theologians to ensure alignment with the goals and objectives of the project. By integrating historical, theological, and empirical perspectives, the study team aimed to refine and enrich existing measures of hope. The goal was to develop a set of indicators that not only account for the motivational dimensions captured by tools like Snyder's scale but also embraced the broader, sometimes ineffable qualities of hope, qualities that are essential for fostering resilience and well-being among children and adolescents in diverse cultural and spiritual contexts.

As mentioned previously, the six themes identified by the theological working group represented both a present and dynamic reality, and reflected the potential of children to overcome adversity, find meaning in their experiences, and grow spiritually and emotionally, which represented a shift toward a more holistic understanding of hope than that which is captured in most existing tools and scales, integrating spiritual well-being with human flourishing and providing deeper insights into the lived experiences of children in challenging contexts.

Following the theologian retreat, the consulting team embarked on an extensive literature review with the goal of identifying psychometrically validated scales that capture the multifaceted construct of hope, with items speaking to each of the six signs. Guided by theoretical frameworks outlined by the theologians, and the World Vision research team, who emphasized elements such as future orientation, goal-directed determination, existential meaning-making, relational connectedness, social support, adaptive coping and spiritual resilience, the team screened a vast body of research. This process ultimately yielded 23 distinct scales (outlined in Exhibit B), each offering unique insights into the psychological and theological dimensions of hope. Below is a discussion of these scales and their contributions to our understanding of hope.

Summary Literature Review

Among contemporary measures, Charles Snyder's Children's Hope Scale has emerged as the most widely used tool for evaluating hope in children and adolescents (e.g., Ciarrochi et al., 2015; Haroz et al., 2017; Hellman et al., 2018; Kirby et al., 2022; Merkas & Braja-Zganec, 2011). Snyder's model conceptualizes hope as a positive motivational state comprising two interrelated dimensions: agency, the determination to achieve goals, and pathways, the perceived ability to devise strategies to overcome obstacles. This dual-faceted approach emphasizes that hope is fundamentally future-oriented, a theme that resonates with Aquinas's early definition.

In addition to Snyder's scale, our review identified other significant measures such as the Hopefulness Scale for Adolescents (Herth, 2024; Hinds & Gattuso, 1991) and Herth's Hope Index (Callina et al., 2015). Some studies have even employed single-item assessments, seen in instruments like the Add Health study (Harris, 2013), the Global Flourishing Study, research by Tong et al. (2010), and the Children's Depression Scales (Weissman et al., 1980), though these often conflate hope with related constructs such as optimism.

Foundational and Goal-Oriented Measures: Several scales are rooted in the foundational theories of hope, particularly those that emphasize the cognitive aspects of goal setting and pathways thinking. Snyder's Children's/Adult Hope Scale, for instance, is renowned for its focus on agency and pathways, reflecting an individual's determination to pursue goals and the ability to generate routes to overcome obstacles. Complementing this is the Locus of Hope Scale, which further concentrates on self-efficacy and the reliance on personal abilities to achieve desired outcomes. These instruments provide critical insights into how individuals conceptualize and operationalize hope in relation to personal ambitions.

Social Support and Interpersonal Dimensions: Another group of scales centers on the interpersonal dimensions of hope, recognizing that social support and meaningful relationships play pivotal roles in sustaining hope. The Nowotny Hope Scale, for example, assesses the extent to which family, friends, and broader community connections contribute to an individual's hopeful outlook. Similarly, the Hope Index Scale – Obayuwana highlights future optimism and life purpose, often incorporating elements of social support and spiritual reinforcement. The Comprehensive Trait and State Hope Scales by Scioli extend this approach by examining both the stable personality traits that predispose individuals to experience hope and the transient states that reflect immediate emotional support from others.

Holistic and Integrative Measures: Integrative scales, such as the Integrative Hope Scale – Schrank and the broader Integrative Hope Scale, seek to bridge cognitive, emotional, and behavioral components of hope. These instruments capture not only how individuals think about and plan for the future but also how they feel and act in the face of adversity. By drawing on a wide array of emotional, social, and motivational indicators, these scales offer a more nuanced perspective that aligns well with the holistic view of hope as expressed in theological discourse.

Spirituality and Faith in Hope: Recognizing that hope often transcends the purely psychological realm, several scales integrate items that assess the role of spirituality and faith. The HFH Adult Hope Measure, for example, evaluates how spiritual practices and beliefs, such as prayer and scripture, reinforce an individual's resilience and future orientation. Similarly, the Faith and Spirituality Items, which are integrated into many hope measures, underscore the importance of a higher power in providing comfort, guidance, and strength during challenging times.

Additional Measures and Contextual Adaptations: Other scales included in our review serve to capture both positive and negative dimensions of hope. The Beck Hopefulness Scale focuses on optimism and a forward-looking perspective, while the Hopelessness Scale – Beck provides a counterbalance by assessing negative expectations and feelings of despair. The Character Strengths Scale, Expected Balance Scale – Staats, and Panorama Well-Being Survey further expand the range of assessments by evaluating emotional balance, resilience, and the everyday experience of hope among adolescents and adults across diverse cultural contexts.

Selection of Relevant Items

To systematically map the comprehensive list of items to the six themes identified by the Theologian Working Group, the study team employed an affinity diagram approach combined with a modified Delphi technique. First, each item derived from the 23 scales was transcribed onto individual cards. Using an affinity diagram method, the consulting team grouped these cards based on similarities, allowing natural clusters to emerge that corresponded with the six thematic constructs of hope. Similar items were eliminated, so a core set of items emerged in each of the constructs.

Once these initial groupings were established, the modified Delphi approach began. The consulting team then rated the relevance of each item to its assigned theme using a structured scale. The initial ratings were aggregated, and areas of divergence were identified. This data prompted a series of group discussions, conducted either virtually or in person, where the consulting team members deliberated on discrepancies and shared their insights to clarify the rationale behind their ratings.

Following these discussions, the consulting team re-rated the items in successive rounds until a consensus threshold (typically 80% agreement) was reached for each item's thematic classification. This combined process of affinity diagramming and the iterative Delphi rounds ensured that the final item pool robustly reflected both the empirical rigor of existing hope scales and the nuanced, multi-dimensional perspectives of hope as articulated by the Theologian Working Group.

Proposed Items

Each item has response types: 1 - Never true of me; 2 - Rarely true of me; 3- Sometimes true of me; 4 - Often true of me; 5 - Always true of me.

Single Item Assessments:

- Compassion (C1): When I hear about someone going through a difficult time, I feel a great deal of compassion for them.
- Purpose (P1): I look for ways to make the future better, even in the face of difficulty.
- Resilience (R1): I can take whatever happens and make the best of it.
- Joy (J1): I feel loved.

- Wisdom (W1): I always act to promote good in all circumstances, even in difficult and challenging situations.
- Spiritual life (S1): I find strength in my relationship with God.

Compassion Items

C1. When I hear about someone going through a difficult time, I feel their suffering.
C2. I notice when others are upset.
C3. When others are upset, I support them.
C4. I cherish spending time with the people in my life.
C5. I feel loved.
C6. I am thankful when people help me.
C7. I care about people even when they don't do what I hope they will do.

Purpose Items

P1. I look for ways to make the future better, even in the face of difficulty.
P2. I make plans for my future.
P3. I have faith that my life has a plan, even when it's not clear.
P4. My life has purpose.
P5. I want to help make the world a better place.
P6. People will listen to me.
P7. My life will make a difference.

Resilience Items

R1. I can take whatever happens and make the best of it.
R2. I have hope even in tough times.
R3. I believe I can work through the difficulties in my life.
R4. I will ask for help when I need it.
R5. I believe my family will help me when I need it.
R6. When I fail, I try again.
R7. I am aware of things that could go wrong, but I keep going.
R8. My spirituality provides me with different ways to cope with challenges.

Joy Items

J1. I feel loved.
J2. I look forward to the future.
J3. I am grateful for my life.
J4. If I list everything I'm thankful for, it would be a very long list.
J5. I look forward to doing things I enjoy.
J6. I celebrate the good things that happen to others.

Wisdom Items

W1. I always act to promote good in all circumstances, even in difficult and challenging situations.
W2. I feel that the things I have learned from my experiences will help me in the future.
W3. I know what is most important to me.
W4. I will do what is right, even when no one is watching.
W5. I do what is right, even when it is hard.
W6. I think about what is right and wrong when I do things.

Spiritual Life Items

S1. I find strength in my relationship with God.
S2. I am loved by God.
S3. God listens to my prayers.
S4. I am amazed by God's creation.
S5. My relationship with God helps me become a better person.
S6. My Christian community is important to me.
S7. The adults in my life support my relationship with God.

Final Item Selection

During a two-day study-team leadership retreat in September 2024, the summary of items was presented by the consulting team to leadership from World Vision International and World Vision USA. The primary objective of the retreat was to review the literature summary on existing hope measurement tools alongside the recommended items, and then to narrow these down to 5-6 items per construct for subsequent psychometric validation. To achieve this, the facilitator employed a modified Delphi technique, a structured, iterative process designed to harness expert opinion and build consensus.

Delphi Method Overview

The Delphi method can be best understood as a structured communication protocol that enables a collective of individuals to address a complex problem or research question effectively (Linstone and Turoff, 2002). The method was developed and refined at the RAND Corporation during the 1950s, with the objective of establishing a systematic approach for eliciting a reliable consensus among experts (Dalkey & Helmer, 1963).

This "structured communication" entails:

1. Providing feedback on each participant's contributions of information and expertise;
2. Presenting an evaluation of the group's overall judgment or position;
3. Allowing individuals to revise their assessments; and
4. Ensuring a level of anonymity for each response.

Fundamentally, the Delphi method is an iterative, multistage group facilitation technique designed to convert individual opinions into a unified group consensus. Its adaptability has made it a frequent choice in health and social science research, although comprehensive procedural guidance is often lacking (Hsu & Sandford, 2007).

When applied rigorously, Delphi can significantly enhance knowledge generation, yet researchers must address essential considerations in advance. These include clearly defining the research problem, selecting a suitably diverse panel of experts, formulating effective questionnaires, and determining how best to present interim results to participants.

Typically, a Delphi study unfolds over multiple rounds of questionnaires, interspersed with controlled feedback on aggregated group discussions. Over the past several decades, researchers have implemented Delphi in a wide array of expert-driven problem-solving contexts and have created specialized variants to suit specific objectives.

During the Hope Measure Research Retreat, participants, and contributors independently reviewed the comprehensive list of items drawn from the theologian subject matter experts, and literature review. Then they shared their initial thoughts regarding the relevance and clarity of each item for the intended construct. These individual assessments were discussed by the group, and the facilitator highlighted areas of agreement as well as discrepancies in opinions. Over the course of the retreat, the group engaged in focused white-board discussions, where participants reflected on the discourse, revised their perspectives and considered alternative viewpoints. This dialogue was critical in refining the initial ratings and resolving any differences.

Subsequent rounds of re-rating followed, with the facilitator guiding the discussion to ensure that every voice was heard and that the rationale behind each decision was transparent. The iterative process continued until a consensus was reached, in this case defined as typically at least 80% agreement among participants, on the optimal set of items for each construct. The result was a distilled, expert-endorsed selection of items that not only reflected the rigorous empirical foundation of existing hope scales but also resonated with the nuanced, multidimensional view of hope articulated by the theological and development teams. This consensus served as the basis for further psychometric validation, ensuring that the final instrument was both reliable and contextually meaningful.

Following the retreat, the statements finalized through this internal consensus process were shared with a broader group of experts for external validation. These included the original seven theologians, World Vision field practitioners from the eight offices participating in the pilot, members of the broader Faith and Development team at the Global Centre and in the regional office, sectoral representatives, and a group of academic partners from Harvard University and other institutions with expertise in human hope and human flourishing. This wider consultation was designed to validate whether the refined statements adequately captured the intended meaning of the six signs of hope, as defined theologically.

In line with Delphi principles, this external feedback stage functioned as a validation loop, allowing for triangulation of expert insight and the confirmation of cross-contextual relevance. It also ensured that theological nuance, field applicability, and academic rigor were all upheld before progressing to psychometric testing. As an outcome of the Delphi-informed process, a final set of five statements per sign of hope was selected for psychometric testing in the participating field offices.

Empirical evidence supports the scientific soundness of using a modified Delphi technique in this context. Systematic reviews (e.g., Okoli & Pawlowski, 2004) have demonstrated that Delphi processes consistently yield high levels of inter-rater agreement, often exceeding 75% consensus across multiple rounds, which is considered a robust indicator of content validity. Moreover, meta-analytic findings (e.g., Diamond et al., 2014) indicate that Delphi-derived item sets tend to display strong internal consistency (Cronbach's $\alpha \geq 0.80$) when subsequently subjected to psychometric testing. In particular, health and social science applications of Delphi have shown that combining independent expert assessments with structured group deliberation reduces individual biases and enhances the reliability of the final instrument (Keeney, Hasson, & McKenna, 2011).

By adhering to these established best practices, such as maintaining anonymity in initial ratings, iterating until predefined consensus thresholds are met, and incorporating both theological and empirical perspectives, the modified Delphi method we employed aligns closely with validated protocols that yield psychometrically sound measure.

This comprehensive approach ensured that our measurement of hope is both empirically robust and theoretically nuanced, providing a solid foundation for future research and practical interventions designed to ease the burdens of hopelessness and promote a brighter, more hopeful future. The next phase of the process was to translate and adapt the selected items to World Vision's diverse audience.

Translation and Cultural Adaptations

The translation and adaptation of the CWBO 1 survey tool followed the TRAPD model, a rigorous methodology designed to ensure both linguistic accuracy and cultural relevance. This structured process involved five steps: translation, review, adjudication, pretesting, and documentation. The initial translation was guided by detailed notes to clarify key concepts. A second translator reviewed the material, identifying issues and proposing alternatives. Discrepancies were resolved through adjudication, ensuring decisions aligned with the survey's objectives. Each translation was then pretested with at least 10 respondents per language to confirm clarity, appropriateness, and comprehension, followed by thorough documentation to maintain consistency across contexts.

During the pilot phase in eight countries, field teams encountered translation challenges that highlighted the complexity of adapting the tool across diverse cultural and linguistic settings.

While some countries, such as Uganda, reported minimal translation concerns, others required substantial adjustments. In Bolivia, "spirituality" was adapted to "belief in God" to align with local language norms. In Iraq, "gratefulness" was adapted to better reflect cultural expressions, using relatable concepts like "thanking God."

In Sri Lanka, phrases such as "almost never true" had no direct equivalent in Sinhala, requiring modified wording for clarity. In Lesotho, abstract concepts like "hope" and "resilience" required simplified language and real-life examples to ensure understanding. In Albania, terms like "social" and "dignity" proved confusing for younger children, requiring facilitators to provide repeated clarifications and simplified language. In Thailand, additional adjustments were needed to align concepts like spirituality and purpose with culturally relevant expressions.

The adaptation process also revealed critical insights about age-appropriate language. Younger children (ages 10-12) often struggled with abstract ideas like hope, gratitude, and future aspirations. Facilitators introduced simplified explanations, relatable examples, and visual aids to support comprehension. In contexts like Thailand and Iraq, additional interpretation support was necessary for ethnic minority groups to ensure meaningful engagement with the tool.

The experience reinforced that translating survey tools is not simply a linguistic exercise but one that requires sensitivity to cultural norms, social values, and cognitive development. Facilitators emphasized the importance of refining complex questions and incorporating interactive elements such as visual aids or storytelling to improve engagement. Additionally, ensuring that facilitators received adequate training on both the survey's intent and adapted language was key to improving data quality.

By combining the structured TRAPD methodology with insights from field practice, the revised CWBO1 guidance can now reflect improved clarity, cultural relevance, and accessibility. These refinements are critical to ensuring the tool effectively captures children's perceptions of God's love and hope for the future across World Vision's diverse operational contexts.

Challenges in Translation, Adaptation and Implementation

Implementing the CWBO 1 survey tool across eight diverse contexts revealed several challenges that extended beyond translation and adaptation. While the TRAPD model ensured linguistic accuracy and cultural relevance, practical issues imposed notable challenges to consistent data collection and meaningful engagement with children.

It is important to note that while some of the implementation challenges presented here are documented for transparency, they do not necessarily stem from the HOPE scale itself. Instead, they reflect broader challenges in data collection within an organization as diverse as World Vision. These challenges were also shaped by the workload that field offices faced during the data gathering process, alongside the overall workload brought by the ongoing change management processes within World Vision in FY25.

Additionally, while the new HOPE scale consists of 35 statements in its piloting version, the survey used during the pilot phase was intentionally longer, including more than 100 statements. This expanded version allowed the team to gather data from additional scales for analysis and validation purposes. The extended length does not reflect the final tool but was necessary to ensure a robust validation process.

Implementation Challenges

The survey's administration posed logistical difficulties that required flexibility and innovation from field teams. In Iraq and Thailand, managing multiple languages within the same sample group significantly increased the time required for data collection. Facilitators often had to switch between languages to clarify concepts, causing delays and fatigue for both staff and participants. In Albania, the use of digital tablets created technical issues, particularly with scrolling navigation, which confused children and slowed progress. Facilitators had to adjust by manually guiding children through the survey or switching to printed versions to improve comprehension.

Children's engagement levels varied across age groups. Younger children (ages 10-12) struggled with abstract concepts such as hope, gratitude, and future aspirations, especially in Albania, Iraq, and Sri Lanka. Facilitators introduced simplified explanations, additional examples, and visual aids to enhance comprehension. In Lesotho and Sri Lanka, children's fatigue was a major concern, especially when surveys were administered during lengthy sessions or school hours. Breaks, interactive discussions, and smaller group formats were introduced to improve engagement. In some locations, older children (ages 16-18) expressed resistance to completing the survey, requiring facilitators to build rapport and provide encouragement. In Albania, older adolescents showed increased anxiety and pessimism in their responses, further impacting their engagement.

Emotional Responses and Sensitivity

In several countries, questions about family difficulties, future uncertainty, or life purpose triggered emotional responses. In Iraq and Sri Lanka, some children experienced distress when reflecting on personal losses or anxieties. Facilitators responded by creating supportive environments where children felt safe to share their feelings. In Uganda and Lesotho, facilitators emphasized the importance of establishing trust before beginning the survey, which improved children's comfort and willingness to participate.

Resource and Capacity Constraints

Facilitators across multiple countries highlighted gaps in training, particularly in explaining complex concepts in ways that children could understand. In Bolivia, Iraq, and Thailand, additional orientation was required to help facilitators manage children's emotional reactions and ensure questions were presented consistently. Scheduling was another key challenge, with teams in Lesotho and Sri Lanka noting that surveys conducted during school hours conflicted with academic schedules, reducing participants' focus. Facilitators emphasized the need for improved planning, enhanced training, and the introduction of interactive elements such as storytelling or visual aids to sustain engagement.

These challenges underscored the importance of balancing methodological rigor with practical flexibility. While the TRAPD model provided a strong foundation for translation and adaptation, the experiences from field teams highlighted that successful implementation relies heavily on well-prepared facilitators, adaptable data collection methods, and thoughtful consideration of children's emotional well-being.

The refined items were then evaluated through a comprehensive psychometric assessment designed to confirm both their reliability and validity.

Phase IV: Psychometric Validation of the Items

Overview of Psychometric Validation Process

Determining the ideal number of survey items for assessing hope as a sign of God's love among children requires balancing comprehensive coverage of the construct with minimizing participant burden. In this context, the survey must be developmentally appropriate, engaging, and culturally sensitive, ensuring that items resonate with children from diverse backgrounds and religious affiliations while capturing the multidimensional nature of hope within a spiritual framework.

Theoretical Framework and Dimensions of Hope

Hope in this study is understood as both a positive psychological state and a reflection of children's experiences of divine love. Integrating developmental and spiritual theories, the construct encompasses emotional, social, and spiritual dimensions. Prior research on children's wellbeing underscores the need to capture multiple facets, ranging from emotional security and social connectedness to spiritual affirmation (Diener et al., 2010; Keyes, 2002). Informed by Koenig's work on the assessment of religious and spiritual constructs (Koenig, 2009), the survey items are designed to be inclusive and sensitive to variations in religious tradition, ensuring that they reflect diverse experiences of hope and divine love.

Item Development and Factor Structure

The item pool was developed to capture the multifaceted nature of hope as both an emotional and motivational construct which draws strength from loving human relationships. Drawing on the extensive literature on hope measures, the instrument is designed to incorporate elements of agency (children's perceived capacity to initiate and sustain actions toward goals) and pathways (their ability to identify routes to achieve these goals). This approach is informed by the robust two-factor structure of the **Children's Hope Scale (CHS)** (Snyder et al., 1997), which has been widely validated for child populations.

In addition to the CHS, the factor structure of hope is supported by other established measures, which underscore the multidimensionality of the construct in children. For instance, instruments like the **Hopelessness Scale for Children** and adaptations of the **State Hope Scale** and **Life Orientation Test** provide complementary perspectives by assessing not only positive expectancies but also the absence or presence of negative outlooks. The inclusion of these dimensions ensures that the survey can capture both the cognitive (goal-directed thinking) and affective (emotional resilience) components of hope.

This study's planned exploratory factor analysis (EFA) examined whether the items clustered into factors analogous to agency and pathways, while also exploring additional dimensions such as emotional reassurance and spiritual connection. Confirmatory factor analysis (CFA) was deployed to validate the factor structure, ensuring that the instrument is sensitive to the

developmental stage of children and is equally applicable across diverse cultural and religious backgrounds.

Psychometric Considerations

Achieving a balance between reliability and validity is essential. Following Koenig's guidelines (2009) and classical psychometric principles (Nunnally, 1978), each latent construct was measured by a minimum of five items to achieve acceptable internal consistency. Items were carefully distributed across dimensions to avoid bias toward any single cultural or religious perspective, thereby enhancing cross-cultural validity. Special attention was given to ensuring that the items performed equivalently across different groups, which is critical for studies involving spiritual constructs among diverse populations.

Practical Considerations, Cultural Sensitivity, and Target Population

The survey targets children, whose cognitive and emotional development necessitates an instrument that is both concise and engaging. Shorter scales (10–15 items) are preferred for settings such as classrooms or clinical environments to prevent fatigue while still yielding robust psychometric data. The language and imagery have been tailored to be age-appropriate and inclusive, ensuring that children from various cultural backgrounds and religious traditions can relate to the content. In alignment with Koenig's emphasis on culturally informed research, alternative wording and culturally equivalent measures are incorporated to respect and reflect the diversity of religious experiences.

Methods of Validation

The study of the Hope items adhered to empirically validated methods for religious and spiritual assessments ensuring that the tool is both scientifically rigorous and culturally sensitive. The study adopted the process outlined by Boateng et al. (2018), for developing and establishing the psychometric properties of a new scale and for translating a scale into a different language (and psychometrically validating it in that language). Boateng outlines nine steps involved in the development of a new multi-item scale, 1) item development defined in steps 1, and 2, 2) scale development defined in steps 3 through 6, and 3) scale evaluation outlined in steps 7 through 9.

Objective of Validation:

The primary objective of the validation process was to evaluate the instrument's ability to measure hope as a multidimensional construct reflective of children's perceptions of God's love. In line with Koenig's approach, the validation process was designed to establish both the reliability and construct validity of the survey, ensuring its effectiveness in research and clinical settings regardless of participants' cultural or religious backgrounds.

Item Generation and Content Validity: The initial item pool was generated through a comprehensive review of the literature on hope, child development, and spirituality. Content validity was enhanced via expert reviews, which involved professionals in psychology, child development, religious studies, theology, and other stakeholders at WV following the framework proposed by Koenig. This process ensured that the items were clear, relevant, and culturally appropriate, with language and imagery resonating across diverse religious affiliations while aligning with the practical needs of WV.

Pilot Testing and Factor Analysis: A pilot study was conducted using a combination of data collection schemes to align with the use by WV field offices (e.g., interviewer-assisted, or self-administered) to achieve a diverse and representative sample of children to identify items that might not perform uniformly across cultural or religious groups. Exploratory factor analysis (EFA) was then employed to determine the underlying dimensions of hope, and confirmatory factor analysis (CFA) was subsequently used to refine the scale. This two-stage factor analytic approach, as outlined by Koenig (2009), was critical in establishing the instrument's structural validity across multiple cultural contexts.

Reliability and Construct Validity Testing: Reliability testing was carried out using internal consistency measures, including Cronbach's alpha, with values above 0.7 considered acceptable. Reliability was additionally estimated using test-retest correlations across administered approximately 10 days apart. Construct validity was assessed by examining the relationships between the survey's dimensions and established measures of hope and spiritual well-being.

Benchmarking and Indicator Cutoffs: A practical consideration is to help WV answer the question, what percent of the adolescents (n.b. we validated the tool for usage with children ages 10-18 but in keeping with other World Vision measurements plan on using it with adolescents

ages 12-18) that we serve are experiencing hope as a sign of God's love? To help WV answer this question using the new hope measure, we provide a stakeholder calibrated benchmark and a normative benchmark calibrated on the sample. These benchmarks provide alternative views, each psychometrically valid, for the use by WV reporting. We include a description on how the indicator is calculated and apply the benchmark to these data.

Practical Administration Considerations: The survey was designed to be engaging, brief, and accessible. Administration protocols were developed to reflect ethical and culturally sensitive practices. Data handling procedures ensured participant confidentiality and respectful treatment of responses. Special adaptations, such as alternative phrasing and supplementary explanations, were incorporated to accommodate the diverse backgrounds of child participants, in line with Koenig's recommendations for culturally informed research.

Findings

1. Item Analysis

Item characteristics were examined using the item locations (means), standard deviations, item-to-total correlations, average item correlations, correlations among items, and empirical item characteristic curves. Items with low item-to-total correlations (< 0.30) or low average correlations (< 0.20) are flagged as potentially ill-fitting due to low discrimination.

The empirical item characteristic curves, provided in our online supplemental material, help to identify potentially problematic items based on the shape of the relation of each item to the total score without the item included. No items will be removed due to item analyses, but these item characteristics help identify potentially ill-fitting items.

Using the full sample (N=4,609), we found evidence that all items pass the initial benchmark of item-to-total (ITC) correlations of at least 0.30. Of potential concern is the domain-specific ITCs, i.e., how correlated an item is with the other items for that specific domain. The domain ITCs were not clearly higher than the total (all items) ITCs, which may suggest a lack of clear separation across the domains. This is not necessarily a problem due to the clear conceptual distinction across domains and the premise that all domains contribute to a single indicator, but could point to a challenge in statistical distinction.

The summary statistics reported in Table 1 include the percent endorsing "Did Not Understand" (% DNU). We can use this to help identify more complex items. The item with the highest percent responding DNU is "*My life will make a difference*" *(SHP6)*, with 1.63% (or 75/4,609 adolescents). Exhibit B provides a breakdown of the percent endorsing DNU by age group.

Table 1.

Item descriptive statistics of all piloted items for the validation sample (N=4,609)

Item	% Miss	% DNU	Mean	SD	KMO	ITC	Domain ITC	Avg Cor	Domain Avg Cor
Compassion Domain									
When I hear about someone going through a difficult time, I feel their suffering. (SHC1)	1.71	0.48	3.09	0.88	0.97	0.57	0.59	0.37	0.44
When others are upset, I support them. (SHC2)	1.08	0.39	2.92	1.03	0.96	0.52	0.60	0.37	0.44
I care about people even when they don't do what I hope they will do. (SHC3)	1.56	0.54	2.89	1.06	0.97	0.47	0.49	0.32	0.37
I notice when others are upset. (SHC4)	0.87	0.24	2.88	1.01	0.96	0.41	0.55	0.32	0.41
I am thankful when people help me. (SHC5)	0.91	0.15	3.39	0.72	0.98	0.60	0.54	0.40	0.40
Joy Domain									
I am grateful for my life. (SHJ1)	1.32	0.37	3.34	0.79	0.97	0.60	0.49	0.40	0.34
I look forward to doing things I enjoy. (SHJ2)	1.00	0.28	3.30	0.79	0.98	0.58	0.53	0.32	0.35
I celebrate the good things that happen to others. (SHJ3)	1.52	0.43	3.09	0.93	0.97	0.52	0.48	0.34	0.33
I feel loved. (SHJ4)	2.71	0.82	3.05	1.02	0.97	0.53	0.50	0.35	0.35
If I list everything I'm thankful for, it would be a very long list. (SHJ5)	2.36	0.91	3.02	0.95	0.98	0.59	0.50	0.35	0.34
I look forward to the future. (SHJ6)	1.69	0.56	3.25	0.78	0.97	0.61	0.48	0.31	0.33
Purpose Domain									
My life has purpose. (SHP1)	2.50	0.76	3.24	0.89	0.98	0.57	0.58	0.37	0.42
I look for ways to make the future better, even in the face of difficulty (SHP2)	1.28	0.46	2.99	0.90	0.98	0.52	0.55	0.35	0.41
I want to help make the world a better place. (SHP3)	1.80	0.48	3.19	0.84	0.97	0.58	0.59	0.38	0.42
I have faith that my life has a plan, even when it's not clear. (SHP4)	2.02	0.78	3.16	0.84	0.98	0.65	0.62	0.39	0.45
I make plans for my future (SHP5)	1.87	0.33	3.16	0.86	0.96	0.53	0.54	0.37	0.40
My life will make a difference. (SHP6)	3.51	1.63	3.13	0.86	0.96	0.58	0.61	0.38	0.44

Table 1.

Item descriptive statistics of all piloted items for the validation sample (N=4,609)

Item	% Miss	% DNU	Mean	SD	KMO	ITC	Domain ITC	Avg Cor	Domain Avg Cor
Resilience Domain									
When I fail, I try again. (SHR1)	1.39	0.43	3.04	0.99	0.97	0.58	0.59	0.39	0.40
I believe I can work through the difficulties in my life. (SHR2)	1.24	0.33	3.10	0.92	0.97	0.59	0.60	0.39	0.41
My spirituality provides me with different ways to cope with challenges. (SHR3)	2.06	0.78	3.05	0.97	0.98	0.52	0.49	0.34	0.34
I have hope even in tough times. (SHR4)	1.91	0.39	3.14	0.87	0.97	0.63	0.61	0.41	0.41
I am aware of things that could go wrong, but I keep going. (SHR5)	1.95	0.78	2.70	1.16	0.97	0.46	0.41	0.28	0.30
I will ask for help when I need it. (SHR6)	0.87	0.20	2.87	1.04	0.95	0.45	0.40	0.30	0.29
Wisdom Domain									
I feel that the things I have learned from my experiences will help me in the future. (SHW1)	1.61	0.41	3.15	0.84	0.98	0.48	0.51	0.36	0.38
I do what is right, even when it is hard. (SHW2)	1.24	0.30	3.01	0.93	0.96	0.57	0.61	0.39	0.45
I think about what is right and wrong when I do things. (SHW3)	1.32	0.48	3.02	0.95	0.98	0.54	0.58	0.37	0.43
I always act to promote good in all circumstances, even in difficult and challenging situations. (SHW4)	1.63	0.67	3.05	0.89	0.97	0.61	0.62	0.39	0.46
I will do what is right, even when no one is watching. (SHW5)	1.28	0.41	2.94	0.99	0.97	0.52	0.53	0.34	0.40
Spirituality Domain									
My relationship with God helps me become a better person. (SHS1)	64.81	0.07	3.38	0.68	0.96	0.65	0.73	0.38	0.56
I am loved by God. (SHS2)	65.33	0.20	3.47	0.67	0.96	0.61	0.72	0.36	0.56
I find strength in my relationship with God. (SHS3)	65.05	0.13	3.40	0.72	0.96	0.66	0.75	0.38	0.57
God listens to my prayers. (SHS4)	65.18	0.17	3.32	0.79	0.97	0.60	0.67	0.35	0.53

Table 1.

Item descriptive statistics of all piloted items for the validation sample (N=4,609)

Item	% Miss	% DNU	Mean	SD	KMO	ITC	ITC	Domain Cor	Avg Domain Avg Cor
I am amazed by God's creation. (SHS5)	65.18	0.17	3.37	0.75	0.97	0.51	0.60	0.30	0.48
My Christian community is important to me. (SHS6)	65.35	0.13	3.21	0.86	0.97	0.50	0.55	0.30	0.45

Note. DNU = Did not understand; ITC = item to total correlation without item included Avg. Cor = average correlation of item with all other items.

2. Factor Analysis

Data were approximately evenly split into exploratory (N=2264) and confirmatory (N=2345) subsets for factor analyses in line with Koenig & Zaben (2021). Sample splitting was conducted stratifying by country, age, and sex to ensure each sample was representative of the population WV serves. The exploratory sample was used to iteratively identify and drop poorly functioning items via Exploratory Factor Analysis (EFA).

EFA is a statistical procedure used to identify a set of variables, called factors, smaller than a scale's item set itself, whose inferred pattern of relation with scale items can explain the observed pattern of correlation between the scale's items. The factors identified by EFA are generally taken as representative of some nondescript theoretical constructs whose alignment with the constructs of a scale is designed to measure depends on their inferred pattern of relation with individual scale items. For example, a factor taken to correspond with Compassion should correlate more strongly with items designed to measure Compassion than with items designed to measure the World Vision Hope Scale's (WVHS) other subdomains.

The initial estimate for the optimal number of factors was identified via parallel analysis at the start of each EFA iteration. Parallel analysis involves assessment of the eigenvalues of the scale item covariance matrix, which describe the amount of additional variance across all items that can be explained by inclusion of additional factors. Parallel analysis determines the optimal number of factors for model estimation as being equal to the number of observed eigenvalues greater than their corresponding counterparts in 95% of randomly simulated samples.

The sensitivity of model fit to deviations from this optimal number of factors was assessed via comparison of EFA fit statistics across models with varying number of factors (with this number varying from 1 to the larger of either 6 (the theorized number of dimensions) or the number of

factors determined via parallel analysis). Factor were rotated using oblique (Promax) rotation, allowing for the estimation of inter-factor correlations.

Once the optimal number of factors was determined and corresponding factor models estimated, item quality was assessed via examination of item loadings, which quantify the strength of relation between items and factors. Items with no salient primary loadings (e.g., no loading greater than 0.40) serve as poor indicators because they lack a statistical relation to the factors taken to correspond with a scale's domains and are thus irrelevant to any of the constructs that a scale is designed to measure.

Items with salient cross-loadings on multiple factors also serve as poor indicators because they exhibit a similar degree of relatedness to multiple factors. This multiplicity of relatedness introduces unnecessary redundancy into the scale, making factors less distinguishable from one another and limiting our ability to infer a one-to-one mapping from factors to theoretical constructs. As such, items with either no salient primary loadings or any salient cross-loadings were dropped at each EFA iteration with EFA models being subsequently estimated based on the resulting subset of retained items.

This procedure was repeated until a convergence point was reached whereby no additional items were dropped when estimating a factor model based on the optimal number of factors determined via parallel analysis. Salience of primary loadings was defined as being at least 0.4, with the salience of cross loadings defined as 75% of an item's primary loading (e.g., 0.3 with a primary loading of 0.4, scaling upward with stronger primary loading values to allow for a greater rate of item retention compared to a fixed standard of salience for cross loadings).

A parallel analysis of all 34 items suggested the need for nine factors (see Figure 1). Two rounds of the automated iterative EFA resulted in the removal of four Compassion items, five Joy items, two Purpose items, two resilience items, and one Spirituality item. The complete results of the iterative EFA are provided in Exhibit C.

Figure 1. Scree plot of eigenvalues for full set of 34 piloted items show evidence for 9 factors.

Table 2. EFA-Implied Factor Structure (N=2,264)

	f1	f2	f3	f4	f5	f6	Uniqueness (u2)	Communality (h2)
SHC1	**0.648**				0.162		0.42	0.58
SHC2	**0.748**					-0.127	0.388	0.612
SHC3	0.239		0.155		**0.451**		0.583	0.417
SHC4	**0.428**		0.156	0.212			0.591	0.409
SHC5	0.197		**0.452**	0.11		**0.382**	0.324	0.676
SHJ1		-0.123	0.122	**0.514**		**0.300**	0.393	0.607
SHJ2	0.123	**0.452**		-0.231		**0.484**	0.425	0.575
SHJ3	**0.514**		0.26	-0.105	0.162		0.488	0.512
SHJ4	0.245			0.222		0.222	0.576	0.424
SHJ5	0.101				0.167	**0.311**	0.619	0.381
SHJ6		**0.518**	-0.145			**0.427**	0.412	0.588
SHP1		0.12	0.207	**0.599**		0.12	0.4	0.6
SHP2				**0.613**	0.137		0.54	0.46
SHP3		0.179		**0.591**	0.262		0.41	0.59
SHP4	-0.101			**0.351**	**0.375**	0.125	0.478	0.522
SHP5	0.119	**0.304**		0.234	0.153		0.51	0.49
SHP6	-0.133	-0.137	0.258	**0.443**	0.232		0.401	0.599
SHR1	0.157	0.15		**0.562**			0.414	0.586
SHR2	-0.154	0.15		0.201	**0.688**		0.414	0.586
SHR3				**0.513**	0.213		0.567	0.433
SHR4	0.134	0.226			**0.500**		0.387	0.613
SHR5			0.101		**0.469**		0.673	0.327
SHR6	0.235	-0.104		**0.633**	-0.212		0.573	0.427
SHW1		0.111		**0.703**		-0.116	0.45	0.55
SHW2	0.246			**0.618**		-0.16	0.404	0.596
SHW3	0.183		0.115	**0.496**			0.522	0.478
SHW4	0.198			**0.683**		-0.112	0.392	0.608
SHW5	-0.105	-0.162	0.366	**0.692**			0.446	0.554
SHS1		0.194			0.117	**0.724**	0.233	0.767
SHS2	-0.152	0.182	0.159	0.14	-0.111	**0.837**	0.224	0.776
SHS3		0.114				**0.801**	0.237	0.763
SHS4						**0.746**	0.373	0.627
SHS5	-0.155		0.19			**0.795**	0.401	0.599
SHS6	0.209					**0.632**	0.481	0.519

The six-factor model representing the six signs of hope demonstrated excellent statistical fit to the data. Standard indices of model fit showed that the structure was highly consistent with children's responses: the Comparative Fit Index (CFI = .999) and the Root Mean Square Error of Approximation (RMSEA = .020) both indicated excellent fit, despite a significant chi-square statistic, which is common in large sample sizes. Together, these results support the validity of the six-factor model as a meaningful representation of how children experience and express hope.

Note: Non-primary loadings (all < 0.1) omitted for parsimony and all loadings greater than 0.30 were bold for ease of discussion. Full loading matrix is omitted for brevity and available upon request to the authors. Six factors accounted for 55.4% of the variance in the items; $\chi^2(372) = 695.2, p < .001$; CFI = .999; RMSEA = .020.

Table 3. EFA-Implied Inter-factor Correlations

Factor	f1	f2	f3	f4	f5	f6
f1	1					
f2	0.351	1				
f3	0.216	0.442	1			
f4	0.659	0.283	0.241	1		
f5	0.749	0.361	0.279	0.757	1	
f6	0.616	0.238	0.146	0.682	0.662	1

Note: Correlations were obtained via Promax rotation.

Based on the iterative process, 18 items were initially selected for a refined scale, and an additional round of 'ad hoc' EFA model estimation was run aimed at assessing the factor structure of the 18 remaining items. The resulting model also identified 2 factors. Factor 1

exhibited salient loadings with items whose contents were reflective of Compassion (including one item (SHJ3) originally classified as a candidate indicator of Joy, whose contents were ultimately deemed as being more reflective of Compassion), Purpose, Resilience, and Wisdom. In contrast, Factor 2 exhibited salient loadings with items whose contents were reflective of Joy (including one item (SHC5) originally classified as a candidate indicator of Compassion, whose contents were ultimately deemed as being more reflective of Joy) and Spiritual Life.

While EFA did not reveal a factor structure that is cleanly aligned to each of the WVHS's individual domains, the identified factor structure did map cleanly onto distinct domains, as assessed via item contents. The initially proposed set of refined items based on the EFA for each domain of the WVHS are:

Compassion

- When I hear about someone going through a difficult time, I feel their suffering. (SHC1)
- I care about people even when they don't do what I hope they will do. (SHC3)
- I celebrate the good things that happen to others. (SHJ3)

    Revised descriptor/item-based domain definition: Marked primarily by a strong and unconditional sense of empathy and care towards others.

Joy

- I am thankful when people help me. (SHC5)
- I am grateful for my life. (SHJ1)
- I feel loved. (SHJ4)

Revised descriptor/item-based domain definition: Marked primarily by a sense of gratitude, both in general and towards others specifically, along with a felt sense of being loved by others.

Purpose

- I look for ways to make the future better, even in the face of difficulty (SHP2)
- I want to help make the world a better place. (SHP3)
- I have faith that my life has a plan, even when it's not clear. (SHP4)

Revised descriptor/item-based domain definition: Marked primarily by holding steadfast in one's belief that their life holds a purpose-oriented around making the world a better place in the future and acting in accordance with this purpose even when it is challenging.

Resilience

- When I fail, I try again. (SHR1)
- I believe I can work through the difficulties in my life. (SHR2)
- I have hope even in tough times. (SHR4)

Revised descriptor/item-based domain definition: Marked primarily by a willingness and ability to maintain hope and persevere during challenging times.

Wisdom

- I do what is right, even when it is hard. (SHW2)
- I always act to promote good in all circumstances, even in difficult and challenging situations. (SHW4)
- I will do what is right, even when no one is watching. (SHW5)

Revised descriptor/item-based domain definition: Marked primarily by a form of moral resilience, or willingness and ability to do the right thing in challenging circumstances or when no one is watching.

Spirituality

- My relationship with God helps me become a better person. (SHS1)
- I am loved by God. (SHS2)
- I find strength in my relationship with God. (SHS3)

Revised descriptor/item-based domain definition: Marked primarily by a sense that one has a personal relationship with a God that loves them and actively improves their life.

The selected items were generally well-received by the theologians and stakeholders at WV. However, upon discussion with the theologians who developed the overall framework for the WVHS, the following changes were made.

- All descriptors were updated combining the theological based description with the item driven description.
- The Joy items and Compassion items were separated and new items were selected for each domain from those tested to fill the 3-item minimum per domain.
- The Resilience domain did not quite have the conceptual coverage required. Item SHR4 was replaced with item SHR3, "My spirituality provides me with different ways to cope with challenges." to capture the spirituality component necessary to the construct.

The final set of items selected for shortened version of WVHS:

Compassion

- When I hear about someone going through a difficult time, I feel their suffering. (SHC1)
- I care about people even when they don't do what I hope they will do. (SHC3)
- I notice when others are upset. (SHC4)

Revised descriptor/item-based domain definition: A hopeful child is empathetic towards and aware of the needs of others, exercising kindness, care, and compassion, even when it might be difficult to do so.

Joy

- I am grateful for my life. (SHJ1)
- I look forward to doing things I enjoy. (SHJ2)
- I feel loved. (SHJ4)

Revised descriptor/item-based domain definition: A hopeful child has a grateful heart, which allows them to enjoy simple experiences and appreciate the kindness and love of others.

Purpose

- I look for ways to make the future better, even in the face of difficulty (SHP2)
- I want to help make the world a better place. (SHP3)
- I have faith that my life has a plan, even when it's not clear. (SHP4)

Revised descriptor/item-based domain definition: A hopeful child pursues their dreams and aspirations, working to make the world a better place and constantly improving their capacity to do so.

Resilience

- When I fail, I try again. (SHR1)
- I believe I can work through the difficulties in my life. (SHR2)
- My spirituality provides me with different ways to cope with challenges. (SHR3)

Revised descriptor/item-based domain definition: A hopeful child has both the capacity and willingness to face life challenges with courage, growing from adversity while maintaining a positive outlook on life.

Wisdom

- I do what is right, even when it is hard. (SHW2)
- I always act to promote good in all circumstances, even in difficult and challenging situations. (SHW4)
- I will do what is right, even when no one is watching. (SHW5)

Revised descriptor/item-based domain definition: A hopeful child understands their inherent value, reflects on life, and demonstrates strong character, exhibiting a willingness and ability to act in accordance with what they believe is right, even in challenging circumstances.

Spirituality

- My relationship with God helps me become a better person. (SHS1)
- I am loved by God. (SHS2)
- I find strength in my relationship with God. (SHS3)

Revised descriptor/item-based domain definition: A hopeful child trusts in and feels loved by a higher power, experiencing relation to the mystical while finding strength and meaning in spiritual practices and rituals, which is a more secular-based definition.

Next, an alternate definition for a more Christian based-based audience, which is where World Vision intends to use this metric: A hopeful child trusts in and feels loved by God, experiencing a

personal relationship with Jesus and gratitude for the work of the Holy Spirit, finding strength and meaning in spiritual practices and rituals.

Confirmatory Factor Analysis

Next, the above-revised set of items is tested using the confirmatory sample. For the confirmatory factor analyses, the statistical fit of a 6-factor model in which item cross-loadings, which are freely estimated during EFA, are fixed to zero to ensure a one-to-one mapping from items to factors (which are taken to correspond with the theoretical construct the items are hypothesized to indicate). Several statistical fit metrics, including CFI, RMSEA, and SRMR, were examined to assess the degree to which a 6-factor model adequately accounted for the observed the pattern of correlation among individual items retained for analysis following the EFA procedures outlined above.

Adequacy of these fit metrics (CFI>0.95, RMSEA<0.06, and SRMR<0.08) generally indicates that the retained items serve as strong indicators of their corresponding factors, establishing some preliminary evidence of construct validity with respect to the sets of item-level indicators corresponding to each dimension of Hope measured by the WVHS. All factor analyses were conducted using the lavaan package (Rosseel, 2012) in R (R Core Team, 2024). The model was estimated using diagonally weighted least squares with robust standard errors and scaled test statistics, and missing data was handled using pairwise deletion (a categorical variant of FIML).

The CFA results using the six-factor model are shown in Table 4. The model fit statistics indicate adequate fit (CFI=.980; RMSEA=.047; SRMR= 0.032). All estimated loadings were acceptable with the lowest standardized loading estimated being 0.61 for item SHJ2, "I look forward to doing things I enjoy." The results generally look good, but there is some evidence of a lack of differentiation among factors due to the high correlations.

Six of fifteen factor correlations exceeded 0.90; these occurred between factors Compassion and Resilience, Joy and Purpose, Joy and Resilience, Purpose and Resilience, Purpose and Wisdom, and Resilience and Wisdom. A lack of differentiation, or discriminant validity, among factors can lead to overestimating the distinctiveness of the information provided by separate factors.

The distinctiveness of the information provided from separate factors is supported by the theological considerations but not strongly by the statistical analysis of CFA using the full sample. When the CFA analyses are done by country, there is more evidence of differentiation among factors (see Exhibit D).

Table 4. Confirmatory factor analysis of revised reduced item set (N=2,345)

Factor	Item	Loading	Std. Err	Std. Loading	Residual Variance
Compassion					

SHC1	1*		0.725	0.474
SHC3	0.893	0.023	0.647	0.581
SHC4	0.899	0.022	0.652	0.575
Joy				
SHJ1	1*		0.751	0.436
SHJ2	0.815	0.021	0.612	0.626
SHJ4	0.877	0.021	0.659	0.566
Purpose				
SHP2	1		0.686	0.529
SHP3	1.03	0.023	0.707	0.5
SHP4	1.096	0.022	0.752	0.434
Resilience				
SHR1	1		0.724	0.476
SHR2	1.021	0.018	0.739	0.453
SHR3	0.862	0.021	0.624	0.611
Wisdom				
SHW2	1		0.761	0.421
SHW4	0.996	0.017	0.758	0.425
SHW5	0.87	0.02	0.662	0.562
Spirituality				
SHS1	1		0.858	0.263
SHS2	1.033	0.02	0.886	0.214
SHS3	1.029	0.02	0.883	0.22

Factor Correlation Matrix (Variance along diagonal)

	Compassion	Joy	Purpose	Resilience	Wisdom	Spirituality
Compassion	(0.526)					
Joy	0.856	(0.564)				

Purpose	0.885	0.911	(0.471)			
Resilience	0.902	0.967	0.996	(0.524)		
Wisdom	0.891	0.885	0.939	0.966	(0.579)	
Spirituality	0.614	0.923	0.769	0.736	0.585	(0.737)

Note. *Factor loading fixed for identification. Model fit indices: $\chi^2(120) = 436.7, p < 2.2e\text{-}16$; CFI $= .980$; RMSEA $= .047$; SRMR $= 0.032$.

The final model assessing the six signs of hope showed strong evidence of statistical validity and overall model fit. The Comparative Fit Index (CFI = .980), Root Mean Square Error of Approximation (RMSEA = .047), and Standardized Root Mean Square Residual (SRMR = .032) all fall within thresholds indicating very good to excellent fit.

While the chi-square statistic ($\chi^2(120) = 436.7$, p < .001) was significant as expected in large samples, the convergence of these model indices strongly supports the structural soundness of the final measurement model used for the six dimensions of hope.

3. Reliability Testing

Internal consistency reliability was assessed using coefficient alpha and alpha if item is dropped (see Table 5). The overall estimate of reliability for the full sample for the full 18 item measure is 0.91 (95% CI: 0.90, 0.92).

Table 5. Estimate of internal consistency and alpha if item is dropped [alpha = 0.91 95% CI: 0.90, 0.92]

Item	w/o item	Domain	w/o item
		Compassion	
When I hear about someone going through a difficult time, I feel their suffering. (SHC1)	0.904	0.65 (0.64, 0.66)	0.521
I care about people even when they don't do what I hope they will do. (SHC3)	0.906		0.575
I notice when others are upset. (SHC4)	0.906		0.564
		Joy	
I am grateful for my life. (SHJ1)	0.903	0.60 (0.59, 0.61)	0.446
I look forward to doing things I enjoy. (SHJ2)	0.908		0.604
I feel loved. (SHJ4)	0.905		0.429

Table 5. Estimate of internal consistency and alpha if item is dropped [alpha = 0.91 95% CI: 0.90, 0.92]

Item	w/o item	Domain	w/o item
		Purpose	
I look for ways to make the future better, even in the face of difficulty (SHP2)	0.905	0.68 (0.67, 0.69)	0.595
I want to help make the world a better place. (SHP3)	0.904		0.611
I have faith that my life has a plan, even when it's not clear. (SHP4)	0.903		0.563
		Resilience	
When I fail, I try again. (SHR1)	0.903	0.67 (0.66, 0.68)	0.549
I believe I can work through the difficulties in my life. (SHR2)	0.903		0.498
My spirituality provides me with different ways to cope with challenges. (SHR3)	0.905		0.663
		Wisdom	
I do what is right, even when it is hard. (SHW2)	0.903	0.72 (0.71, 0.73)	0.580
I always act to promote good in all circumstances, even in difficult and challenging situations. (SHW4)	0.903		0.599
I will do what is right, even when no one is watching. (SHW5)	0.905		0.686
		Spirituality	
My relationship with God helps me become a better person. (SHS1)	0.905	0.83 (0.82, 0.84)	0.786
I am loved by God. (SHS2)	0.906		0.764
I find strength in my relationship with God. (SHS3)	0.905		0.756

Additionally, a small subset of adolescents in each country (approximately 40) were re-administered the WVHS approximately 10 days after the first administration of the survey. There was some difficulty in matching IDs across administrations, leading to less than 40 in each country, but overall, there was a fair number of adolescents with repeated data on the survey. We report the estimated product moment correlation, 95% confidence interval, p-value. All missing values are omitted pairwise (similar to FIML). Estimates are reported in Table 6. The tested test-retest correlations for the individual items are reported in Exhibit E.

Table 6. Test-retest estimates of reliability (N=228)

Variable	Est 95% CI	p-value
Hope Total Score	**0.74 (0.68,0.80)**	**< 2.22e-16**
Domain Scores		
Compassion	0.63 (0.54,0.70)	< 2.22e-16
Joy	0.62 (0.53,0.69)	< 2.22e-16
Purpose	0.66 (0.58,0.73)	< 2.22e-16
Resilience	0.61 (0.52,0.69)	< 2.22e-16
Wisdom	0.62 (0.53,0.69)	< 2.22e-16
Spirituality	0.52 (0.27,0.70)	1.51e-04

The Hope Total Score showed strong test–retest reliability (r = 0.74), indicating the scale captures a stable construct over time. Domain level correlations ranged from 0.61 to 0.66, which is acceptable for early-stage instruments, especially in complex field settings. These results suggest that children's responses were generally consistent across administrations, providing evidence of temporal reliability.

The Spirituality domain showed a lower correlation (r = 0.52) with a wider confidence interval, indicating greater variability and less stability over time. However, this result should be interpreted with caution. The Spirituality items were only administered in three of the eight participating countries, due to contextual sensitivities in measuring spiritual constructs among children of diverse faith backgrounds. As a result, only 47 children had valid, matched responses for this domain in both survey rounds. This significantly smaller sample size reduced statistical power and produced a less stable reliability estimate. The broader confidence interval (0.27, 0.70) reflects this uncertainty.

In addition to limited sample size, spiritual development in children may naturally vary more across time, influenced by context, experiences, and faith expression. Thus, the lower test–retest correlation in this domain may also reflect real variability in children's spiritual self-perception rather than measurement error alone. Future validation efforts should aim to increase sample sizes for the Spirituality domain in contexts where it is appropriate to administer those items. Cognitive testing and item refinement will further improve the reliability and cross-contextual relevance of this important domain.

4. Criterion-Related Validity Testing

Convergence validity evidence. Validity evidence in the form of correlations with existing variables. Criterion variables include the existing WV Hope indicator (FD1) and God's Love

indicator (FD2), Snyder's Adolescent Hope Scale, and the Flourishing Index. See Exhibit F for items used in constructing these scores.

The correlations are reported in Table 7 and show good signs of convergence with the existing WV indicators and Snyder's adolescent hope scale. The Spiritual Life domain separates from the other domains with a stronger correlation with the existing God's Love Indicator. Additional correlations are reported in Exhibit F.

Table 7. Composite Correlations between Hope Scores and Related Scales; Est. (95% CI)

| Variable | Hope Total Score | Domains | | | | | |
		Compassion	Joy	Purpose	Resilience	Wisdom	Spiritual Life
Hope Indicator (FD01)	**0.63** **(0.61,0.65)**	0.45 (0.43,0.47)	0.59 (0.57,0.61)	0.53 (0.51,0.55)	0.53 (0.51,0.55)	0.50 (0.47,0.52)	0.50 (0.47,0.54)
God's Love Indicator (FD02)	0.66 (0.63,0.69)	0.41 (0.37,0.45)	0.57 (0.53,0.60)	0.51 (0.48,0.55)	0.50 (0.46,0.54)	0.39 (0.34,0.43)	**0.74** **(0.71,0.76)**
Snyder's Adolescent Hope Scale	**0.66** **(0.65,0.68)**	0.51 (0.49,0.53)	0.53 (0.51,0.55)	0.58 (0.56,0.60)	0.60 (0.58,0.62)	0.54 (0.52,0.56)	0.44 (0.40,0.48)

5. Benchmarking

A challenge with any measurement is determining an appropriate cutoff or benchmark. In this section, we provide evidence for two alternative benchmarks. The first is derived from the expert review to provide an anchored benchmark. The second is calibrated to the distribution of scores and based on a normative approach.

Expert Review Anchored Benchmark. During the initial review of the items by the theologians and various stakeholders at World Vision, we asked several questions geared towards identifying thresholds for scores. Specifically, we asked:

- On a scale of 0-10 where 0 is hopelessness and 10 is the most hopeful, what is the lowest score you would give to a child who is expressing hope rooted in God's love?
   - This item aims to help identify a lower bound for scores representing a minimum level of hope sufficient to say, "this child expresses hope rooted in God's love," as measured by this assessment of hope.

This item aims to help identify the score, or the percentile of the distribution of scores, which helps identify those who are expressing hope rooted in God's love as measured by this hope assessment. Identical items were asked specifically for each domain and used as additional

information to inform the overall estimate. An initial estimate for the candidate threshold was obtained by averaging ratings provided by the theologians and stakeholders.

The average rating was 7.04 could be interpreted as a percentile of the distribution of possible scores (e.g., 70%), leading to the benchmark being 3.33. Figure F1 provides the distribution of

The distribution of scores on the Signs of Hope (18-item version) measure is shown in Figure F1.

Figure 2. Distribution of Hope scores with cutoff for children displaying the minimum level for signs of hope (raw score benchmark).
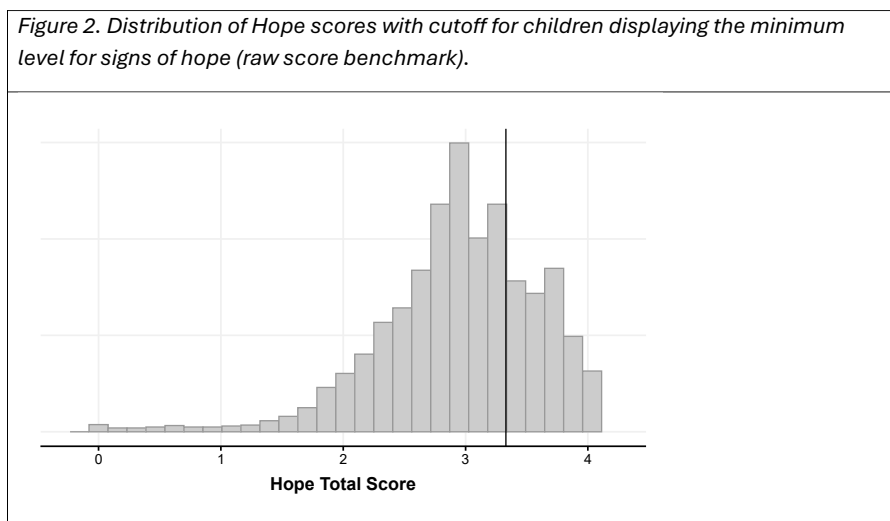
Table 8 reports on the percent of the sample at or above the thresholds (3.33 = 70-percentile calibrated benchmark) using the scale.

Table 8. Percent of adolescents served by WV expressing signs of hope by country using the expert review anchored benchmark (% > 3.33)

Characteristic	Overall N 4,6091	Albania N = 6611	Bolivia N = 5581	Iraq N = 5321	Lesotho N = 5131	Senegal N = 5921	Sri Lanka N = 6321	Thailand N = 5621	Uganda N = 5591
Signs of Hope Total	33%	25%	25%	16%	45%	36%	64%	14%	38%
Compassion	37%	28%	32%	23%	40%	33%	60%	33%	43%
Joy	50%	40%	37%	25%	58%	59%	78%	42%	56%
Resilience	39%	28%	32%	24%	50%	54%	67%	16%	42%
Purpose	42%	34%	40%	23%	50%	39%	79%	29%	40%
Wisdom	37%	32%	36%	23%	41%	35%	63%	27%	37%
Spirituality	58%	-	55%	-	60%	-	-	-	59%

Alternatively, the benchmark can be created by calibrating a benchmark to separate X% of the sample. Assuming a latent normal distribution underlying the distribution of total scores (i.e., a "signs of hope factor"), we can create a mapping from the quantiles of the normal distribution back to the observed scores to create a benchmark that separates X% of the population. As shown in Figure 3, the 50%-tile of the distribution of scores aligns with an observed total score of 3.0.

Figure 3. From percentages of the population to observed scores.

Using an alternative benchmark of 3.0, which was the benchmark in the previous indicators for World Vision's CWBO1, the resulting percent of adolescents expressing signs of hope based on these data is shown in Table 9.

Table 9. Percent of adolescents served by WV expressing signs of hope by country using the normative benchmark (% > 3.00)

Characteristic	Overall N 4,6091	Albania N = 6611	Bolivia N = 5581	Iraq N = 5321	Lesotho N = 5131	Senegal N = 5921	Sri Lanka N = 6321	Thailand N = 5621	Uganda N = 5591
Signs of Hope Total	46%	33%	40%	31%	55%	49%	81%	22%	58%
Compassion	35%	26%	31%	24%	36%	33%	64%	23%	39%
Joy	46%	39%	35%	24%	56%	38%	77%	38%	55%
Resilience	39%	28%	32%	24%	50%	54%	67%	16%	42%
Purpose	39%	33%	37%	25%	46%	39%	73%	16%	42%

Table 9. Percent of adolescents served by WV expressing signs of hope by country using the normative benchmark (% > 3.00)

Characteristic	Overall N 4,6091	Albania N = 6611	Bolivia N = 5581	Iraq N = 5321	Lesotho N = 5131	Senegal N = 5921	Sri Lanka N = 6321	Thailand N = 5621	Uganda N = 5591
Wisdom	37%	32%	36%	23%	41%	35%	63%	27%	37%
Spirituality	58%	-	54%	-	60%	-	-	-	59%

After some dialogue on benchmarking, the research team decided on the alternative approach to applying the benchmark in a way that aims to minimize confusion (i.e., to use %>3.00 as is being used in other World Vision measures). First, either of the benchmarks described above is applied separately by domain to get the proportion of adolescents expressing signs of hope by domain. Then, an overall metric is created by averaging across the domains to create an overall score.

Revisiting the reported percentages in Table 9, the domain percentages will not change. What does change is the percentile reported in the row Signs of Hope Total. The new overall percentage is 42.3%. Table 10 provides the updated percentages.

Table 10. Updated benchmarking for overall signs of hope (%>3.00).

Characteristic	Overall N 4,6091	Albania N = 6611	Bolivia N = 5581	Iraq N = 5321	Lesotho N = 5131	Senegal N = 5921	Sri Lanka N = 6321	Thailand N = 5621	Uganda N = 5591
Signs of Hope Total	42.3%	31.6%	37.5%	24.0%	48.2%	39.8%	68.8%	24.0%	45.7%

Summary and Conclusion

By adhering to the psychometric validation procedures outlined by Koenig (2009) and Koenig & Zaben (2021), the study successfully validated a robust survey instrument that accurately measures the multidimensional construct of hope as a sign of God's love among children from diverse cultural and religious backgrounds. The validation process involved rigorous methodological steps, including initial concept development informed by theological and empirical literature, expert panel reviews for content validity, and pilot testing for clarity and appropriateness across varied contexts. Subsequently, the refined instrument underwent extensive statistical analyses, such as exploratory and confirmatory factor analyses, reliability

assessments, and tests for criterion and construct validity, ensuring the tool reliably captures children's internal experiences of hope linked to perceptions of divine love.

Further, the study specifically accounted for cultural sensitivity and religious diversity, reflecting Koenig and Zaben's (2021) recommendations for instrument adaptation to varied faith traditions and cultural norms. Researchers engaged local community stakeholders, religious leaders, parents, and educators during the validation process to ensure cultural relevance, linguistic appropriateness, and theological accuracy, thereby enhancing the survey's applicability and resonance among diverse populations. These inclusive validation strategies ensured that the final instrument effectively measures children's perceptions of hope as a tangible reflection of God's love, facilitating meaningful cross-cultural comparisons and longitudinal tracking of spiritual development.

Ultimately, the validated survey provides an empirically robust foundation for future research, enabling scholars and practitioners to better understand how experiences of divine love influence psychological resilience, emotional well-being, and overall flourishing among children. The instrument's multidimensional structure allows researchers to explore nuanced relationships between spiritual perceptions, interpersonal dynamics, and developmental outcomes, thereby significantly contributing to the emerging literature on spirituality, hope, and human flourishing across global contexts.

Exhibit A

Summary of Items from Selected Love, Wellbeing and Hope Scales

Miller Hope Scale: *(Ages: 18 and older; primarily USA, also used in Canada, UK, Turkey, China)*

- I feel loved.
- I am valued for what I am.
- I have someone who shares my concerns.
- I am needed by others.
- My life has meaning.
- I make plans for my own future.
- I spend time planning for the future.
- I am bothered by troubles that prevent my planning for the future.
- I intend to make the most of life.
- I find myself becoming uninvolved with most things in my life.
- I look forward to an enjoyable future.
- I am positive about most aspects of my life.
- I am positive about the future.
- I am not interested in life.
- I am satisfied with my life.
- I feel uninvolved with life.

Nowotny Hope Scale: *(Ages: 18 and older; used in USA and Norway; also in Canada, UK, Australia, Germany for some items)*

- I know I can go to my family or friends for help.
- Sometimes I feel I am all alone.
- In the future I plan to accomplish many things.
- I can look forward to the future.
- I have confidence in my own ability.
- I know I can make changes in my life.
- I feel the decisions I make get me what I expect.
- I share important decision making with my family (or significant other).
- I use prayer to give me strength.
- I like to make my own decisions.
- I want to maintain control over my life and my body.
- I use scripture to give me strength.

Hope Index Scale – Obayuwana: *(Ages: primarily adults; used in the USA, also in Nigeria, UK, South Africa, Brazil)*

- I have people who care about me.
- I feel that my future is bright.
- I feel hopeful even when things are tough.
- I feel that my life has value and purpose.
- I have a positive outlook on life.
- I have a positive view of the future.
- I am optimistic about my future.
- My faith helps me stay hopeful.
- I trust that things will work out for the best.

Herth Hope Index: *(Ages: adolescents; cross-cultural adaptability – used in USA, Spain, Canada, Australia, Norway, Brazil, South Korea, China; and for some items, ages 18+ in countries such as USA, Canada, Iran, Japan, Sweden)*

- I sense the presence of loved ones.
- I feel all alone.
- I feel loved and needed.
- I know my life has meaning and purpose.
- I believe my outlook affects my life.
- I feel that my life has value and purpose.
- I have plans for today and next week.
- I am able to maintain hope even in tough times.
- I have support from those close to me.
- I can seek and receive help.
- I keep going even when I hurt.
- I have hope even when plans go astray.

Integrative Hope Scale – Schrank: *(Ages: 16 and older; developed in Austria and used internationally, including USA, UK, Germany, Italy, Canada)*

- I feel loved.
- I have someone who shares my concerns.
- I am needed by others.
- I am valued for what I am.
- It is hard for me to keep up my interest in activities I used to enjoy.
- I look forward to doing things I enjoy.

Comprehensive Trait Hope Scale – Scioli: *(Ages: older adolescents; used in USA, Canada, Europe)*

- Friend or family member who really listens.
- Feel safe enough with certain people.
- Welcome new experiences.
- Find ways to relax.
- There are people I completely trust.
- Capable of finding support.
- Have a network of friends.
- People I can call in times of crisis.
- Had good success when seeking help.
- Future looks bright.
- Future will bring opportunities.
- Look forward to the future.

Comprehensive State Hope Scale – Scioli: *(Ages: older adolescents; used in USA, Canada, Europe)*

- Emotional support (credit given to kindness, love, affection from others).

HFH Adult Hope Measure: *(Ages: 18 and older; used in USA, Canada, UK, Australia, South Africa)*

- I look for ways to make the future better, even in the face of difficulty.
- Even when things are hard, I generally believe I can work through the difficulties.
- When things are outside of my control, I still believe in the possibility of a good future.
- My hope for being with God is always stronger than all of my earthly desires.

Snyder Children's (and Adult) Hope Scale: *(For children/adolescents and adults; focus on goal-oriented dimensions)*

- I can think of many ways to get the things in life that are most important to me.
- Even when others get discouraged, I know I can find a way to solve the problem.

Bernardo Lotcus of Hope Scale

- My friends provide me with the encouragement I need to reach my goals.
- I have the ability to find ways to get out of a difficult situation.

Hale Generalized Expectancy for Success Scale

- I handle unexpected problems successfully.

Beck Hopefulness Scale: *(Ages: adolescents; used globally – USA, Canada, Australia, Europe, China, parts of Asia and Africa; also, for some items, ages 17 and above)*

- I look forward to the future with hope and enthusiasm.
- I have great faith in the future.

Hopelessness Scale – Beck: *(Ages: adolescents; used globally – USA, Canada, Australia, Europe, China, parts of Asia and Africa; and ages: 17 and above)*

- I can look forward to more good times than bad times.
- When I look ahead to the future, I expect I will be happier than I am now.
- All I can see ahead of me is unpleasantness rather than pleasantness.
- It is very unlikely that I will get any real satisfaction in the future.
- I cannot imagine what my life will be like in 10 years.
- I expect to get more good things in life than the average person.

Character Strengths Scale: *(Ages: 18 and older; used in USA, Canada, UK, Australia, Germany)*

- I always look on the bright side.
- I am confident that my way of doing things will work out for the best.
- I believe that good will always triumph over evil.
- I expect the best.
- I have a clear picture in my mind about what I want to happen in the future.
- I have a plan for what I want to be doing 5 years from now.
- I know that I will succeed with the goals I set for myself.
- I never go into a game or competition expecting to lose.
- If I get a bad grade or evaluation, I focus on the next opportunity and plan to do better.

Expected Balance Scale – Staats: *(Ages: primarily adults; used in USA)*

- Have you ever felt particularly excited or interested in something?
- Have you ever felt depressed or very unhappy?
- Have you ever been full of energy?
- Have you ever felt very tired?
- Have you ever felt so restless that you couldn't sit long in a chair?
- Have you ever felt that you were really enjoying yourself?
- Have you ever felt very cheerful?
- Have you ever felt like crying?

Panorama Well-Being Survey: *(Ages: 11–18; used in the USA)*

- During the past week, how often did you feel excited/happy/loved/safe/hopeful?
- During the past week, how often did you feel angry/lonely/sad/worried/frustrated?

Hinds Hopefulness Scale for Adolescents: *(Ages: 10–18; used in USA, Canada, Australia, Spain, China)*

- I'm getting some self-confidence.

- I won't let myself spend all of my time feeling sorry for myself.
- I let myself focus on the bad.
- I won't let myself keep worrying about things I can't fix.
- I make myself do something to get my mind off bad thoughts.
- I try to make myself believe things will get better.
- I force myself to try harder.
- I make myself think positive thoughts.
- I'm not positive about my life becoming a good one.
- I know I'll do OK in life.

Locus of Hope Scale: *(Ages: 18 and older; used in the Philippines, USA, Australia, Hong Kong, Portugal)*

- I meet the goals that I set for myself.

Hope Scale: *(Ages: 18 and older; used in USA, Canada, UK, Australia, Sweden)*

- Have a satisfactory leisure life.
- Have a satisfactory sex life.
- At the end of my life, be able to say it was good that I lived.

Generalized Expectancy for Success Scale: *(Ages: 18 and older; used in USA, Canada, UK, Australia, Japan)*

- I attain the career goals I set for myself.
- I experience many failures in my life.
- I handle myself well in whatever situation I'm in.
- I discover that the good in life outweighs the bad.

Adult Hope Scale: *(Ages: 18 and older; used in USA, UK, Japan, South Africa, Iran)*

- I have been pretty successful in life.
- I usually find myself worrying about something.
- I meet the goals that I set for myself.

Integrative Hope Scale: *(Ages: 18 and older; used in USA, Austria, Germany, UK, Canada)*

- I feel my life has value and worth.
- I am hopeless about some parts of my life.
- I find myself becoming uninvolved with most things in life.
- There are things I want to do in life.
- I intend to make the most of life.

Items on Faith and Spirituality: *(Often integrated into hope measures; countries and ages vary)*

- I use prayer to give me strength.
- My faith gives me comfort.
- I believe in a higher power.
- My faith helps me stay hopeful.
- I have faith in a higher power that guides me.
- My faith gives me strength.
- I feel that my faith helps me stay hopeful.
- I believe that a higher power supports me in all things.
- My faith helps me find ways to achieve what I want in life.
- I feel that my spiritual beliefs guide me toward positive outcomes.
- My spirituality provides me with different ways to cope with challenges.
- I trust that my spiritual beliefs will help me through difficult times.
- My faith in a higher power gives me the confidence to face life's challenges.
- I believe that my spiritual beliefs have the power to change my life.

Exhibit B

Demographics

Characteristic	Overall N = 4,609[1]	Albania N = 661[1]	Bolivia N = 558[1]	Iraq N = 532[1]	Lesotho N = 513[1]	Senegal N = 592[1]	Sri Lanka N = 632[1]	Thailand N = 562[1]	Uganda N = 559[1]
Sex									
Female	2,373 (51%)	344 (52%)	278 (50%)	245 (46%)	271 (53%)	320 (54%)	334 (53%)	292 (52%)	289 (52%)
Male	2,236 (49%)	317 (48%)	280 (50%)	287 (54%)	242 (47%)	272 (46%)	298 (47%)	270 (48%)	270 (48%)
Age									
Mean	13.9	14.0	13.5	13.4	14.0	13.6	13.9	14.1	15.0
SD	2.4	2.6	2.4	2.1	2.5	2.4	2.0	2.3	2.4
Age groups (strata)									
9-12	1,438 (31%)	210 (32%)	214 (38%)	190 (36%)	167 (33%)	221 (37%)	171 (27%)	161 (29%)	104 (19%)
13-14	1,203 (26%)	144 (22%)	163 (29%)	191 (36%)	98 (19%)	139 (23%)	233 (37%)	134 (24%)	101 (18%)
15-16	1,143 (25%)	156 (24%)	93 (17%)	99 (19%)	151 (29%)	141 (24%)	158 (25%)	177 (31%)	168 (30%)
17-19	825 (18%)	151 (23%)	88 (16%)	52 (9.8%)	97 (19%)	91 (15%)	70 (11%)	90 (16%)	186 (33%)

[1]n (%)

Sample size of test-retest sample by country	
COUNTRY	N
Albania	18
Bolivia	10
Iraq	35
Senegal	53
Sri Lanka	33
Thailand	40
Uganda	39

Exhibit B

Expanded Descriptive Statistics

Table B1.			
Summary of adolescents—overall & by age group—endorsing "Did Not Understand" to each item [N (%)]			
Characteristic	Overall N = 4,6091	13 and under N = 2,0601	14 and over N = 2,5491
SHC1	22 (0.5%)	10 (0.5%)	12 (0.5%)
SHC2	18 (0.4%)	10 (0.5%)	8 (0.3%)
SHC3	25 (0.5%)	12 (0.6%)	13 (0.5%)
SHC4	11 (0.2%)	5 (0.2%)	6 (0.2%)
SHC5	7 (0.2%)	3 (0.1%)	4 (0.2%)
SHJ1	17 (0.4%)	10 (0.5%)	7 (0.3%)
SHJ2	13 (0.3%)	7 (0.3%)	6 (0.2%)
SHJ3	20 (0.4%)	11 (0.5%)	9 (0.4%)
SHJ4	38 (0.8%)	21 (1.0%)	17 (0.7%)
SHJ5	42 (0.9%)	19 (0.9%)	23 (0.9%)
SHJ6	26 (0.6%)	13 (0.6%)	13 (0.5%)
SHP1	35 (0.8%)	19 (0.9%)	16 (0.6%)
SHP2	21 (0.5%)	13 (0.6%)	8 (0.3%)
SHP3	22 (0.5%)	9 (0.4%)	13 (0.5%)
SHP4	36 (0.8%)	26 (1.3%)	10 (0.4%)
SHP5	15 (0.3%)	7 (0.3%)	8 (0.3%)
SHP6	75 (1.6%)	40 (1.9%)	35 (1.4%)
SHR1	20 (0.4%)	9 (0.4%)	11 (0.4%)
SHR2	15 (0.3%)	7 (0.3%)	8 (0.3%)
SHR3	36 (0.8%)	22 (1.1%)	14 (0.5%)
SHR4	18 (0.4%)	9 (0.4%)	9 (0.4%)
SHR5	36 (0.8%)	23 (1.1%)	13 (0.5%)
SHR6	9 (0.2%)	4 (0.2%)	5 (0.2%)
SHW1	19 (0.4%)	12 (0.6%)	7 (0.3%)
SHW2	14 (0.3%)	5 (0.2%)	9 (0.4%)
SHW3	22 (0.5%)	9 (0.4%)	13 (0.5%)
SHW4	31 (0.7%)	20 (1.0%)	11 (0.4%)
SHW5	19 (0.4%)	11 (0.5%)	8 (0.3%)
SHS1	3 (<0.1%)	2 (<0.1%)	1 (<0.1%)
SHS2	9 (0.2%)	4 (0.2%)	5 (0.2%)
SHS3	6 (0.1%)	3 (0.1%)	3 (0.1%)
SHS4	8 (0.2%)	2 (<0.1%)	6 (0.2%)
SHS5	8 (0.2%)	2 (<0.1%)	6 (0.2%)
SHS6	6 (0.1%)	3 (0.1%)	3 (0.1%)

Table B2: Correlation matrix among all piloted items

Item	(SEHC1)	(SEHC2)	(SEHC3)	(SEHC4)	(SEHC5)	(SEHI1)	(SEHI2)	(SEHI3)	(SEHI4)	(SEHI5)	(SEHI6)	(SEHP1)	(SEHP2)	(SEHP3)	(SEHP4)	(SEHP5)	(SEHP6)	(SEHR1)	(SEHR2)	(SEHR3)	(SEHR4)	(SEHR5)	(SEHR6)	(SEHW1)	(SEHW2)	(SEHW3)	(SEHW4)	(SEHW5)	(SEHS1)	(SEHS2)	(SEHS3)	(SEHS4)	(SEHS5)	(SEHS6)
SEHC1																																		
SEHC2	0.53																																	
SEHC3	0.4	0.38																																
SEHC4	0.41	0.45	0.35																															
SEHC5	0.41	0.41	0.45	0.42																														
SEHI1	0.37	0.36	0.31	0.34	0.49																													
SEHI2	0.33	0.34	0.24	0.28	0.36	0.49																												
SEHI3	0.44	0.44	0.35	0.33	0.44	0.32	0.27																											
SEHI4	0.35	0.38	0.28	0.3	0.37	0.44	0.29	0.33																										
SEHI5	0.34	0.44	0.31	0.32	0.39	0.37	0.35		0.4																									
SEHI6	0.3	0.29	0.26	0.27	0.28	0.3	0.3	0.26	0.28																									
SEHP1	0.33	0.34	0.32	0.31	0.47	0.48	0.31	0.34	0.4		0.44																							
SEHP2	0.34	0.34	0.33	0.33	0.36	0.43	0.24	0.3			0.4	0.44																						
SEHP3	0.39	0.4	0.37	0.34	0.44	0.44	0.28	0.35			0.4	0.4	0.4																					
SEHP4	0.39	0.36	0.37	0.35	0.44	0.49	0.3	0.33			0.43	0.43	0.44	0.43																				
SEHP5	0.38	0.41	0.32	0.32	0.39	0.4	0.34	0.43			0.44	0.41	0.44	0.37	0.4																			
SEHP6	0.4	0.36	0.36	0.37	0.39	0.47	0.27	0.29			0.41	0.27	0.36	0.52	0.48	0.4																		
SEHR1	0.43	0.44	0.34	0.36	0.45	0.42	0.38	0.41	0.39	0.37	0.41	0.41	0.41	0.43	0.43	0.44	0.41																	
SEHR2	0.39	0.38	0.38	0.38	0.42	0.42	0.35	0.35	0.38	0.42	0.5	0.44	0.36	0.46	0.47	0.44	0.49	0.5																
SEHR3	0.33	0.32	0.3	0.3	0.33	0.41	0.22	0.27	0.31	0.34	0.38	0.38	0.41	0.38	0.4	0.32	0.38	0.38	0.38															
SEHR4	0.46	0.44	0.38	0.35	0.42	0.44	0.37	0.42	0.43	0.37	0.37	0.41	0.43	0.44	0.47	0.45	0.52	0.52	0.52	0.38														
SEHR5	0.29	0.32	0.23	0.25	0.3	0.28	0.23	0.23	0.27	0.24	0.28	0.28	0.27	0.3	0.29	0.32	0.28	0.38	0.33	0.26	0.34													
SEHR6	0.32	0.3	0.27	0.27	0.32	0.36	0.21	0.24	0.36	0.3	0.2	0.34	0.39	0.3	0.37	0.27	0.37	0.28	0.32	0.37	0.31	0.16												
SEHW1	0.35	0.37	0.34	0.36	0.45	0.44	0.31	0.35	0.31	0.39	0.28	0.38	0.48	0.4	0.44	0.4	0.41	0.43	0.42	0.32	0.41	0.37	0.37											
SEHW2	0.47	0.47	0.39	0.35	0.4	0.38	0.34	0.43	0.36	0.36		0.39	0.4	0.42	0.41	0.5	0.5	0.5	0.48	0.36	0.56	0.45	0.3	0.39										
SEHW3	0.39	0.4	0.36	0.37	0.41	0.39	0.32	0.4	0.36	0.41		0.4	0.36	0.41	0.44	0.38	0.44	0.42	0.42	0.32	0.43	0.5	0.28	0.37	0.45									
SEHW4	0.46	0.46	0.4	0.34	0.39	0.4	0.36	0.41	0.31	0.43		0.38	0.41	0.46	0.44	0.43	0.5	0.5	0.36	0.4	0.52	0.5	0.32	0.39	0.52	0.5								
SEHW5	0.3	0.33	0.4	0.32	0.44	0.38	0.26	0.33	0.36	0.35		0.41	0.36	0.4	0.43	0.33	0.4	0.37	0.39	0.31	0.43	0.41	0.24	0.37	0.4	0.41	0.41							
SEHS1	0.33	0.33	0.28	0.21	0.4	0.41	0.37	0.38	0.36	0.38	0.47	0.34	0.33	0.44	0.4	0.34	0.38	0.37	0.33	0.42	0.31	0.26	0.3	0.31	0.34	0.33	0.33	0.26						
SEHS2	0.34	0.25	0.24	0.23	0.43	0.48	0.37	0.25	0.36	0.4	0.4	0.34	0.32	0.32	0.39	0.33	0.4	0.35	0.3	0.36	0.24	0.31	0.27	0.3	0.37	0.26	0.26	0.25	0.63					
SEHS3	0.3	0.33	0.28	0.25	0.38	0.45	0.38	0.27	0.39	0.4	0.4	0.34	0.34	0.34	0.36	0.29	0.36	0.35	0.35	0.38	0.4	0.28	0.3	0.42	0.4	0.32	0.3	0.31	0.63	0.66				
SEHS4	0.23	0.29	0.24	0.22	0.38	0.44	0.4	0.25	0.36	0.34	0.34	0.34	0.3	0.33	0.31	0.26	0.34	0.3	0.32	0.35	0.38	0.25	0.27	0.38	0.3	0.3	0.24	0.29	0.57	0.55	0.59			
SEHS5	0.23	0.21	0.22	0.21	0.22	0.36	0.29	0.3	0.27	0.29	0.3	0.28	0.2	0.28	0.32	0.29	0.27	0.28	0.25	0.33	0.27	0.24	0.23	0.23	0.27	0.24	0.22	0.47	0.49	0.52	0.5	0.47		
SEHS6	0.36	0.26	0.23	0.18	0.25	0.33	0.28	0.28	0.32	0.33	0.33	0.28	0.23	0.31			0.32	0.24	0.23	0.29	0.29	0.27	0.27	0.24	0.28	0.27	0.22		0.48	0.43	0.48	0.45	0.4	
Avg. Cor.	0.37	0.37	0.32	0.32	0.37	0.4	0.32	0.34	0.35	0.35	0.31	0.37	0.35	0.38	0.39	0.37	0.38	0.39	0.39	0.34	0.41	0.28	0.3	0.36	0.39	0.37	0.39	0.34	0.38	0.36	0.38	0.35	0.3	0.3

Exhibit C

Expanded Results of Iterative EFA Models

The results presented next is the traditional R output format for EFA estimated using lavaan.

```
Iteration: 1

Parallel analysis suggests that the number of factors =  9  and the number of components =  NA

EFA Summary:
This is lavaan 0.6-19 -- running exploratory factor analysis

  Estimator                                  DWLS
  Rotation method                   PROMAX OBLIQUE
  Promax kappa                                  4
  Rotation algorithm (rstarts)          PROMAX (0)
  Standardized metric                        TRUE
  Row weights                              Kaiser

                                       Used      Total
  Number of observations               2261       2264
  Number of missing patterns            241

Overview models:
              chisq  df pvalue   cfi rmsea
  nfactors = 1 4167.482 527  0.000 0.987 0.055
  nfactors = 2 2292.374 494  0.000 0.994 0.040
  nfactors = 3 1437.515 462  0.000 0.997 0.031
  nfactors = 4 1164.175 431  0.000 0.997 0.027
  nfactors = 5  925.457 401  0.000 0.998 0.024
  nfactors = 6  695.225 372  0.000 0.999 0.020
  nfactors = 7  515.565 344  0.000 0.999 0.015
  nfactors = 8  407.090 317  0.000 1.000 0.011
  nfactors = 9  315.208 291  0.158 1.000 0.006

Eigenvalues correlation matrix:

    ev1      ev2      ev3      ev4      ev5      ev6      ev7      ev8
  15.412    1.996    1.302    0.973    0.894    0.865    0.848    0.739
    ev9     ev10     ev11     ev12     ev13     ev14     ev15     ev16
   0.719    0.672    0.645    0.585    0.563    0.550    0.533    0.524
   ev17     ev18     ev19     ev20     ev21     ev22     ev23     ev24
   0.491    0.485    0.455    0.436    0.421    0.408    0.391    0.375
   ev25     ev26     ev27     ev28     ev29     ev30     ev31     ev32
   0.354    0.338    0.334    0.322    0.309    0.273    0.259    0.213
   ev33     ev34
   0.176    0.138

Number of factors:  1

Standardized loadings:

        f1      unique.var   communalities
SHC1  0.672        0.548          0.452
SHC2  0.667        0.555          0.445
SHC3  0.603        0.637          0.363
SHC4  0.588        0.654          0.346
SHC5  0.722        0.478          0.522
SHJ1  0.706        0.501          0.499
SHJ2  0.598        0.642          0.358
SHJ3  0.625        0.610          0.390
SHJ4  0.630        0.603          0.397
SHJ5  0.599        0.642          0.358
SHJ6  0.618        0.618          0.382
SHP1  0.694        0.518          0.482
```

```
SHP2  0.613          0.624          0.376
SHP3  0.700          0.510          0.490
SHP4  0.693          0.519          0.481
SHP5  0.660          0.564          0.436
SHP6  0.691          0.523          0.477
SHR1  0.733          0.462          0.538
SHR2  0.711          0.495          0.505
SHR3  0.603          0.636          0.364
SHR4  0.752          0.435          0.565
SHR5  0.541          0.707          0.293
SHR6  0.520          0.729          0.271
SHW1  0.650          0.578          0.422
SHW2  0.721          0.480          0.520
SHW3  0.665          0.558          0.442
SHW4  0.723          0.478          0.522
SHW5  0.624          0.610          0.390
SHS1  0.810          0.344          0.656
SHS2  0.781          0.390          0.610
SHS3  0.803          0.355          0.645
SHS4  0.716          0.488          0.512
SHS5  0.661          0.563          0.437
SHS6  0.633          0.600          0.400


                          f1
Sum of squared loadings 15.347
Proportion of total     1.000
Proportion var          0.451
Cumulative var          0.451

Number of factors:  2

Standardized loadings:

         f1     f2     unique.var    communalities
SHC1  0.759      .        0.516          0.484
SHC2  0.838 -0.178        0.502          0.498
SHC3  0.746 -0.147        0.596          0.404
SHC4  0.650      .        0.632          0.368
SHC5  0.344  0.433        0.459          0.541
SHJ1  0.240  0.528        0.463          0.537
SHJ2  0.184  0.468        0.611          0.389
SHJ3  0.696      .        0.583          0.417
SHJ4  0.364  0.309        0.594          0.406
SHJ5  0.283  0.363        0.626          0.374
SHJ6  0.157  0.520        0.576          0.424
SHP1  0.314  0.435        0.496          0.504
SHP2  0.410  0.238        0.620          0.380
SHP3  0.511  0.226        0.506          0.494
SHP4  0.442  0.295        0.512          0.488
SHP5  0.468  0.229        0.559          0.441
SHP6  0.427  0.308        0.514          0.486
SHR1  0.782               0.433          0.567
SHR2  0.671      .        0.482          0.518
SHR3  0.362  0.281        0.630          0.370
SHR4  0.724               0.419          0.581
SHR5  0.544               0.698          0.302
SHR6  0.245  0.317        0.717          0.283
SHW1  0.430  0.258        0.573          0.427
SHW2  0.930 -0.219        0.409          0.591
SHW3  0.727      .        0.531          0.469
SHW4  0.893 -0.177        0.421          0.579
SHW5  0.633               0.595          0.405
SHS1         0.854        0.265          0.735
SHS2 -0.228  1.040        0.242          0.758
SHS3      .  0.941        0.250          0.750
SHS4 -0.101  0.862        0.386          0.614
SHS5 -0.211  0.910        0.431          0.569
SHS6         0.698        0.532          0.468
```

```
                          f1    f2  total
Sum of sq (obliq) loadings 9.517 7.107 16.624
Proportion of total        0.572 0.428  1.000
Proportion var             0.280 0.209  0.489
Cumulative var             0.280 0.489  0.489


Factor correlations:

      f1     f2
f1  1.000
f2  0.791  1.000


Number of factors:  3

Standardized loadings:

        f1     f2     f3     unique.var   communalities
SHC1  0.707                     0.498          0.502
SHC2  0.775                     0.486          0.514
SHC3  0.594  0.170 -0.141       0.594          0.406
SHC4  0.519  0.152              0.633          0.367
SHC5  0.246  0.252  0.331       0.457          0.543
SHJ1      .  0.655  0.225       0.402          0.598
SHJ2  0.421 -0.372  0.653       0.428          0.572
SHJ3  0.690 -0.101      .       0.550          0.450
SHJ4  0.242  0.264  0.211       0.592          0.408
SHJ5  0.219  0.178  0.293       0.623          0.377
SHJ6  0.301 -0.171  0.599       0.485          0.515
SHP1      .  0.505  0.206       0.473          0.527
SHP2  0.129  0.590              0.560          0.440
SHP3  0.295  0.416      .       0.492          0.508
SHP4  0.199  0.500      .       0.486          0.514
SHP5  0.421      .  0.239       0.548          0.452
SHP6  0.166  0.533      .       0.481          0.519
SHR1  0.691          .          0.424          0.576
SHR2  0.482  0.306              0.478          0.522
SHR3      .  0.584              0.574          0.426
SHR4  0.628  0.103      .       0.412          0.588
SHR5  0.476          .          0.693          0.307
SHR6         0.560              0.663          0.337
SHW1  0.162  0.552              0.529          0.471
SHW2  0.785  0.108 -0.152       0.408          0.592
SHW3  0.571  0.199      .       0.530          0.470
SHW4  0.743  0.134 -0.129       0.420          0.580
SHW5  0.442  0.303      .       0.588          0.412
SHS1         0.193  0.700       0.260          0.740
SHS2 -0.191  0.238  0.833       0.240          0.760
SHS3         0.178  0.778       0.244          0.756
SHS4      .  0.234  0.685       0.383          0.617
SHS5 -0.206  0.251  0.715       0.429          0.571
SHS6         0.132  0.586       0.524          0.476


                          f1    f2    f3  total
Sum of sq (obliq) loadings 7.101 5.159 5.154 17.414
Proportion of total        0.408 0.296 0.296  1.000
Proportion var             0.209 0.152 0.152  0.512
Cumulative var             0.209 0.361 0.512  0.512


Factor correlations:

      f1     f2     f3
f1  1.000
f2  0.736  1.000
f3  0.681  0.646  1.000


Number of factors:  4

Standardized loadings:
```

```
         f1      f2      f3      f4      unique.var    communalities
SHC1   0.518           0.265                0.451          0.549
SHC2   0.655           0.234       .        0.386          0.614
SHC3   0.190   0.140   0.476  -0.143        0.595          0.405
SHC4   0.374   0.187   0.210       .        0.603          0.397
SHC5   0.171   0.256   0.111   0.324        0.448          0.552
SHJ1           0.645       .    0.211        0.392          0.608
SHJ2       .  -0.385   0.331   0.676        0.422          0.578
SHJ3   0.433       .    0.323       .        0.528          0.472
SHJ4   0.210   0.276       .    0.197        0.577          0.423
SHJ5       .   0.162   0.179   0.294        0.623          0.377
SHJ6          -0.190   0.275   0.619        0.480          0.520
SHP1           0.461   0.168   0.209        0.474          0.526
SHP2           0.550   0.179                0.560          0.440
SHP3           0.348   0.393       .        0.488          0.512
SHP4  -0.106   0.429   0.352       .        0.478          0.522
SHP5       .           0.375   0.248        0.547          0.453
SHP6       .   0.474   0.277       .        0.479          0.521
SHR1       .           0.682                0.412          0.588
SHR2  -0.209   0.188   0.749                0.411          0.589
SHR3       .   0.532   0.194                0.575          0.425
SHR4       .           0.629   0.104        0.401          0.599
SHR5           0.521       .                0.680          0.320
SHR6   0.213   0.620  -0.195                0.603          0.397
SHW1           0.503   0.237                0.529          0.471
SHW2   0.167           0.706  -0.140        0.405          0.595
SHW3   0.132   0.152   0.510       .        0.530          0.470
SHW4   0.110       .    0.721  -0.115        0.411          0.589
SHW5       .   0.221   0.553       .        0.574          0.426
SHS1       .   0.167       .    0.719        0.257          0.743
SHS2  -0.118   0.225       .    0.848        0.239          0.761
SHS3       .   0.193  -0.121   0.779        0.239          0.761
SHS4           0.228       .    0.692        0.384          0.616
SHS5  -0.128   0.236  -0.100   0.729        0.427          0.573
SHS6   0.184   0.171  -0.169   0.577        0.502          0.498
```

```
                              f3     f4     f2     f1    total
Sum of sq (obliq) loadings  6.111  5.232  4.563  1.985  17.890
Proportion of total         0.342  0.292  0.255  0.111   1.000
Proportion var              0.180  0.154  0.134  0.058   0.526
Cumulative var              0.180  0.334  0.468  0.526   0.526
```

Factor correlations:

```
        f1      f2      f3      f4
f1   1.000
f2   0.590   1.000
f3   0.696   0.711   1.000
f4   0.594   0.641   0.677   1.000
```

Number of factors: 5

Standardized loadings:

```
         f1      f2      f3      f4      f5      unique.var    communalities
SHC1   0.568       .    0.114   0.305                0.416          0.584
SHC2   0.640                    0.254       .        0.399          0.601
SHC3   0.198   0.153           0.465  -0.151         0.593          0.407
SHC4   0.370   0.239       .    0.177  -0.101        0.593          0.407
SHC5   0.165   0.371  -0.160            0.291        0.410          0.590
SHJ1           0.639       .        .    0.219        0.393          0.607
SHJ2       .  -0.329  -0.145   0.319   0.650          0.417          0.583
SHJ3   0.441          -0.174   0.272                0.501          0.499
SHJ4   0.215   0.249       .        .    0.206        0.576          0.424
SHJ5       .   0.124       .    0.197   0.307        0.619          0.381
SHJ6          -0.167       .    0.281   0.606        0.480          0.520
SHP1       .   0.634  -0.159       .    0.163        0.400          0.600
SHP2           0.572       .    0.162       .        0.558          0.442
SHP3           0.208   0.302   0.462   0.128        0.444          0.556
```

	f1	f2	f3	f4	f5	unique.var	communalities
SHP4	-0.103	0.434	.	0.343	.	0.478	0.522
SHP5	.	0.122	.	0.346	0.220	0.532	0.468
SHP6		0.318	0.390	0.363	0.142	0.392	0.608
SHR1	.			0.679		0.412	0.588
SHR2	-0.197	0.175	0.139	0.757		0.412	0.588
SHR3	.	0.502	0.144	0.203		0.576	0.424
SHR4	.		.	0.646	0.110	0.400	0.600
SHR5				0.506	.	0.677	0.323
SHR6	0.216	0.567	0.134	-0.179		0.601	0.399
SHW1	.	0.630	.	0.176		0.485	0.515
SHW2	0.178		.	0.722	-0.134	0.405	0.595
SHW3	0.140	0.149	.	0.509	.	0.530	0.470
SHW4	0.130		0.181	0.777	.	0.394	0.606
SHW5	.	0.293		0.517	.	0.558	0.442
SHS1	.	.	0.168	0.157	0.745	0.236	0.764
SHS2	-0.126	0.271	.	-0.142	0.850	0.223	0.777
SHS3	.	0.138	.	.	0.787	0.236	0.764
SHS4		0.175	.	.	0.701	0.381	0.619
SHS5	-0.112	0.238		-0.118	0.728	0.428	0.572
SHS6	0.211	.	0.144	-0.107	0.601	0.478	0.522

	f4	f5	f2	f1	f3	total
Sum of sq (obliq) loadings	6.096	5.249	4.493	2.062	0.463	18.364
Proportion of total	0.332	0.286	0.245	0.112	0.025	1.000
Proportion var	0.179	0.154	0.132	0.061	0.014	0.540
Cumulative var	0.179	0.334	0.466	0.526	0.540	0.540

Factor correlations:

	f1	f2	f3	f4	f5
f1	1.000				
f2	0.628	1.000			
f3	0.006	-0.012	1.000		
f4	0.681	0.734	-0.184	1.000	
f5	0.595	0.659	-0.055	0.670	1.000

Number of factors: 6

Standardized loadings:

	f1	f2	f3	f4	f5	f6	unique.var	communalities
SHC1	0.648		.		0.162		0.420	0.580
SHC2	0.748		.		.	-0.127	0.388	0.612
SHC3	0.239	.	0.155		0.451	.	0.583	0.417
SHC4	0.428		0.156	0.212	.	.	0.591	0.409
SHC5	0.197	.	0.452	0.110		0.382	0.324	0.676
SHJ1		-0.123	0.122	0.514		0.300	0.393	0.607
SHJ2	0.123	0.452		-0.231	.	0.484	0.425	0.575
SHJ3	0.514		0.260	-0.105	0.162		0.488	0.512
SHJ4	0.245			0.222		0.222	0.576	0.424
SHJ5	0.101	.		.	0.167	0.311	0.619	0.381
SHJ6		0.518	-0.145			0.427	0.412	0.588
SHP1	.	0.120	0.207	0.599		0.120	0.400	0.600
SHP2				0.613	0.137	.	0.540	0.460
SHP3		-0.179			0.591	0.262	0.410	0.590
SHP4	-0.101			0.351	0.375	0.125	0.478	0.522
SHP5	0.119	0.304		0.234	0.153	.	0.510	0.490
SHP6		-0.133	-0.137	0.258	0.443	0.232	0.401	0.599
SHR1	0.157	0.150			0.562		0.414	0.586
SHR2	-0.154	0.150	.	0.201	0.688		0.414	0.586
SHR3				0.513	0.213		0.567	0.433
SHR4	0.134	0.226	.	.	0.500		0.387	0.613
SHR5		.	0.101	.	0.469		0.673	0.327
SHR6	0.235	-0.104	.	0.633	-0.212	.	0.573	0.427
SHW1		0.111	.	0.703	.	-0.116	0.450	0.550
SHW2	0.246	.		0.618	-0.160		0.404	0.596
SHW3	0.183		0.115	0.496			0.522	0.478
SHW4	0.198	.	.	0.683	-0.112		0.392	0.608
SHW5	-0.105	-0.162	0.366	0.692			0.446	0.554

```
SHS1       0.194      .      .  0.117  0.724          0.233          0.767
SHS2 -0.152 0.182  0.159  0.140 -0.111  0.837         0.224          0.776
SHS3      . 0.114      .                0.801         0.237          0.763
SHS4            .                       0.746         0.373          0.627
SHS5 -0.155           0.190             0.795         0.401          0.599
SHS6  0.209                          .  0.632         0.481          0.519


                            f5     f6     f4     f1     f2     f3   total
Sum of sq (obliq) loadings 5.270  5.130  3.623  2.691  1.220  0.917 18.851
Proportion of total        0.280  0.272  0.192  0.143  0.065  0.049  1.000
Proportion var             0.155  0.151  0.107  0.079  0.036  0.027  0.554
Cumulative var             0.155  0.306  0.412  0.492  0.527  0.554  0.554


Factor correlations:

      f1     f2     f3     f4     f5     f6
f1  1.000
f2  0.351  1.000
f3  0.216  0.442  1.000
f4  0.659  0.283  0.241  1.000
f5  0.749  0.361  0.279  0.757  1.000
f6  0.616  0.238  0.146  0.682  0.662  1.000


Number of factors:  7

Standardized loadings:

        f1     f2     f3     f4     f5     f6     f7    unique.var
SHC1  0.489                 .      .      .  0.361                0.424
SHC2  0.592      .                        0.302 -0.133           0.390
SHC3  0.221          0.145            0.247  0.290 -0.138         0.559
SHC4  0.476  0.126         0.223  0.240      . -0.190            0.502
SHC5  0.193      .  0.125  0.481      .  0.370                   0.314
SHJ1        -0.153      .  0.506      .              0.324        0.387
SHJ2  0.123  0.509      . -0.220      .  0.110  0.399            0.398
SHJ3  0.344      . -0.222 -0.101  0.203  0.476      .            0.455
SHJ4  0.134 -0.125         0.213      .  0.276  0.292            0.525
SHJ5  0.138  0.157  0.168      .      .              0.253        0.597
SHJ6      .  0.558             . -0.151              0.333        0.384
SHP1      .        -0.152  0.641  0.149              0.137        0.397
SHP2              .        0.612         0.117      .            0.542
SHP3        -0.104  0.397         0.109  0.286  0.238            0.408
SHP4      .         0.146  0.373  0.116  0.191  0.113            0.478
SHP5         0.181 -0.178  0.282      .  0.385  0.107            0.491
SHP6         0.450  0.230         0.117  0.191                   0.387
SHR1      .      .                   .  0.623                   0.412
SHR2 -0.122  0.203  0.234  0.243         0.424      .            0.386
SHR3                0.144  0.507         0.128                   0.568
SHR4         0.109         0.123 -0.124  0.658                   0.367
SHR5      .                       .  0.574      .               0.647
SHR6  0.229 -0.101  0.105  0.581 -0.106 -0.160      .            0.576
SHW1      .      .  0.726      .              . -0.113           0.452
SHW2      .                       0.766 -0.116                   0.384
SHW3  0.102      .      .      .  0.143  0.482                   0.520
SHW4  0.111      .  0.199              0.645 -0.115             0.394
SHW5 -0.101 -0.128  0.103         0.454  0.410                   0.451
SHS1         0.179  0.148              .      .  0.691           0.234
SHS2 -0.113  0.174         0.154  0.129 -0.158  0.808           0.225
SHS3         0.111      .                       0.779           0.237
SHS4      .             .                    .  0.757           0.356
SHS5 -0.139                       0.184      .  0.781           0.400
SHS6  0.138             .              .        0.628           0.476


                            f6     f7     f4     f1     f5     f3     f2   total
Sum of sq (obliq) loadings 5.048  4.977  3.740  1.825  1.276  1.220  1.193 19.278
Proportion of total        0.262  0.258  0.194  0.095  0.066  0.063  0.062  1.000
Proportion var             0.148  0.146  0.110  0.054  0.038  0.036  0.035  0.567
Cumulative var             0.148  0.295  0.405  0.459  0.496  0.532  0.567  0.567
```

```
Factor correlations:

       f1     f2     f3     f4     f5     f6     f7
f1  1.000
f2  0.310  1.000
f3  0.370  0.308  1.000
f4  0.582  0.417  0.499  1.000
f5  0.337  0.433  0.344  0.494  1.000
f6  0.627  0.481  0.448  0.729  0.524  1.000
f7  0.555  0.368  0.341  0.664  0.349  0.641  1.000

Number of factors:  8

Standardized loadings:

         f1     f2     f3     f4     f5     f6     f7     f8     unique.var
SHC1  0.489                            .            0.341            0.422
SHC2  0.588     .      .                            0.246 -0.136     0.392
SHC3  0.207            .   0.256  0.104             0.351 -0.127     0.562
SHC4  0.482  0.112         0.329  0.139  0.126     .     -0.243     0.477
SHC5  0.186               0.545     .      .            0.372       0.313
SHJ1        -0.164        .   0.126  0.131  0.397            0.302   0.388
SHJ2  0.103  0.552            .  -0.219 -0.119  0.158  0.469         0.349
SHJ3  0.360     .   0.146  0.232 -0.201 -0.136  0.386     .         0.460
SHJ4  0.162 -0.150  0.193     .      .   0.118  0.160  0.252        0.523
SHJ5  0.124  0.157         .   0.109  0.161     .            0.248   0.599
SHJ6     .   0.480  0.209 -0.127                          0.317     0.399
SHP1     .          0.253  0.195     .   0.483            0.116     0.399
SHP2                   .        -0.111  0.682  0.188               0.508
SHP3            .      .      .   0.438     .   0.315  0.185        0.417
SHP4     .            .   0.124  0.193  0.257  0.189     .          0.475
SHP5     .      .   0.625     .      .            0.163            0.378
SHP6            .            .   0.757            .      .          0.296
SHR1     .      .   0.120                         0.582            0.413
SHR2 -0.124  0.173     .        0.246  0.161  0.447 -0.118        0.386
SHR3            -0.113               0.575  0.212  0.109           0.539
SHR4     .   0.247 -0.142            .            0.564            0.367
SHR5            0.117     .      .                0.529     .       0.650
SHR6  0.218     .      .      .      .   0.597 -0.133  0.111        0.567
SHW1     .   0.125  0.105     .   0.654     .      .               0.452
SHW2  0.100            .            .      .   0.751     .          0.381
SHW3     .            .   0.132         0.105  0.527               0.513
SHW4     .      . -0.134            0.117  0.733                   0.363
SHW5 -0.108     .      .   0.442            0.500                  0.452
SHS1     .   0.176            .   0.108     .      .   0.698        0.233
SHS2 -0.109  0.160     .   0.158            .  -0.173  0.797        0.225
SHS3        0.137 -0.114               0.110            0.818       0.223
SHS4     .            .            .      .   0.127  0.787          0.346
SHS5 -0.133            0.201     .      .      .   0.762           0.395
SHS6  0.146               .   0.137     .            0.607         0.472

                             f8    f7    f6    f1    f4    f5    f3    f2 total
Sum of sq (obliq) loadings 4.930 4.893 3.027 1.821 1.503 1.371 1.075 1.046 19.666
Proportion of total        0.251 0.249 0.154 0.093 0.076 0.070 0.055 0.053 1.000
Proportion var             0.145 0.144 0.089 0.054 0.044 0.040 0.032 0.031 0.578
Cumulative var             0.145 0.289 0.378 0.431 0.476 0.516 0.548 0.578 0.578

Factor correlations:

       f1     f2     f3     f4     f5     f6     f7     f8
f1  1.000
f2  0.244  1.000
f3  0.464  0.313  1.000
f4  0.330  0.362  0.511  1.000
f5  0.461  0.398  0.436  0.523  1.000
f6  0.533  0.345  0.555  0.559  0.724  1.000
f7  0.611  0.394  0.582  0.578  0.660  0.693  1.000
f8  0.549  0.280  0.604  0.428  0.572  0.622  0.620  1.000
```

```
Number of factors:  9

Standardized loadings:

         f1     f2     f3     f4     f5     f6     f7     f8     f9
SHC1  0.256                             0.537    .            0.214
SHC2  0.451                             0.543 -0.191 -0.120      .
SHC3  0.198     .                 .     0.185  0.381 -0.176  0.140
SHC4  0.659     .            0.140 0.120              -0.219      .
SHC5  0.409           .    .    .              0.201  0.428      .
SHJ1     . -0.147        . 0.132 0.412    .         0.310      .
SHJ2  0.127  0.496        -0.209 -0.125 0.188        0.507
SHJ3  0.240     . 0.148 -0.202 -0.133 0.516  0.134      . 0.100
SHJ4       -0.136 0.177       . 0.124 0.297 -0.102 0.252 0.125
SHJ5  0.187  0.137        . 0.161    .              0.273
SHJ6        0.518 0.227                    .         0.315 0.110
SHP1        .  0.240       . 0.501    .         . 0.142 -0.112
SHP2                 -0.109 0.715 0.123
SHP3     . -0.119       . 0.468    . 0.274       . 0.207
SHP4           0.117 0.189 0.282       0.191       .
SHP5        0.126 0.611              0.228           .      .
SHP6     .    .       . 0.726                    . 0.111
SHR1     .               . 0.742 -0.127          -0.249
SHR2        0.163       . 0.264 0.185 0.306       . -0.110 -0.166
SHR3     .    -0.127          0.605 0.177          0.121      .
SHR4 -0.130     . 0.245       .       . 0.571                   .
SHR5     .    .    .                  0.573          0.121 -0.161
SHR6  0.127     .    .          0.608          -0.147 0.105 0.135
SHW1     .    . 0.121       . 0.676                 . -0.103
SHW2 -0.111                  0.110 0.735 0.147 -0.119      .
SHW3     .    .             0.124 0.495 0.153
SHW4        . -0.139       . 0.140 0.722             .
SHW5     .                        0.118 0.780
SHS1     . 0.154          0.116    . 0.138 -0.125 0.731      .
SHS2        0.131    .             . -0.164       . 0.858
SHS3     . 0.136 -0.103       . 0.121             0.841 0.171
SHS4 -0.158             .          . 0.110          0.805 0.105
SHS5     .                   .    . -0.107       . 0.806
SHS6     .    . 0.103 0.111       .                . 0.586 0.409

                               f8    f6    f5    f1    f4    f7    f3    f2    f9 total
Sum of sq (obliq) loadings  5.170 4.982 3.255 1.578 1.404 1.193 0.997 0.976 0.499 20.054
Proportion of total         0.258 0.248 0.162 0.079 0.070 0.059 0.050 0.049 0.025  1.000
Proportion var              0.152 0.147 0.096 0.046 0.041 0.035 0.029 0.029 0.015  0.590
Cumulative var              0.152 0.299 0.394 0.441 0.482 0.517 0.546 0.575 0.590  0.590

Factor correlations:

        f1     f2     f3     f4     f5     f6     f7     f8     f9
f1  1.000
f2  0.233  1.000
f3  0.519  0.170  1.000
f4  0.438  0.363  0.396  1.000
f5  0.593  0.306  0.530  0.714  1.000
f6  0.659  0.398  0.532  0.649  0.714  1.000
f7  0.577  0.258  0.495  0.552  0.612  0.657  1.000
f8  0.581  0.269  0.624  0.574  0.648  0.639  0.560  1.000
f9  0.113  0.009 -0.076 -0.002  0.086  0.120 -0.134 -0.015  1.000

Iteration: 2

Parallel analysis suggests that the number of factors =  7  and the number of components =  NA

EFA Summary:
This is lavaan 0.6-19 -- running exploratory factor analysis

  Estimator                                         DWLS
  Rotation method                          PROMAX OBLIQUE
  Promax kappa                                         4
```

```
   Rotation algorithm (rstarts)          PROMAX (0)
   Standardized metric                      TRUE
   Row weights                            Kaiser

                                         Used      Total
   Number of observations                2261      2264
   Number of missing patterns             170

Overview models:
               chisq  df pvalue  cfi rmsea
 nfactors = 1 1996.885 230  0.000 0.986 0.058
 nfactors = 2  844.193 208  0.000 0.995 0.037
 nfactors = 3  515.044 187  0.000 0.997 0.028
 nfactors = 4  333.184 167  0.000 0.999 0.021
 nfactors = 5  236.369 148  0.000 0.999 0.016
 nfactors = 6  162.708 130  0.027 1.000 0.011
 nfactors = 7  102.855 113  0.743 1.000 0.000

Eigenvalues correlation matrix:

     ev1      ev2      ev3      ev4      ev5      ev6      ev7      ev8
  10.686    1.611    1.095    0.819    0.781    0.699    0.665    0.654
     ev9     ev10     ev11     ev12     ev13     ev14     ev15     ev16
   0.574    0.543    0.531    0.509    0.472    0.451    0.427    0.399
    ev17     ev18     ev19     ev20     ev21     ev22     ev23
   0.374    0.362    0.349    0.329    0.263    0.205    0.203

Number of factors:  1

Standardized loadings:

        f1      unique.var   communalities
SHC1  0.667         0.555           0.445
SHC4  0.565         0.680           0.320
SHJ3  0.619         0.617           0.383
SHP1  0.685         0.531           0.469
SHP2  0.620         0.616           0.384
SHP3  0.699         0.512           0.488
SHP5  0.652         0.574           0.426
SHP6  0.685         0.531           0.469
SHR1  0.739         0.453           0.547
SHR3  0.612         0.625           0.375
SHR4  0.753         0.433           0.567
SHR5  0.559         0.688           0.312
SHR6  0.515         0.735           0.265
SHW1  0.651         0.576           0.424
SHW2  0.733         0.463           0.537
SHW3  0.675         0.545           0.455
SHW4  0.729         0.468           0.532
SHW5  0.617         0.619           0.381
SHS1  0.809         0.346           0.654
SHS2  0.776         0.398           0.602
SHS3  0.800         0.360           0.640
SHS4  0.716         0.487           0.513
SHS5  0.653         0.573           0.427

                        f1
Sum of squared loadings 10.612
Proportion of total      1.000
Proportion var           0.461
Cumulative var           0.461

Number of factors:  2

Standardized loadings:

        f1     f2      unique.var   communalities
SHC1  0.692               0.535           0.465
SHC4  0.583               0.667           0.333
```

```
SHJ3   0.737 -0.120          0.579          0.421
SHP1   0.322  0.428          0.502          0.498
SHP2   0.330  0.345          0.597          0.403
SHP3   0.466  0.281          0.502          0.498
SHP5   0.526  0.160          0.569          0.431
SHP6   0.377  0.367          0.511          0.489
SHR1   0.798                 0.422          0.578
SHR3   0.277  0.396          0.598          0.402
SHR4   0.751                 0.413          0.587
SHR5   0.532                 0.681          0.319
SHR6   0.176  0.398          0.703          0.297
SHW1   0.375  0.329          0.561          0.439
SHW2   0.912 -0.191          0.399          0.601
SHW3   0.735      .          0.517          0.483
SHW4   0.873 -0.151          0.417          0.583
SHW5   0.614                 0.607          0.393
SHS1      .   0.807          0.273          0.727
SHS2  -0.181  0.991          0.260          0.740
SHS3          0.897          0.260          0.740
SHS4      .   0.823          0.389          0.611
SHS5  -0.146  0.844          0.456          0.544

                              f1    f2   total
Sum of sq (obliq) loadings 6.610 4.972 11.582
Proportion of total        0.571 0.429  1.000
Proportion var             0.287 0.216  0.504
Cumulative var             0.287 0.504  0.504


Factor correlations:

       f1     f2
f1  1.000
f2  0.768  1.000


Number of factors:  3


Standardized loadings:

         f1     f2     f3     unique.var    communalities
SHC1          0.640                0.530          0.470
SHC4   0.268  0.442 -0.126        0.655          0.345
SHJ3      .   0.730                0.564          0.436
SHP1   0.510      .   0.194        0.476          0.524
SHP2   0.676      .                0.529          0.471
SHP3   0.222  0.340  0.218        0.499          0.501
SHP5      .   0.454  0.185        0.562          0.438
SHP6   0.371  0.193  0.212        0.502          0.498
SHR1          0.761      .        0.409          0.591
SHR3   0.561             .        0.565          0.435
SHR4          0.705  0.105        0.402          0.598
SHR5  -0.119  0.541  0.180        0.655          0.345
SHR6   0.656 -0.100                0.638          0.362
SHW1   0.747             .        0.463          0.537
SHW2          0.829 -0.136        0.398          0.602
SHW3   0.126  0.637      .        0.516          0.484
SHW4   0.114  0.768 -0.143        0.415          0.585
SHW5   0.163  0.504                0.607          0.393
SHS1      .      .   0.731        0.262          0.738
SHS2      . -0.118  0.890        0.249          0.751
SHS3                 0.820        0.248          0.752
SHS4      .   0.784                0.364          0.636
SHS5                 0.803        0.431          0.569


                              f2    f3    f1   total
Sum of sq (obliq) loadings 5.315 3.803 2.943 12.060
Proportion of total        0.441 0.315 0.244  1.000
Proportion var             0.231 0.165 0.128  0.524
Cumulative var             0.231 0.396 0.524  0.524
```

```
Factor correlations:

        f1      f2      f3
f1  1.000
f2  0.782  1.000
f3  0.697  0.693  1.000

Number of factors:  4

Standardized loadings:

          f1      f2      f3      f4       unique.var    communalities
SHC1   0.127  0.618                          0.527          0.473
SHC4      .   0.425  0.246 -0.118            0.656          0.344
SHJ3  -0.119  0.724                          0.540          0.460
SHP1  -0.150      .   0.621  0.211           0.414          0.586
SHP2   0.105      .   0.602                  0.535          0.465
SHP3   0.404  0.317         0.203            0.424          0.576
SHP5  -0.203  0.453  0.212  0.203            0.503          0.497
SHP6   0.424  0.149  0.161  0.193            0.421          0.579
SHR1          0.733              .           0.410          0.590
SHR3   0.164         0.466      .            0.566          0.434
SHR4          0.682         0.105            0.399          0.601
SHR5      .   0.527      .   0.180           0.647          0.353
SHR6   0.215 -0.102  0.528                   0.632          0.368
SHW1      .          0.820      .            0.415          0.585
SHW2      .   0.797        -0.131            0.399          0.601
SHW3   0.138  0.614      .      .            0.514          0.486
SHW4   0.243  0.752        -0.158            0.388          0.612
SHW5      .   0.484  0.138                   0.607          0.393
SHS1   0.185      .         0.714            0.252          0.748
SHS2         -0.110  0.106  0.880            0.238          0.762
SHS3      .                0.798            0.250          0.750
SHS4      .      .      .   0.762            0.365          0.635
SHS5                       0.783            0.432          0.568


                              f2     f4     f3     f1   total
Sum of sq (obliq) loadings 5.104  3.716  2.536  1.108  12.464
Proportion of total        0.410  0.298  0.203  0.089  1.000
Proportion var             0.222  0.162  0.110  0.048  0.542
Cumulative var             0.222  0.383  0.494  0.542  0.542

Factor correlations:

        f1      f2      f3      f4
f1  1.000
f2  0.463  1.000
f3  0.515  0.762  1.000
f4  0.414  0.675  0.673  1.000

Number of factors:  5

Standardized loadings:

          f1      f2      f3      f4      f5       unique.var    communalities
SHC1   0.516      .   0.598      .      .            0.356          0.644
SHC4   0.149         0.408  0.248      .            0.648          0.352
SHJ3   0.139 -0.145  0.707                          0.540          0.460
SHP1  -0.124 -0.116  0.121  0.601  0.207            0.409          0.591
SHP2      .      .         0.602                    0.536          0.464
SHP3      .   0.544  0.278         0.165            0.376          0.624
SHP5         -0.193  0.471  0.198  0.210            0.505          0.495
SHP6          0.430  0.116  0.174  0.174            0.425          0.575
SHR1      .   0.715                                 0.406          0.594
SHR3          0.132         0.471      .            0.568          0.432
SHR4   0.142         0.655         0.116            0.398          0.602
SHR5      .          0.539      .   0.162            0.627          0.373
SHR6   0.191      . -0.149  0.585                   0.575          0.425
SHW1      .      .      .   0.798      .            0.419          0.581
```

```
SHW2     .     .   0.762         -0.133          0.402          0.598
SHW3        0.181  0.591    .       .            0.509          0.491
SHW4  0.108  0.240  0.700        -0.164          0.394          0.606
SHW5 -0.164  0.203  0.496  0.134     .           0.561          0.439
SHS1     .  0.152     .         0.710            0.252          0.748
SHS2     .     .     .       .   0.873           0.237          0.763
SHS3  0.121                     0.807            0.239          0.761
SHS4     .                      0.759            0.366          0.634
SHS5     .     .                0.771            0.425          0.575

                              f3     f5     f4     f2     f1   total
Sum of sq (obliq) loadings 4.930  3.686  2.538  1.135  0.539  12.828
Proportion of total        0.384  0.287  0.198  0.088  0.042   1.000
Proportion var             0.214  0.160  0.110  0.049  0.023   0.558
Cumulative var             0.214  0.375  0.485  0.534  0.558   0.558


Factor correlations:


        f1     f2     f3     f4     f5
f1   1.000
f2   0.425  1.000
f3   0.131  0.491  1.000
f4   0.286  0.590  0.730  1.000
f5   0.153  0.474  0.665  0.662  1.000


Number of factors:  6

Standardized loadings:


        f1     f2     f3     f4     f5     f6    unique.var   communalities
SHC1  0.497                     0.464     .        0.341          0.659
SHC4  0.147  0.144     .  0.212  0.323 -0.157      0.638          0.362
SHJ3  0.136  0.194 -0.102       0.587             0.542          0.458
SHP1     .  0.311          0.491        0.156      0.410          0.590
SHP2              .        0.630  0.159            0.508          0.492
SHP3     .     .  0.312          0.419  0.153      0.446          0.554
SHP5        0.481             .  0.213     .       0.436          0.564
SHP6              0.879                            0.127          0.873
SHR1              .              0.709            0.407          0.593
SHR3              .        0.497  0.145  0.164     0.544          0.456
SHR4  0.138  0.168              0.562     .        0.395          0.605
SHR5     .     .     .       .   0.547  0.179      0.628          0.372
SHR6  0.159        .  0.575 -0.118                 0.590          0.410
SHW1     .  0.240         0.708        -0.111      0.417          0.583
SHW2     .                      0.790 -0.101       0.401          0.599
SHW3        .        0.102  0.706                  0.496          0.504
SHW4     . -0.158            .  0.848     .        0.373          0.627
SHW5 -0.163              0.121  0.597             0.558          0.442
SHS1     .        .             .   0.723          0.255          0.745
SHS2        0.131            . -0.140  0.863        0.235          0.765
SHS3     .        .     .        0.837            0.232          0.768
SHS4        .     .        0.103  0.803            0.350          0.650
SHS5     .     .             .   0.771            0.425          0.575


                              f5     f6     f4     f3     f2     f1   total
Sum of sq (obliq) loadings 4.870  3.662  2.280  1.016  0.875  0.545  13.247
Proportion of total        0.368  0.276  0.172  0.077  0.066  0.041   1.000
Proportion var             0.212  0.159  0.099  0.044  0.038  0.024   0.576
Cumulative var             0.212  0.371  0.470  0.514  0.552  0.576   0.576


Factor correlations:


        f1     f2     f3     f4     f5     f6
f1   1.000
f2   0.133  1.000
f3   0.224  0.276  1.000
f4   0.279  0.386  0.629  1.000
f5   0.267  0.535  0.625  0.725  1.000
f6   0.190  0.458  0.586  0.644  0.678  1.000
```

```
Number of factors:  7

Standardized loadings:

        f1      f2      f3      f4      f5      f6      f7      unique.var
SHC1  0.526  0.175                           0.356  0.111        0.349
SHC4  0.231  0.432          0.109  0.137   0.143 -0.131        0.555
SHJ3  0.179  0.252  0.130 -0.124    .      0.480               0.507
SHP1    .    0.137  0.264          0.452           0.174        0.403
SHP2                         .      0.612  0.189               0.507
SHP3    .                  0.367           0.399  0.140        0.432
SHP5          0.503                 .      0.193    .          0.439
SHP6    .           0.798                                     0.212
SHR1          0.125                        0.672               0.410
SHR3          .            0.490  0.176  0.156               0.543
SHR4  0.111 -0.269  0.338           .      0.613               0.316
SHR5    .     .       .      .      .      0.522  0.193        0.625
SHR6  0.164   .            .      0.544 -0.121    .          0.589
SHW1    .     .    0.230          0.679          -0.116        0.417
SHW2    .   -0.146    .            .      0.835 -0.141        0.379
SHW3          0.159 -0.142          .      0.659               0.470
SHW4    .     .   -0.109           .      0.844    .          0.373
SHW5 -0.155   .                    .      0.574               0.546
SHS1    .     .             .             .      0.727        0.252
SHS2          0.105               -0.162  0.883               0.234
SHS3  0.107                 .      .             0.860        0.232
SHS4          .     .       .             0.113  0.818        0.349
SHS5                              .       .      0.792        0.423


                              f6    f7    f5    f4    f3    f1    f2  total
Sum of sq (obliq) loadings 4.568 3.740 2.166 0.983 0.932 0.573 0.477 13.439
Proportion of total        0.340 0.278 0.161 0.073 0.069 0.043 0.036 1.000
Proportion var             0.199 0.163 0.094 0.043 0.041 0.025 0.021 0.584
Cumulative var             0.199 0.361 0.455 0.498 0.539 0.564 0.584 0.584

Factor correlations:

        f1      f2      f3      f4      f5      f6      f7
f1  1.000
f2 -0.127  1.000
f3  0.122  0.483  1.000
f4  0.251  0.298  0.301  1.000
f5  0.285  0.401  0.393  0.631  1.000
f6  0.255  0.567  0.556  0.623  0.689  1.000
f7  0.171  0.421  0.509  0.597  0.637  0.688  1.000
```

Exhibit D

CFA Results by Country

Methods: From Section 3 Factor Analysis—for the confirmatory factor analyses, the statistical fit of a 6-factor model in which item cross-loadings, which are freely estimated during EFA, are fixed to zero to ensure a one-to-one mapping from items to factors (which are taken to correspond with the theoretical construct the items are hypothesized to indicate). Several statistical fit metrics, including CFI, RMSEA, and SRMR, were examined to assess the degree to which a 6-factor model adequately accounted for the observed the pattern of correlation among individual items retained for analysis following the EFA procedures outlined above. Adequacy of these fit metrics (CFI>0.95, RMSEA<0.06, and SRMR<0.08) generally indicates that the retained items serve as strong indicators of their corresponding factors, establishing some preliminary evidence of construct validity with respect to the sets of item-level indicators corresponding to each dimension of Hope measured by the WVHS. All factor analyses were conducted using the lavaan package (Rosseel, 2012) in R (R Core Team, 2024). The model was estimated using diagonally weighted least squares with robust standard errors and scaled test statistics, and missing data was handled using pairwise deletion (a categorical variant of FIML).

Comparison of overall model fit by country. Table D1 reports the fit statistics of the fitted model. First, the reduced model with only the five factors common across all contexts is presented. Then, the full model with all six factors is compared in Bolivia, Lesotho, and Uganda. We see the greatest sources of misfit of the five factors are driven by the Iraq and Senegal samples; otherwise, the fit of the model within country in other countries is generally decent. In the models with the spirituality factor, the Uganda sample stuck out as most potentially problematic. However, overall, these fit statistics are adequate, though certainly not perfect. Cells of the table within the bounds of adequate fit are bolded.

Table D1. Comparison of fit statistics across fitted CFA models by country.

Country	chisq	df	p-value	CFI	RMSEA	SRMR
Five Factors (Compassion, Joy, Purpose, Resilience, Wisdom)						
Albania	153.5	80	1.50e-06	**0.981**	0.070	**0.030**
Bolivia	148.3	80	5.46e-06	**0.961**	**0.055**	**0.047**
Iraq	1118.7	80	< 2.22e-16	0.887	0.177	0.092
Lesotho	68.4	80	**0.819**	**0.995**	**0.033**	**0.028**
Senegal	476.7	80	< 2.22e-16	0.921	0.120	**0.072**
Sri Lanka	163.4	80	1.13e-07	0.945	**0.051**	**0.054**
Thailand	165.1	80	7.24e-08	0.946	**0.058**	**0.049**
Uganda	184.1	80	3.49e-10	**0.973**	0.074	**0.040**
Six Factors (Compassion, Joy, Purpose, Resilience, Wisdom, Spirituality)						
Boliva	245.1	120	1.34e-10	**0.957**	**0.059**	**0.050**
Lesotho	102.4	120	**0.876**	**0.995**	**0.033**	**0.028**
Uganda	373.0	120	< 2.22e-16	**0.972**	0.080	**0.046**

The following reports on the fitted CFA models by country.

Albania

```
lavaan 0.6-19 ended normally after 43 iterations

  Estimator                                      DWLS
  Optimization method                          NLMINB
  Number of model parameters                       85
  Row rank of the constraints matrix               25

                                         Used       Total
  Number of observations                  658         661
  Number of missing patterns               88

Parameter Estimates:

  Parameterization                            Delta
  Standard errors                        Robust.sem
  Information                              Expected
  Information saturated (h1) model     Unstructured

Latent Variables:
                 Estimate  Std.Err  z-value  P(>|z|)   Std.lv   Std.all
  Compassion =~
    SHC1            1.000                                0.737    0.737
    SHC3            0.956    0.035   27.074    0.000     0.705    0.705
    SHC4            1.067    0.035   30.488    0.000     0.787    0.787
  Joy =~
    SHJ1            1.000                                0.828    0.828
    SHJ2            1.021    0.021   47.926    0.000     0.845    0.845
    SHJ4            0.962    0.024   40.372    0.000     0.796    0.796
  Purpose =~
    SHP2            1.000                                0.723    0.723
    SHP3            1.108    0.031   35.855    0.000     0.801    0.801
    SHP4            1.022    0.031   33.198    0.000     0.739    0.739
  Resilience =~
    SHR1            1.000                                0.810    0.810
    SHR2            1.000    0.019   52.241    0.000     0.810    0.810
    SHR3            0.901    0.025   36.348    0.000     0.730    0.730
  Wisdom =~
    SHW2            1.000                                0.808    0.808
    SHW4            1.020    0.022   46.953    0.000     0.825    0.825
    SHW5            0.982    0.024   41.481    0.000     0.794    0.794

Covariances:
                 Estimate  Std.Err  z-value  P(>|z|)   Std.lv   Std.all
  Compassion ~~
    Joy             0.560    0.024   23.817    0.000     0.918    0.918
    Purpose         0.498    0.025   20.164    0.000     0.935    0.935
    Resilience      0.543    0.024   22.530    0.000     0.910    0.910
    Wisdom          0.546    0.024   22.579    0.000     0.915    0.915
```

```
  Joy ~~
    Purpose              0.582   0.024   24.637   0.000   0.973   0.973
    Resilience           0.659   0.021   31.102   0.000   0.982   0.982
    Wisdom               0.649   0.021   31.402   0.000   0.970   0.970
  Purpose ~~
    Resilience           0.604   0.022   26.917   0.000   1.031   1.031
    Wisdom               0.581   0.022   26.159   0.000   0.995   0.995
  Resilience ~~
    Wisdom               0.651   0.020   31.908   0.000   0.995   0.995

Variances:
                      Estimate  Std.Err  z-value  P(>|z|)  Std.lv  Std.all
    .SHC1               0.456                              0.456   0.456
    .SHC3               0.503                              0.503   0.503
    .SHC4               0.381                              0.381   0.381
    .SHJ1               0.315                              0.315   0.315
    .SHJ2               0.286                              0.286   0.286
    .SHJ4               0.366                              0.366   0.366
    .SHP2               0.478                              0.478   0.478
    .SHP3               0.359                              0.359   0.359
    .SHP4               0.454                              0.454   0.454
    .SHR1               0.344                              0.344   0.344
    .SHR2               0.344                              0.344   0.344
    .SHR3               0.467                              0.467   0.467
    .SHW2               0.346                              0.346   0.346
    .SHW4               0.320                              0.320   0.320
    .SHW5               0.370                              0.370   0.370
    Compassion          0.544   0.030   17.835   0.000   1.000   1.000
    Joy                 0.685   0.026   25.902   0.000   1.000   1.000
    Purpose             0.522   0.031   17.018   0.000   1.000   1.000
    Resilience          0.656   0.026   25.490   0.000   1.000   1.000
    Wisdom              0.654   0.025   25.925   0.000   1.000   1.000

R-Square:
                      Estimate
    SHC1                0.544
    SHC3                0.497
    SHC4                0.619
    SHJ1                0.685
    SHJ2                0.714
    SHJ4                0.634
    SHP2                0.522
    SHP3                0.641
    SHP4                0.546
    SHR1                0.656
    SHR2                0.656
    SHR3                0.533
    SHW2                0.654
    SHW4                0.680
    SHW5                0.630

Average Absolute Residual:  0.026
```

Correlation Matrix Residuals with e_ij > 0.10 bolded.

Item	SHC1	SHC3	SHC4	SHJ1	SHJ2	SHJ4	SHP2	SHP3	SHP4	SHR1	SHR2	SHR3	SHW2	SHW4	SHW5
SHC1		0.033	0.004	-0.040	0.021	0.006	-0.029	-0.006	-0.005	0.012	-0.003	-0.027	-0.012	0.025	-0.013
SHC3	0.033		-0.041	-0.023	-0.064	-0.061	-0.034	0.021	0.027	-0.013	0.024	-0.010	-0.023	0.042	0.067
SHC4	0.004	-0.041		0.027	0.031	0.034	-0.020	-0.001	0.028	-0.005	0.017	-0.010	-0.057	-0.053	0.011
SHJ1	-0.040	-0.023	0.027		-0.004	0.000	0.040	0.003	0.039	-0.012	-0.033	0.033	-0.056	-0.032	0.032
SHJ2	0.021	-0.064	0.031	-0.004		0.004	-0.035	0.013	-0.058	0.028	-0.001	-0.012	-0.004	0.036	-0.041
SHJ4	0.006	-0.061	0.034	0.000	0.004		-0.047	0.014	-0.020	0.018	-0.016	-0.028	0.057	-0.001	-0.050
SHP2	-0.029	-0.034	-0.020	0.040	-0.035	-0.047		-0.006	-0.004	-0.050	-0.013	**0.107**	-0.004	-0.024	0.031
SHP3	-0.006	0.021	-0.001	0.003	0.013	0.014	-0.006		0.008	-0.004	-0.002	-0.048	-0.010	0.004	0.005
SHP4	-0.005	0.027	0.028	0.039	-0.058	-0.020	-0.004	0.008		-0.004	0.007	-0.027	-0.074	-0.027	0.069
SHR1	0.012	-0.013	-0.005	-0.012	0.028	0.018	-0.050	-0.004	-0.004		-0.009	-0.031	0.038	0.013	-0.037
SHR2	-0.003	0.024	0.017	-0.033	-0.001	-0.016	-0.013	-0.002	0.007	-0.009		0.036	0.032	-0.043	0.010
SHR3	-0.027	-0.010	-0.010	0.033	-0.012	-0.028	**0.107**	-0.048	-0.027	-0.031	0.036		-0.030	-0.009	-0.017
SHW2	-0.012	-0.023	-0.057	-0.056	-0.004	0.057	-0.004	-0.010	-0.074	0.038	0.032	-0.030		0.050	-0.045
SHW4	0.025	0.042	-0.053	-0.032	0.036	-0.001	-0.024	0.004	-0.027	0.013	-0.043	-0.009	0.050		-0.037
SHW5	-0.013	0.067	0.011	0.032	-0.041	-0.050	0.031	0.005	0.069	-0.037	0.010	-0.017	-0.045	-0.037	

Bolivia

```
lavaan 0.6-19 ended normally after 38 iterations

  Estimator                                    DWLS
  Optimization method                        NLMINB
  Number of model parameters                    105
  Row rank of the constraints matrix             33

  Number of observations                        558
  Number of missing patterns                     90

Parameter Estimates:

  Parameterization                            Delta
  Standard errors                        Robust.sem
  Information                              Expected
  Information saturated (h1) model     Unstructured

Latent Variables:
                Estimate  Std.Err  z-value  P(>|z|)   Std.lv   Std.all
  Compassion =~
    SHC1           1.000                                0.607    0.607
    SHC3           1.088    0.091   11.955    0.000     0.660    0.660
    SHC4           0.731    0.085    8.580    0.000     0.443    0.443
  Joy =~
    SHJ1           1.000                                0.696    0.696
    SHJ2           0.977    0.065   15.012    0.000     0.680    0.680
    SHJ4           0.672    0.057   11.706    0.000     0.468    0.468
  Purpose =~
    SHP2           1.000                                0.514    0.514
    SHP3           1.155    0.104   11.129    0.000     0.593    0.593
    SHP4           1.228    0.098   12.589    0.000     0.631    0.631
  Resilience =~
    SHR1           1.000                                0.724    0.724
    SHR2           0.931    0.044   21.087    0.000     0.674    0.674
    SHR3           0.680    0.059   11.541    0.000     0.493    0.493
  Wisdom =~
    SHW2           1.000                                0.670    0.670
    SHW4           0.991    0.062   15.991    0.000     0.664    0.664
    SHW5           0.912    0.065   14.065    0.000     0.611    0.611
  Spirituality =~
    SHS1           1.000                                0.844    0.844
    SHS2           0.998    0.037   27.245    0.000     0.843    0.843
    SHS3           0.990    0.031   31.821    0.000     0.836    0.836

Covariances:
                Estimate  Std.Err  z-value  P(>|z|)   Std.lv   Std.all
  Compassion ~~
    Joy            0.227    0.031    7.273    0.000     0.536    0.536
    Purpose        0.235    0.027    8.623    0.000     0.755    0.755
    Resilience     0.308    0.031    9.911    0.000     0.702    0.702
```

Wisdom	0.326	0.032	10.224	0.000	0.803	0.803
Spirituality	0.300	0.034	8.913	0.000	0.586	0.586
Joy ~~						
Purpose	0.327	0.031	10.658	0.000	0.915	0.915
Resilience	0.495	0.033	14.906	0.000	0.981	0.981
Wisdom	0.362	0.030	11.898	0.000	0.777	0.777
Spirituality	0.434	0.032	13.430	0.000	0.739	0.739
Purpose ~~						
Resilience	0.337	0.031	10.734	0.000	0.907	0.907
Wisdom	0.321	0.031	10.275	0.000	0.932	0.932
Spirituality	0.337	0.031	10.835	0.000	0.778	0.778
Resilience ~~						
Wisdom	0.405	0.029	13.762	0.000	0.836	0.836
Spirituality	0.451	0.032	14.300	0.000	0.738	0.738
Wisdom ~~						
Spirituality	0.348	0.032	10.787	0.000	0.615	0.615

Variances:

	Estimate	Std.Err	z-value	P(>|z|)	Std.lv	Std.all
.SHC1	0.632				0.632	0.632
.SHC3	0.564				0.564	0.564
.SHC4	0.803				0.803	0.803
.SHJ1	0.515				0.515	0.515
.SHJ2	0.537				0.537	0.537
.SHJ4	0.781				0.781	0.781
.SHP2	0.736				0.736	0.736
.SHP3	0.648				0.648	0.648
.SHP4	0.602				0.602	0.602
.SHR1	0.475				0.475	0.475
.SHR2	0.545				0.545	0.545
.SHR3	0.757				0.757	0.757
.SHW2	0.551				0.551	0.551
.SHW4	0.560				0.560	0.560
.SHW5	0.627				0.627	0.627
.SHS1	0.287				0.287	0.287
.SHS2	0.290				0.290	0.290
.SHS3	0.302				0.302	0.302
Compassion	0.368	0.048	7.610	0.000	1.000	1.000
Joy	0.485	0.050	9.776	0.000	1.000	1.000
Purpose	0.264	0.039	6.823	0.000	1.000	1.000
Resilience	0.525	0.040	12.952	0.000	1.000	1.000
Wisdom	0.449	0.042	10.650	0.000	1.000	1.000
Spirituality	0.713	0.033	21.419	0.000	1.000	1.000

R-Square:

	Estimate
SHC1	0.368
SHC3	0.436
SHC4	0.197
SHJ1	0.485
SHJ2	0.463
SHJ4	0.219

```
        SHP2                0.264
        SHP3                0.352
        SHP4                0.398
        SHR1                0.525
        SHR2                0.455
        SHR3                0.243
        SHW2                0.449
        SHW4                0.440
        SHW5                0.373
        SHS1                0.713
        SHS2                0.710
        SHS3                0.698


Average Absolute Residual:  0.039
Correlation Matrix Residuals with e_ij > 0.10 bolded.
```

Item	SHC1	SHC3	SHC4	SHJ1	SHJ2	SHJ4	SHP2	SHP3	SHP4	SHR1	SHR2	SHR3	SHW2	SHW4	SHW5	SHS1	SHS2	SHS3
SHC1		0.018	-0.036	-0.065	0.056	-0.048	-0.030	0.047	-0.070	0.060	-0.025	-0.075	0.087	0.089	**-0.196**	0.002	-0.036	0.007
SHC3	0.018		-0.001	-0.016	0.007	0.000	0.029	0.061	-0.056	0.000	-0.010	0.005	-0.052	0.000	0.025	-0.022	-0.013	0.019
SHC4	-0.036	-0.001		-0.021	0.093	-0.028	0.003	0.008	0.000	0.019	-0.009	-0.008	-0.044	-0.027	0.018	0.010	0.028	0.023
SHJ1	-0.065	-0.016	-0.021		-0.083	**0.151**	-0.033	-0.020	0.092	-0.063	0.005	-0.063	-0.044	-0.058	0.073	-0.040	0.063	0.017
SHJ2	0.056	0.007	0.093	-0.083		-0.061	-0.071	0.027	-0.031	0.061	0.023	-0.024	0.045	0.013	0.000	-0.013	-0.010	-0.024
SHJ4	-0.048	0.000	-0.028	**0.151**	-0.061		-0.006	-0.067	-0.018	0.000	0.046	-0.092	-0.004	0.025	-0.079	-0.024	0.012	0.009
SHP2	-0.030	0.029	0.003	-0.033	-0.071	-0.006		-0.042	0.057	0.003	-0.026	0.059	0.040	-0.013	0.014	-0.012	-0.009	0.016
SHP3	0.047	0.061	0.008	-0.020	0.027	-0.067	-0.042		-0.022	-0.079	0.003	0.037	-0.003	0.037	0.005	0.096	-0.070	-0.066
SHP4	-0.070	-0.056	0.000	0.092	-0.031	-0.018	0.057	-0.022		0.010	0.015	0.013	-0.056	-0.069	0.050	0.013	-0.020	0.004
SHR1	0.060	0.000	0.019	-0.063	0.061	0.000	0.003	-0.079	0.010		0.080	**-0.137**	0.049	0.015	-0.018	-0.041	-0.050	-0.066
SHR2	-0.025	-0.010	-0.009	0.005	0.023	0.046	-0.026	0.003	0.015	0.080		**-0.109**	0.018	0.015	-0.019	-0.076	-0.080	-0.023
SHR3	-0.075	0.005	-0.008	-0.063	-0.024	-0.092	0.059	0.037	0.013	**-0.137**	**-0.109**		-0.086	-0.039	-0.020	**0.184**	**0.127**	**0.104**
SHW2	0.087	-0.052	-0.044	-0.044	0.045	-0.004	0.040	-0.003	-0.056	0.049	0.018	-0.086		0.019	-0.031	0.031	-0.080	0.012
SHW4	0.089	0.000	-0.027	-0.058	0.013	0.025	-0.013	0.037	-0.069	0.015	0.015	-0.039	0.019		0.006	-0.013	-0.067	-0.012
SHW5	**-0.196**	0.025	0.018	0.073	0.000	-0.079	0.014	0.005	0.050	-0.018	-0.019	-0.020	-0.031	0.006		-0.001	0.026	0.082
SHS1	0.002	-0.022	0.010	-0.040	-0.013	-0.024	-0.012	0.096	0.013	-0.041	-0.076	**0.184**	0.031	-0.013	-0.001		0.006	-0.032
SHS2	-0.036	-0.013	0.028	0.063	-0.010	0.012	-0.009	-0.070	-0.020	-0.050	-0.080	**0.127**	-0.080	-0.067	0.026	0.006		0.022
SHS3	0.007	0.019	0.023	0.017	-0.024	0.009	0.016	-0.066	0.004	-0.066	-0.023	**0.104**	0.012	-0.012	0.082	-0.032	0.022	

Iraq

```
lavaan 0.6-19 ended normally after 44 iterations

  Estimator                                         DWLS
  Optimization method                             NLMINB
  Number of model parameters                          85
  Row rank of the constraints matrix                  25


  Number of observations                             532
  Number of missing patterns                           8
Parameter Estimates:


  Parameterization                                 Delta
  Standard errors                             Robust.sem
  Information                                   Expected
  Information saturated (h1) model          Unstructured


Latent Variables:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
```

```
  Compassion =~
    SHC1              1.000                                    0.662    0.662
    SHC3              1.108    0.047   23.829   0.000          0.734    0.734
    SHC4              0.958    0.041   23.635   0.000          0.634    0.634
  Joy =~
    SHJ1              1.000                                    0.732    0.732
    SHJ2              0.845    0.028   29.690   0.000          0.618    0.618
    SHJ4              0.669    0.034   19.610   0.000          0.490    0.490
  Purpose =~
    SHP2              1.000                                    0.551    0.551
    SHP3              1.322    0.069   19.044   0.000          0.728    0.728
    SHP4              1.506    0.077   19.688   0.000          0.829    0.829
  Resilience =~
    SHR1              1.000                                    0.647    0.647
    SHR2              1.029    0.043   23.716   0.000          0.665    0.665
    SHR3              1.038    0.043   23.928   0.000          0.672    0.672
  Wisdom =~
    SHW2              1.000                                    0.681    0.681
    SHW4              1.054    0.038   27.747   0.000          0.718    0.718
    SHW5              1.087    0.037   29.211   0.000          0.740    0.740

Covariances:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv   Std.all
  Compassion ~~
    Joy               0.539    0.023   23.211   0.000          1.113    1.113
    Purpose           0.392    0.026   15.194   0.000          1.076    1.076
    Resilience        0.466    0.026   18.197   0.000          1.089    1.089
    Wisdom            0.485    0.025   19.286   0.000          1.076    1.076
  Joy ~~
    Purpose           0.469    0.026   17.723   0.000          1.164    1.164
    Resilience        0.556    0.023   23.988   0.000          1.174    1.174
    Wisdom            0.592    0.023   25.237   0.000          1.186    1.186
  Purpose ~~
    Resilience        0.400    0.025   15.956   0.000          1.124    1.124
    Wisdom            0.366    0.024   15.331   0.000          0.975    0.975
  Resilience ~~
    Wisdom            0.485    0.023   20.929   0.000          1.100    1.100

Variances:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv   Std.all
   .SHC1             0.562                                    0.562    0.562
   .SHC3             0.462                                    0.462    0.462
   .SHC4             0.598                                    0.598    0.598
   .SHJ1             0.464                                    0.464    0.464
   .SHJ2             0.618                                    0.618    0.618
   .SHJ4             0.760                                    0.760    0.760
   .SHP2             0.697                                    0.697    0.697
   .SHP3             0.470                                    0.470    0.470
   .SHP4             0.312                                    0.312    0.312
   .SHR1             0.582                                    0.582    0.582
   .SHR2             0.557                                    0.557    0.557
   .SHR3             0.549                                    0.549    0.549
```

```
    .SHW2              0.536                              0.536   0.536
    .SHW4              0.485                              0.485   0.485
    .SHW5              0.452                              0.452   0.452
     Compassion        0.438    0.033   13.430   0.000    1.000   1.000
     Joy               0.536    0.035   15.331   0.000    1.000   1.000
     Purpose           0.303    0.032    9.414   0.000    1.000   1.000
     Resilience        0.418    0.031   13.319   0.000    1.000   1.000
     Wisdom            0.464    0.030   15.365   0.000    1.000   1.000


R-Square:
                   Estimate
     SHC1             0.438
     SHC3             0.538
     SHC4             0.402
     SHJ1             0.536
     SHJ2             0.382
     SHJ4             0.240
     SHP2             0.303
     SHP3             0.530
     SHP4             0.688
     SHR1             0.418
     SHR2             0.443
     SHR3             0.451
     SHW2             0.464
     SHW4             0.515
     SHW5             0.548


Average Absolute Residual:  0.084


Correlation Matrix Residuals with e_ij > 0.10 bolded.
```

Item	SHC1	SHC3	SHC4	SHJ1	SHJ2	SHJ4	SHP2	SHP3	SHP4	SHR1	SHR2	SHR3	SHW2	SHW4	SHW5
SHC1		-0.082	0.011	-0.091	0.079	**0.152**	**-0.121**	**-0.101**	**-0.159**	**0.103**	-0.073	-0.053	**0.159**	-0.009	**-0.137**
SHC3	-0.082		0.042	0.056	**-0.201**	-0.047	0.002	-0.045	0.053	**-0.142**	-0.053	0.069	-0.035	-0.098	0.092
SHC4	0.011	0.042		-0.024	-0.081	0.061	0.070	**0.121**	-0.084	-0.086	**0.118**	-0.049	-0.082	**-0.136**	-0.061
SHJ1	-0.091	0.056	-0.024		-0.075	0.038	0.084	**-0.163**	**0.100**	**-0.143**	**-0.120**	-0.014	**-0.161**	**-0.181**	0.026
SHJ2	0.079	**-0.201**	-0.081	-0.075		0.064	**-0.160**	**-0.132**	**-0.229**	**0.190**	-0.080	**-0.145**	-0.042	**0.169**	**-0.133**
SHJ4	**0.152**	-0.047	0.061	0.038	0.064		-0.083	**-0.141**	-0.098	0.038	-0.015	0.004	0.086	-0.057	**-0.119**
SHP2	**-0.121**	0.002	0.070	0.084	**-0.160**	-0.083		-0.007	0.055	**-0.145**	**-0.134**	0.099	-0.044	-0.071	0.072
SHP3	**-0.101**	-0.045	**0.121**	**-0.163**	**-0.132**	**-0.141**	-0.007		-0.049	-0.093	**0.179**	-0.032	-0.053	-0.078	0.005
SHP4	**-0.159**	0.053	-0.084	**0.100**	**-0.229**	-0.098	0.055	-0.049		**-0.179**	**-0.138**	0.005	-0.049	-0.089	0.096
SHR1	**0.103**	**-0.142**	-0.086	**-0.143**	**0.190**	0.038	**-0.145**	-0.093	**-0.179**		-0.037	-0.023	0.020	**0.123**	**-0.117**
SHR2	-0.073	-0.053	**0.118**	**-0.120**	-0.080	-0.015	**-0.134**	**0.179**	**-0.138**	-0.037		0.049	-0.022	-0.047	**-0.114**
SHR3	-0.053	0.069	-0.049	-0.014	**-0.145**	0.004	0.099	-0.032	0.005	-0.023	0.049		-0.039	0.002	0.028
SHW2	**0.159**	-0.035	-0.082	**-0.161**	-0.042	0.086	-0.044	-0.053	-0.049	0.020	-0.022	-0.039		0.089	-0.081
SHW4	-0.009	-0.098	**-0.136**	**-0.181**	**0.169**	-0.057	-0.071	-0.078	-0.089	**0.123**	-0.047	0.002	0.089		-0.065
SHW5	**-0.137**	0.092	-0.061	0.026	**-0.133**	**-0.119**	0.072	0.005	0.096	**-0.117**	**-0.114**	0.028	-0.081	-0.065	

Lesotho

```
lavaan 0.6-19 ended normally after 44 iterations

  Estimator                                         DWLS
```

```
  Optimization method                           NLMINB
  Number of model parameters                      105
  Row rank of the constraints matrix               33

  Number of observations                          513
  Number of missing patterns                        5


Parameter Estimates:

  Parameterization                              Delta
  Standard errors                          Robust.sem
  Information                                Expected
  Information saturated (h1) model       Unstructured


Latent Variables:
                 Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
  Compassion =~
    SHC1            1.000                               0.695    0.695
    SHC3            0.767    0.056   13.754    0.000    0.533    0.533
    SHC4            0.785    0.051   15.263    0.000    0.546    0.546
  Joy =~
    SHJ1            1.000                               0.728    0.728
    SHJ2            1.094    0.045   24.049    0.000    0.796    0.796
    SHJ4            0.877    0.048   18.347    0.000    0.638    0.638
  Purpose =~
    SHP2            1.000                               0.619    0.619
    SHP3            1.201    0.067   17.944    0.000    0.744    0.744
    SHP4            1.304    0.066   19.667    0.000    0.807    0.807
  Resilience =~
    SHR1            1.000                               0.761    0.761
    SHR2            0.976    0.038   25.579    0.000    0.743    0.743
    SHR3            0.900    0.037   24.500    0.000    0.685    0.685
  Wisdom =~
    SHW2            1.000                               0.714    0.714
    SHW4            1.008    0.043   23.247    0.000    0.720    0.720
    SHW5            0.908    0.051   17.751    0.000    0.649    0.649
  Spirituality =~
    SHS1            1.000                               0.895    0.895
    SHS2            0.944    0.023   41.024    0.000    0.845    0.845
    SHS3            0.990    0.021   46.277    0.000    0.886    0.886


Covariances:
                 Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
  Compassion ~~
    Joy             0.484    0.029   16.766    0.000    0.958    0.958
    Purpose         0.405    0.028   14.607    0.000    0.941    0.941
    Resilience      0.494    0.028   17.408    0.000    0.934    0.934
    Wisdom          0.518    0.028   18.507    0.000    1.044    1.044
    Spirituality    0.533    0.030   17.830    0.000    0.857    0.857
  Joy ~~
    Purpose         0.446    0.028   16.186    0.000    0.990    0.990
    Resilience      0.511    0.026   19.386    0.000    0.923    0.923
```

	Estimate	Std.Err	z-value	P(>|z|)	Std.lv	Std.all
Wisdom	0.486	0.027	17.797	0.000	0.935	0.935
Spirituality	0.608	0.026	23.189	0.000	0.934	0.934
Purpose ~~						
Resilience	0.467	0.027	17.127	0.000	0.991	0.991
Wisdom	0.430	0.027	16.166	0.000	0.971	0.971
Spirituality	0.504	0.028	17.966	0.000	0.910	0.910
Resilience ~~						
Wisdom	0.522	0.027	19.441	0.000	0.959	0.959
Spirituality	0.632	0.024	26.233	0.000	0.928	0.928
Wisdom ~~						
Spirituality	0.544	0.027	20.363	0.000	0.851	0.851

Variances:

	Estimate	Std.Err	z-value	P(>|z|)	Std.lv	Std.all
.SHC1	0.517				0.517	0.517
.SHC3	0.716				0.716	0.716
.SHC4	0.702				0.702	0.702
.SHJ1	0.470				0.470	0.470
.SHJ2	0.366				0.366	0.366
.SHJ4	0.592				0.592	0.592
.SHP2	0.617				0.617	0.617
.SHP3	0.447				0.447	0.447
.SHP4	0.348				0.348	0.348
.SHR1	0.421				0.421	0.421
.SHR2	0.448				0.448	0.448
.SHR3	0.531				0.531	0.531
.SHW2	0.490				0.490	0.490
.SHW4	0.481				0.481	0.481
.SHW5	0.579				0.579	0.579
.SHS1	0.199				0.199	0.199
.SHS2	0.286				0.286	0.286
.SHS3	0.215				0.215	0.215
Compassion	0.483	0.041	11.842	0.000	1.000	1.000
Joy	0.530	0.040	13.124	0.000	1.000	1.000
Purpose	0.383	0.037	10.417	0.000	1.000	1.000
Resilience	0.579	0.035	16.347	0.000	1.000	1.000
Wisdom	0.510	0.037	13.717	0.000	1.000	1.000
Spirituality	0.801	0.023	35.248	0.000	1.000	1.000

R-Square:

	Estimate
SHC1	0.483
SHC3	0.284
SHC4	0.298
SHJ1	0.530
SHJ2	0.634
SHJ4	0.408
SHP2	0.383
SHP3	0.553
SHP4	0.652
SHR1	0.579
SHR2	0.552
SHR3	0.469

```
      SHW2                  0.510
      SHW4                  0.519
      SHW5                  0.421
      SHS1                  0.801
      SHS2                  0.714
      SHS3                  0.785


Average Absolute Residual:  0.023


Correlation Matrix Residuals with e_ij > 0.10 bolded.
```

Item	SHC1	SHC3	SHC4	SHJ1	SHJ2	SHJ4	SHP2	SHP3	SHP4	SHR1	SHR2	SHR3	SHW2	SHW4	SHW5	SHS1	SHS2	SHS3
SHC1		-0.015	0.054	-0.002	-0.005	0.039	-0.017	-0.040	0.010	-0.023	-0.010	-0.042	0.037	0.005	-0.021	-0.018	0.037	-0.006
SHC3	-0.015		-0.058	0.015	-0.049	0.046	-0.036	0.025	0.000	-0.026	0.050	-0.043	0.037	0.006	-0.002	0.022	-0.010	-0.001
SHC4	0.054	-0.058		-0.041	0.002	0.000	0.010	0.014	0.027	0.013	0.065	0.016	-0.008	-0.037	-0.079	-0.040	0.000	0.016
SHJ1	-0.002	0.015	-0.041		0.014	0.014	-0.050	-0.008	0.000	0.034	-0.024	0.039	-0.010	-0.061	0.022	-0.016	0.041	-0.006
SHJ2	-0.005	-0.049	0.002	0.014		-0.039	0.061	0.017	-0.006	-0.019	0.027	-0.010	-0.038	0.017	-0.007	-0.017	0.009	0.010
SHJ4	0.039	0.046	0.000	0.014	-0.039		-0.047	0.010	-0.016	-0.048	-0.027	-0.004	0.013	0.022	0.074	-0.042	0.015	-0.001
SHP2	-0.017	-0.036	0.010	-0.050	0.061	-0.047		-0.035	0.029	0.009	0.010	-0.046	0.019	-0.015	-0.044	0.005	0.065	-0.012
SHP3	-0.040	0.025	0.014	-0.008	0.017	0.010	-0.035		-0.001	0.018	-0.037	-0.037	-0.052	0.048	-0.011	0.048	-0.014	-0.019
SHP4	0.010	0.000	0.027	0.000	-0.006	-0.016	0.029	-0.001		-0.023	0.057	-0.024	-0.002	0.013	-0.002	-0.006	0.002	-0.042
SHR1	-0.023	-0.026	0.013	0.034	-0.019	-0.048	0.009	0.018	-0.023		-0.030	0.021	0.040	-0.005	-0.038	0.002	-0.014	0.026
SHR2	-0.010	0.050	0.065	-0.024	0.027	-0.027	0.010	-0.037	0.057	-0.030		0.013	0.021	-0.003	0.009	-0.035	-0.026	-0.043
SHR3	-0.042	-0.043	0.016	0.039	-0.010	-0.004	-0.046	-0.037	-0.024	0.021	0.013		-0.010	-0.039	-0.006	0.036	0.023	0.036
SHW2	0.037	0.037	-0.008	-0.010	-0.038	0.013	0.019	-0.052	-0.002	0.040	0.021	-0.010		-0.024	0.021	-0.020	-0.042	0.007
SHW4	0.005	0.006	-0.037	-0.061	0.017	0.022	-0.015	0.048	0.013	-0.005	-0.003	-0.039	-0.024		0.002	0.027	-0.027	0.005
SHW5	-0.021	-0.002	-0.079	0.022	-0.007	0.074	-0.044	-0.011	-0.002	-0.038	0.009	-0.006	0.021	0.002		-0.004	0.009	0.040
SHS1	-0.018	0.022	-0.040	-0.016	-0.017	-0.042	0.005	0.048	-0.006	0.002	-0.035	0.036	-0.020	0.027	-0.004		-0.013	0.013
SHS2	0.037	-0.010	0.000	0.041	0.009	0.015	0.065	-0.014	0.002	-0.014	-0.026	0.023	-0.042	-0.027	0.009	-0.013		-0.008
SHS3	-0.006	-0.001	0.016	-0.006	0.010	-0.001	-0.012	-0.019	-0.042	0.026	-0.043	0.036	0.007	0.005	0.040	0.013	-0.008	

Senegal

```
lavaan 0.6-19 ended normally after 42 iterations

  Estimator                                    DWLS
  Optimization method                        NLMINB
  Number of model parameters                     80
  Row rank of the constraints matrix             25

  Number of observations                        592
  Number of missing patterns                     13

Parameter Estimates:

  Parameterization                            Delta
  Standard errors                         Robust.sem
  Information                              Expected
  Information saturated (h1) model     Unstructured

Latent Variables:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
  Compassion =~
    SHC1              1.000                                0.835    0.835
    SHC3              0.871    0.031   27.970    0.000     0.728    0.728
```

```
       SHC4           0.953   0.028   33.625   0.000    0.796    0.796
  Joy =~
    SHJ1             1.000                              0.631    0.631
    SHJ2             0.487   0.072    6.741   0.000    0.307    0.307
    SHJ4             1.107   0.087   12.764   0.000    0.699    0.699
  Purpose =~
    SHP2             1.000                              0.580    0.580
    SHP3             0.766   0.069   11.075   0.000    0.444    0.444
    SHP4             1.455   0.084   17.416   0.000    0.844    0.844
  Resilience =~
    SHR1             1.000                              0.768    0.768
    SHR2             1.004   0.036   27.625   0.000    0.771    0.771
    SHR3             0.847   0.037   22.602   0.000    0.651    0.651
  Wisdom =~
    SHW2             1.000                              0.851    0.851
    SHW4             0.900   0.032   28.298   0.000    0.766    0.766
    SHW5             0.908   0.031   29.265   0.000    0.773    0.773

Covariances:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv   Std.all
  Compassion ~~
    Joy              0.432   0.034   12.541   0.000    0.819    0.819
    Purpose          0.357   0.027   13.206   0.000    0.738    0.738
    Resilience       0.584   0.022   26.621   0.000    0.911    0.911
    Wisdom           0.517   0.025   20.888   0.000    0.728    0.728
  Joy ~~
    Purpose          0.274   0.030    9.144   0.000    0.749    0.749
    Resilience       0.320   0.032   10.114   0.000    0.659    0.659
    Wisdom           0.352   0.034   10.274   0.000    0.656    0.656
  Purpose ~~
    Resilience       0.405   0.028   14.685   0.000    0.909    0.909
    Wisdom           0.404   0.029   13.761   0.000    0.819    0.819
  Resilience ~~
    Wisdom           0.568   0.023   25.164   0.000    0.869    0.869

Variances:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv   Std.all
   .SHC1            0.302                              0.302    0.302
   .SHC3            0.471                              0.471    0.471
   .SHC4            0.366                              0.366    0.366
   .SHJ1            0.602                              0.602    0.602
   .SHJ2            0.906                              0.906    0.906
   .SHJ4            0.511                              0.511    0.511
   .SHP2            0.664                              0.664    0.664
   .SHP3            0.803                              0.803    0.803
   .SHP4            0.288                              0.288    0.288
   .SHR1            0.410                              0.410    0.410
   .SHR2            0.405                              0.405    0.405
   .SHR3            0.577                              0.577    0.577
   .SHW2            0.276                              0.276    0.276
   .SHW4            0.414                              0.414    0.414
   .SHW5            0.403                              0.403    0.403
```

```
     Compassion        0.698    0.027    25.751    0.000    1.000    1.000
     Joy               0.398    0.050     7.910    0.000    1.000    1.000
     Purpose           0.336    0.037     9.083    0.000    1.000    1.000
     Resilience        0.590    0.030    19.731    0.000    1.000    1.000
     Wisdom            0.724    0.031    23.466    0.000    1.000    1.000


R-Square:
                   Estimate
     SHC1            0.698
     SHC3            0.529
     SHC4            0.634
     SHJ1            0.398
     SHJ2            0.094
     SHJ4            0.489
     SHP2            0.336
     SHP3            0.197
     SHP4            0.712
     SHR1            0.590
     SHR2            0.595
     SHR3            0.423
     SHW2            0.724
     SHW4            0.586
     SHW5            0.597


Average Absolute Residual:  0.061
Correlation Matrix Residuals with e_ij > 0.10 bolded.
```

Item	SHC1	SHC3	SHC4	SHJ1	SHJ2	SHJ4	SHP2	SHP3	SHP4	SHR1	SHR2	SHR3	SHW2	SHW4	SHW5
SHC1		-0.089	0.071	0.015	**0.157**	-0.061	-0.060	**-0.189**	0.031	-0.011	0.003	-0.084	0.076	0.028	-0.069
SHC3	-0.089		-0.031	-0.089	0.032	-0.084	0.032	0.009	0.070	0.019	0.051	-0.030	0.035	0.021	0.045
SHC4	0.071	-0.031		**0.198**	0.010	**-0.103**	-0.033	**-0.103**	-0.017	-0.037	0.038	0.008	-0.081	-0.009	**-0.130**
SHJ1	0.015	-0.089	**0.198**		**-0.205**	0.066	0.040	**0.160**	**-0.105**	**-0.102**	-0.035	0.075	**-0.133**	**-0.181**	**-0.122**
SHJ2	**0.157**	0.032	0.010	-0.205		-0.056	-0.087	**-0.193**	0.022	0.019	0.037	-0.061	-0.012	0.071	-0.021
SHJ4	-0.061	-0.084	**-0.103**	0.066	-0.056		0.098	0.052	-0.068	0.069	-0.053	-0.034	**0.114**	-0.050	**0.150**
SHP2	-0.060	0.032	-0.033	0.040	-0.087	0.098		**0.159**	-0.039	-0.054	-0.029	**0.138**	-0.034	-0.043	-0.051
SHP3	**-0.189**	0.009	**-0.103**	**0.160**	**-0.193**	0.052	**0.159**		-0.027	-0.049	0.003	0.096	-0.020	-0.045	0.015
SHP4	0.031	0.070	-0.017	**-0.105**	0.022	-0.068	-0.039	-0.027		-0.055	-0.019	0.047	0.017	0.015	0.036
SHR1	-0.011	0.019	-0.037	**-0.102**	0.019	0.069	-0.054	-0.049	-0.055		0.036	-0.047	0.025	0.063	-0.019
SHR2	0.003	0.051	0.038	-0.035	0.037	-0.053	-0.029	0.003	-0.019	0.036		-0.011	-0.055	0.051	-0.061
SHR3	-0.084	-0.030	0.008	0.075	-0.061	-0.034	**0.138**	0.096	0.047	-0.047	-0.011		-0.091	0.039	0.038
SHW2	0.076	0.035	-0.081	**-0.133**	-0.012	**0.114**	-0.034	-0.020	0.017	0.025	-0.055	-0.091		-0.077	0.062
SHW4	0.028	0.021	-0.009	**-0.181**	0.071	-0.050	-0.043	-0.045	0.015	0.063	0.051	0.039	-0.077		-0.039
SHW5	-0.069	0.045	**-0.130**	**-0.122**	-0.021	**0.150**	-0.051	0.015	0.036	-0.019	-0.061	0.038	0.062	-0.039	

Sri Lanka

```
lavaan 0.6-19 ended normally after 35 iterations

  Estimator                                      DWLS
  Optimization method                            NLMINB
  Number of model parameters                       85
  Row rank of the constraints matrix               25


  Number of observations                          632
```

```
   Number of missing patterns                        17

Parameter Estimates:

  Parameterization                             Delta
  Standard errors                         Robust.sem
  Information                               Expected
  Information saturated (h1) model       Unstructured

Latent Variables:
                Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
  Compassion =~
    SHC1           1.000                                0.484    0.484
    SHC3           1.173    0.148    7.941    0.000     0.567    0.567
    SHC4           1.155    0.128    9.047    0.000     0.558    0.558
  Joy =~
    SHJ1           1.000                                0.566    0.566
    SHJ2           0.577    0.090    6.437    0.000     0.327    0.327
    SHJ4           0.844    0.093    9.095    0.000     0.478    0.478
  Purpose =~
    SHP2           1.000                                0.470    0.470
    SHP3           1.217    0.110   11.108    0.000     0.572    0.572
    SHP4           0.986    0.096   10.295    0.000     0.463    0.463
  Resilience =~
    SHR1           1.000                                0.654    0.654
    SHR2           0.862    0.065   13.358    0.000     0.564    0.564
    SHR3           0.638    0.061   10.529    0.000     0.418    0.418
  Wisdom =~
    SHW2           1.000                                0.616    0.616
    SHW4           1.028    0.070   14.595    0.000     0.634    0.634
    SHW5           0.756    0.064   11.720    0.000     0.466    0.466

Covariances:
                Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
  Compassion ~~
    Joy            0.221    0.031    7.135    0.000     0.806    0.806
    Purpose        0.187    0.028    6.740    0.000     0.821    0.821
    Resilience     0.277    0.036    7.702    0.000     0.874    0.874
    Wisdom         0.240    0.033    7.340    0.000     0.804    0.804
  Joy ~~
    Purpose        0.266    0.030    8.953    0.000     1.000    1.000
    Resilience     0.324    0.037    8.839    0.000     0.873    0.873
    Wisdom         0.329    0.031   10.692    0.000     0.944    0.944
  Purpose ~~
    Resilience     0.339    0.033   10.410    0.000     1.103    1.103
    Wisdom         0.324    0.031   10.552    0.000     1.117    1.117
  Resilience ~~
    Wisdom         0.451    0.036   12.651    0.000     1.117    1.117

Variances:
                Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
   .SHC1          0.766                                0.766    0.766
```

```
    .SHC3              0.678                              0.678    0.678
    .SHC4              0.688                              0.688    0.688
    .SHJ1              0.679                              0.679    0.679
    .SHJ2              0.893                              0.893    0.893
    .SHJ4              0.771                              0.771    0.771
    .SHP2              0.779                              0.779    0.779
    .SHP3              0.673                              0.673    0.673
    .SHP4              0.785                              0.785    0.785
    .SHR1              0.572                              0.572    0.572
    .SHR2              0.682                              0.682    0.682
    .SHR3              0.826                              0.826    0.826
    .SHW2              0.620                              0.620    0.620
    .SHW4              0.598                              0.598    0.598
    .SHW5              0.783                              0.783    0.783
     Compassion        0.234    0.045    5.179    0.000   1.000    1.000
     Joy               0.321    0.052    6.143    0.000   1.000    1.000
     Purpose           0.221    0.038    5.797    0.000   1.000    1.000
     Resilience        0.428    0.052    8.296    0.000   1.000    1.000
     Wisdom            0.380    0.046    8.311    0.000   1.000    1.000


R-Square:
                      Estimate
     SHC1              0.234
     SHC3              0.322
     SHC4              0.312
     SHJ1              0.321
     SHJ2              0.107
     SHJ4              0.229
     SHP2              0.221
     SHP3              0.327
     SHP4              0.215
     SHR1              0.428
     SHR2              0.318
     SHR3              0.174
     SHW2              0.380
     SHW4              0.402
     SHW5              0.217


Average Absolute Residual:  0.044
Correlation Matrix Residuals with e_ij > 0.10 bolded.
```

Item	SHC1	SHC3	SHC4	SHJ1	SHJ2	SHJ4	SHP2	SHP3	SHP4	SHR1	SHR2	SHR3	SHW2	SHW4	SHW5
SHC1		0.006	0.029	-0.004	**0.105**	0.047	-0.080	0.008	-0.021	0.014	-0.047	0.038	0.026	-0.014	**-0.119**
SHC3	0.006		-0.031	**-0.111**	-0.063	-0.034	-0.023	0.035	0.040	-0.022	0.052	-0.063	0.007	-0.011	**0.135**
SHC4	0.029	-0.031		0.036	**0.110**	-0.009	-0.078	-0.005	0.071	0.009	-0.036	0.023	-0.055	-0.007	-0.016
SHJ1	-0.004	**-0.111**	0.036		**-0.103**	0.011	0.084	0.036	-0.017	-0.017	**-0.110**	0.082	-0.057	0.041	0.019
SHJ2	**0.105**	-0.063	**0.110**	**-0.103**		0.089	0.089	-0.041	-0.007	0.058	-0.003	-0.007	-0.001	**-0.155**	-0.050
SHJ4	0.047	-0.034	-0.009	0.011	0.089		0.022	**-0.101**	**-0.142**	0.041	-0.074	0.048	0.106	-0.048	0.027
SHP2	-0.080	-0.023	-0.078	0.084	0.089	0.022		-0.035	0.032	**-0.105**	0.003	0.010	-0.014	0.009	0.083
SHP3	0.008	0.035	-0.005	0.036	-0.041	**-0.101**	-0.035		0.007	-0.015	0.010	0.026	**-0.111**	0.046	0.057
SHP4	-0.021	0.040	0.071	-0.017	-0.007	**-0.142**	0.032	0.007		-0.015	0.087	0.008	-0.022	-0.045	-0.026
SHR1	0.014	-0.022	0.009	-0.017	0.058	0.041	**-0.105**	-0.015	-0.015		0.042	-0.020	0.072	0.036	**-0.149**
SHR2	-0.047	0.052	-0.036	**-0.110**	-0.003	-0.074	0.003	0.010	0.087	0.042		-0.039	-0.009	0.017	-0.028
SHR3	0.038	-0.063	0.023	0.082	-0.007	0.048	0.010	0.026	0.008	-0.020	-0.039		-0.018	-0.021	-0.035

Item	SHC1	SHC3	SHC4	SHJ1	SHJ2	SHJ4	SHP2	SHP3	SHP4	SHR1	SHR2	SHR3	SHW2	SHW4	SHW5
SHW2	0.026	0.007	-0.055	-0.057	-0.001	**0.106**	-0.014	**-0.111**	-0.022	0.072	-0.009	-0.018		0.000	0.012
SHW4	-0.014	-0.011	-0.007	0.041	**-0.155**	-0.048	0.009	0.046	-0.045	0.036	0.017	-0.021	0.000		-0.012
SHW5	**-0.119**	**0.135**	-0.016	0.019	-0.050	0.027	0.083	0.057	-0.026	**-0.149**	-0.028	-0.035	0.012	-0.012	

Thailand

```
lavaan 0.6-19 ended normally after 36 iterations

  Estimator                                         DWLS
  Optimization method                             NLMINB
  Number of model parameters                          85
  Row rank of the constraints matrix                  25

  Number of observations                             562
  Number of missing patterns                          65


Parameter Estimates:

  Parameterization                                 Delta
  Standard errors                             Robust.sem
  Information                                   Expected
  Information saturated (h1) model          Unstructured

Latent Variables:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
  Compassion =~
    SHC1              1.000                                0.648    0.648
    SHC3              0.984    0.079   12.513    0.000     0.638    0.638
    SHC4              0.879    0.078   11.227    0.000     0.570    0.570
  Joy =~
    SHJ1              1.000                                0.521    0.521
    SHJ2              0.808    0.094    8.553    0.000     0.421    0.421
    SHJ4              0.755    0.089    8.533    0.000     0.393    0.393
  Purpose =~
    SHP2              1.000                                0.467    0.467
    SHP3              1.149    0.104   11.024    0.000     0.537    0.537
    SHP4              0.993    0.093   10.672    0.000     0.464    0.464
  Resilience =~
    SHR1              1.000                                0.698    0.698
    SHR2              0.930    0.056   16.519    0.000     0.649    0.649
    SHR3              0.514    0.063    8.145    0.000     0.359    0.359
  Wisdom =~
    SHW2              1.000                                0.726    0.726
    SHW4              0.991    0.043   23.320    0.000     0.720    0.720
    SHW5              0.913    0.049   18.707    0.000     0.663    0.663


Covariances:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
```

```
  Compassion ~~
    Joy              0.193    0.031     6.332    0.000    0.573    0.573
    Purpose          0.239    0.027     8.882    0.000    0.791    0.791
    Resilience       0.268    0.031     8.784    0.000    0.594    0.594
    Wisdom           0.384    0.030    12.986    0.000    0.815    0.815
  Joy ~~
    Purpose          0.284    0.031     9.191    0.000    1.169    1.169
    Resilience       0.399    0.033    12.012    0.000    1.099    1.099
    Wisdom           0.321    0.030    10.538    0.000    0.849    0.849
  Purpose ~~
    Resilience       0.324    0.032    10.036    0.000    0.994    0.994
    Wisdom           0.314    0.029    10.690    0.000    0.926    0.926
  Resilience ~~
    Wisdom           0.462    0.029    15.977    0.000    0.912    0.912

Variances:
                   Estimate  Std.Err  z-value  P(>|z|)  Std.lv   Std.all
   .SHC1             0.580                                0.580    0.580
   .SHC3             0.593                                0.593    0.593
   .SHC4             0.675                                0.675    0.675
   .SHJ1             0.729                                0.729    0.729
   .SHJ2             0.823                                0.823    0.823
   .SHJ4             0.845                                0.845    0.845
   .SHP2             0.782                                0.782    0.782
   .SHP3             0.712                                0.712    0.712
   .SHP4             0.785                                0.785    0.785
   .SHR1             0.513                                0.513    0.513
   .SHR2             0.579                                0.579    0.579
   .SHR3             0.871                                0.871    0.871
   .SHW2             0.472                                0.472    0.472
   .SHW4             0.482                                0.482    0.482
   .SHW5             0.560                                0.560    0.560
    Compassion       0.420    0.048     8.820    0.000    1.000    1.000
    Joy              0.271    0.049     5.538    0.000    1.000    1.000
    Purpose          0.218    0.037     5.884    0.000    1.000    1.000
    Resilience       0.487    0.041    11.947    0.000    1.000    1.000
    Wisdom           0.528    0.037    14.289    0.000    1.000    1.000

R-Square:
                   Estimate
    SHC1             0.420
    SHC3             0.407
    SHC4             0.325
    SHJ1             0.271
    SHJ2             0.177
    SHJ4             0.155
    SHP2             0.218
    SHP3             0.288
    SHP4             0.215
    SHR1             0.487
    SHR2             0.421
    SHR3             0.129
```

```
      SHW2                      0.528
      SHW4                      0.518
      SHW5                      0.440


Average Absolute Residual:  0.042
Correlation Matrix Residuals with e_ij > 0.10 bolded.
```

Item	SHC1	SHC3	SHC4	SHJ1	SHJ2	SHJ4	SHP2	SHP3	SHP4	SHR1	SHR2	SHR3	SHW2	SHW4	SHW5
SHC1		-0.070	-0.025	0.014	0.044	-0.047	-0.052	0.087	-0.065	0.071	-0.076	0.065	0.091	0.003	-0.049
SHC3	-0.070		0.093	-0.078	0.076	-0.089	0.015	-0.033	-0.035	-0.029	0.014	-0.013	0.005	-0.067	0.098
SHC4	-0.025	0.093		0.000	0.054	0.029	0.093	-0.011	-0.022	-0.045	-0.012	0.028	-0.076	-0.072	0.031
SHJ1	0.014	-0.078	0.000		-0.062	0.058	-0.016	-0.009	0.072	0.000	-0.023	0.085	-0.002	-0.030	-0.008
SHJ2	0.044	0.076	0.054	-0.062		0.001	0.005	-0.054	0.004	-0.025	-0.007	**-0.119**	-0.011	0.062	0.045
SHJ4	-0.047	-0.089	0.029	0.058	0.001		-0.072	0.074	-0.060	-0.022	0.047	0.075	0.028	0.008	**-0.104**
SHP2	-0.052	0.015	0.093	-0.016	0.005	-0.072		-0.058	**0.105**	**-0.105**	0.079	0.019	-0.064	-0.009	0.037
SHP3	0.087	-0.033	-0.011	-0.009	-0.054	0.074	-0.058		-0.057	0.032	-0.012	-0.013	-0.010	0.021	-0.001
SHP4	-0.065	-0.035	-0.022	0.072	0.004	-0.060	**0.105**	-0.057		-0.033	0.008	-0.013	-0.004	-0.062	**0.101**
SHR1	0.071	-0.029	-0.045	0.000	-0.025	-0.022	**-0.105**	0.032	-0.033		0.018	-0.013	-0.004	0.079	-0.057
SHR2	-0.076	0.014	-0.012	-0.023	-0.007	0.047	0.079	-0.012	0.008	0.018		-0.046	-0.042	0.018	-0.022
SHR3	0.065	-0.013	0.028	0.085	**-0.119**	0.075	0.019	-0.013	-0.013	-0.013	-0.046		-0.019	0.036	-0.071
SHW2	0.091	0.005	-0.076	-0.002	-0.011	0.028	-0.064	-0.010	-0.004	-0.004	-0.042	-0.019		0.024	0.015
SHW4	0.003	-0.067	-0.072	-0.030	0.062	0.008	-0.009	0.021	-0.062	0.079	0.018	0.036	0.024		-0.056
SHW5	-0.049	0.098	0.031	-0.008	0.045	**-0.104**	0.037	-0.001	**0.101**	-0.057	-0.022	-0.071	0.015	-0.056	

Uganda

```
lavaan 0.6-19 ended normally after 50 iterations

  Estimator                                         DWLS
  Optimization method                             NLMINB
  Number of model parameters                          99
  Row rank of the constraints matrix                  33


  Number of observations                             559
  Number of missing patterns                           6

Parameter Estimates:

  Parameterization                                 Delta
  Standard errors                             Robust.sem
  Information                                   Expected
  Information saturated (h1) model          Unstructured


Latent Variables:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
  Compassion =~
    SHC1              1.000                                0.734    0.734
    SHC3              0.995    0.034   29.414    0.000     0.731    0.731
    SHC4              0.733    0.042   17.361    0.000     0.538    0.538
  Joy =~
    SHJ1              1.000                                0.798    0.798
    SHJ2              0.829    0.035   23.924    0.000     0.661    0.661
    SHJ4              1.048    0.028   37.390    0.000     0.836    0.836
```

```
Purpose =~
  SHP2          1.000                                 0.630   0.630
  SHP3          1.174    0.058   20.403   0.000        0.740   0.740
  SHP4          1.275    0.057   22.438   0.000        0.803   0.803
Resilience =~
  SHR1          1.000                                 0.584   0.584
  SHR2          1.153    0.046   24.850   0.000        0.673   0.673
  SHR3          1.135    0.058   19.524   0.000        0.663   0.663
Wisdom =~
  SHW2          1.000                                 0.744   0.744
  SHW4          1.051    0.038   27.780   0.000        0.782   0.782
  SHW5          1.036    0.039   26.651   0.000        0.771   0.771
Spirituality =~
  SHS1          1.000                                 0.882   0.882
  SHS2          1.072    0.022   49.664   0.000        0.945   0.945
  SHS3          1.093    0.021   51.265   0.000        0.964   0.964


Covariances:
                Estimate  Std.Err  z-value  P(>|z|)  Std.lv  Std.all
  Compassion ~~
    Joy         0.422    0.024   17.390   0.000        0.721   0.721
    Purpose     0.443    0.024   18.580   0.000        0.959   0.959
    Resilience  0.457    0.025   18.170   0.000        1.065   1.065
    Wisdom      0.527    0.027   19.820   0.000        0.965   0.965
    Spirituality 0.406   0.022   18.170   0.000        0.628   0.628
  Joy ~~
    Purpose     0.364    0.023   15.989   0.000        0.723   0.723
    Resilience  0.380    0.023   16.778   0.000        0.815   0.815
    Wisdom      0.366    0.026   13.940   0.000        0.617   0.617
    Spirituality 0.638   0.023   27.280   0.000        0.907   0.907
  Purpose ~~
    Resilience  0.377    0.023   16.444   0.000        1.024   1.024
    Wisdom      0.433    0.023   18.753   0.000        0.923   0.923
    Spirituality 0.345   0.023   15.312   0.000        0.621   0.621
  Resilience ~~
    Wisdom      0.449    0.025   17.669   0.000        1.034   1.034
    Spirituality 0.334   0.022   15.281   0.000        0.648   0.648
  Wisdom ~~
    Spirituality 0.276   0.023   11.936   0.000        0.421   0.421


Variances:
                Estimate  Std.Err  z-value  P(>|z|)  Std.lv  Std.all
  .SHC1         0.461                                 0.461   0.461
  .SHC3         0.466                                 0.466   0.466
  .SHC4         0.711                                 0.711   0.711
  .SHJ1         0.363                                 0.363   0.363
  .SHJ2         0.563                                 0.563   0.563
  .SHJ4         0.300                                 0.300   0.300
  .SHP2         0.603                                 0.603   0.603
  .SHP3         0.453                                 0.453   0.453
  .SHP4         0.355                                 0.355   0.355
```

```
            .SHR1              0.659                              0.659   0.659
            .SHR2              0.547                              0.547   0.547
            .SHR3              0.561                              0.561   0.561
            .SHW2              0.446                              0.446   0.446
            .SHW4              0.388                              0.388   0.388
            .SHW5              0.405                              0.405   0.405
            .SHS1              0.222                              0.222   0.222
            .SHS2              0.106                              0.106   0.106
            .SHS3              0.071                              0.071   0.071
         Compassion           0.539    0.033   16.179   0.000     1.000   1.000
         Joy                  0.637    0.031   20.739   0.000     1.000   1.000
         Purpose              0.397    0.033   12.104   0.000     1.000   1.000
         Resilience           0.341    0.029   11.722   0.000     1.000   1.000
         Wisdom               0.554    0.034   16.254   0.000     1.000   1.000
         Spirituality         0.778    0.025   30.801   0.000     1.000   1.000


R-Square:
                       Estimate
         SHC1            0.539
         SHC3            0.534
         SHC4            0.289
         SHJ1            0.637
         SHJ2            0.437
         SHJ4            0.700
         SHP2            0.397
         SHP3            0.547
         SHP4            0.645
         SHR1            0.341
         SHR2            0.453
         SHR3            0.439
         SHW2            0.554
         SHW4            0.612
         SHW5            0.595
         SHS1            0.778
         SHS2            0.894
         SHS3            0.929


Average Absolute Residual:   0.039
Correlation Matrix Residuals with e_ij > 0.10 bolded.
```

Item	SHC1	SHC3	SHC4	SHJ1	SHJ2	SHJ4	SHP2	SHP3	SHP4	SHR1	SHR2	SHR3	SHW2	SHW4	SHW5	SHS1	SHS2	SHS3
SHC1		-0.010	0.067	-0.045	0.034	0.040	-0.053	-0.004	0.007	0.039	0.000	-0.024	-0.014	-0.039	-0.021	0.084	-0.066	0.033
SHC3	-0.010		-0.051	-0.062	0.060	-0.020	0.067	0.027	-0.034	-0.039	0.040	-0.012	0.017	0.029	0.025	0.045	**-0.114**	-0.089
SHC4	0.067	-0.051		0.008	0.040	-0.040	0.038	-0.063	-0.016	0.065	-0.015	**-0.101**	0.033	-0.060	0.019	0.049	0.038	0.055
SHJ1	-0.045	-0.062	0.008		-0.048	0.023	-0.030	-0.002	0.003	-0.039	-0.086	0.043	-0.047	-0.020	-0.021	0.009	0.062	-0.005
SHJ2	0.034	0.060	0.040	-0.048		0.003	0.009	0.059	0.048	-0.091	0.007	**0.139**	**0.128**	0.064	-0.006	-0.030	-0.052	-0.094
SHJ4	0.040	-0.020	-0.040	0.023	0.003		-0.041	0.000	-0.058	0.006	-0.071	0.049	-0.014	-0.021	-0.044	0.035	0.015	-0.036
SHP2	-0.053	0.067	0.038	-0.030	0.009	-0.041		0.000	0.015	-0.076	0.034	0.044	-0.030	-0.004	0.029	0.025	-0.093	-0.022
SHP3	-0.004	0.027	-0.063	-0.002	0.059	0.000	0.000		-0.009	0.007	-0.018	-0.001	-0.062	-0.031	-0.010	0.099	-0.021	0.030
SHP4	0.007	-0.034	-0.016	0.003	0.048	-0.058	0.015	-0.009		0.032	-0.010	-0.037	-0.011	0.031	0.057	0.033	-0.093	-0.027
SHR1	0.039	-0.039	0.065	-0.039	-0.091	0.006	-0.076	0.007	0.032		**0.105**	-0.098	-0.028	-0.003	-0.012	0.070	-0.054	-0.016
SHR2	0.000	0.040	-0.015	-0.086	0.007	-0.071	0.034	-0.018	-0.010	**0.105**		-0.036	0.014	0.044	0.039	-0.023	-0.082	-0.086
SHR3	-0.024	-0.012	**-0.101**	0.043	**0.139**	0.049	0.044	-0.001	-0.037	-0.098	-0.036		-0.043	-0.009	-0.046	0.082	0.036	0.022
SHW2	-0.014	0.017	0.033	-0.047	**0.128**	-0.014	-0.030	-0.062	-0.011	-0.028	0.014	-0.043		0.027	0.015	0.072	-0.020	0.010
SHW4	-0.039	0.029	-0.060	-0.020	0.064	-0.021	-0.004	-0.031	0.031	-0.003	0.044	-0.009	0.027		-0.048	0.062	-0.040	-0.014
SHW5	-0.021	0.025	0.019	-0.021	-0.006	-0.044	0.029	-0.010	0.057	-0.012	0.039	-0.046	0.015	-0.048		-0.004	-0.086	-0.029

Item	SHC1	SHC3	SHC4	SHJ1	SHJ2	SHJ4	SHP2	SHP3	SHP4	SHR1	SHR2	SHR3	SHW2	SHW4	SHW5	SHS1	SHS2	SHS3
SHS1	0.084	0.045	0.049	0.009	-0.030	0.035	0.025	0.099	0.033	0.070	-0.023	0.082	0.072	0.062	-0.004		-0.059	-0.051
SHS2	-0.066	**-0.114**	0.038	0.062	-0.052	0.015	-0.093	-0.021	-0.093	-0.054	-0.082	0.036	-0.020	-0.040	-0.086	-0.059		0.042
SHS3	0.033	-0.089	0.055	-0.005	-0.094	-0.036	-0.022	0.030	-0.027	-0.016	-0.086	0.022	0.010	-0.014	-0.029	-0.051	0.042	

Exhibit E

Test-Retest Reliability Estimates

Table E1. Test-retest estimates of reliability (N=228)

Variable	Est	95% CI	p-value
Individual Items			
SHC1	0.53	(0.43,0.62)	< 2.22e-16
SHC2	0.46	(0.35,0.56)	3.64e-13
SHC3	0.48	(0.37,0.58)	2.28e-14
SHC4	0.54	(0.43,0.62)	< 2.22e-16
SHC5	0.61	(0.52,0.68)	< 2.22e-16
SHJ1	0.60	(0.51,0.68)	< 2.22e-16
SHJ2	0.64	(0.55,0.71)	< 2.22e-16
SHJ3	0.36	(0.24,0.47)	2.38e-08
SHJ4	0.56	(0.46,0.65)	< 2.22e-16
SHJ5	0.52	(0.42,0.61)	< 2.22e-16
SHJ6	0.77	(0.71,0.82)	< 2.22e-16
SHP1	0.47	(0.36,0.57)	8.51e-14
SHP2	0.68	(0.61,0.75)	< 2.22e-16
SHP3	0.52	(0.42,0.61)	< 2.22e-16
SHP4	0.45	(0.33,0.55)	2.67e-12
SHP5	0.60	(0.51,0.68)	< 2.22e-16
SHP6	0.57	(0.48,0.66)	< 2.22e-16
SHR1	0.54	(0.44,0.62)	< 2.22e-16
SHR2	0.50	(0.40,0.59)	8.00e-16
SHR3	0.57	(0.47,0.65)	< 2.22e-16
SHR4	0.49	(0.38,0.58)	5.03e-15
SHR5	0.61	(0.52,0.68)	< 2.22e-16
SHR6	0.67	(0.59,0.74)	< 2.22e-16
SHW1	0.39	(0.27,0.50)	1.34e-09
SHW2	0.52	(0.42,0.61)	< 2.22e-16
SHW3	0.50	(0.40,0.60)	6.96e-16
SHW4	0.49	(0.38,0.58)	8.20e-15
SHW5	0.39	(0.27,0.49)	2.12e-09
SHS1	0.50	(0.25,0.68)	2.59e-04
SHS2	0.30	(0.01,0.54)	0.041
SHS3	0.37	(0.10,0.59)	0.008
SHS4	0.26	(-0.02,0.51)	0.067
SHS5	0.51	(0.26,0.69)	2.50e-04
SHS6	0.51	(0.26,0.69)	2.10e-04

Criterion Variable Items

Existing World Vision Hope indicator (FD1)
Can you tell me if these things are true for you and how often they happened in the last three months?
* I feel that life is a positive experience
* I feel very fulfilled and satisfied with life
* I feel good about my future
* I believe there is some real purpose for my life
Response options: Almost never true, Not very often true, Sometimes true, Often true, Almost always true

Existing World Vision Experiencing God's Love indicator (FD2)
Can you tell me if these things are true for you and how often they happened in the last three months?
* I find strength in my relationship with God
* I feel God's love for me directly
* I have a meaningful relationship with God
* In general, I feel close to God
Response options: Almost never true, Not very often true, Sometimes true, Often true, Almost always true

Hope (Snyders Hope Scale)
* I think I am doing pretty well.
* I can think of many ways to get the things in life that are most important to me.
* I am doing just as well as other kids my age.
* When I have a problem, I can come up with lots of ways to solve it.
* I think the things I have done in the past will help me in the future.
* Even when others want to quit, I know that I can find ways to solve the problem.
* Response options: None of the time, A little of the time, Some of the time, A lot of the time, Most of the time, All of the time

Adolescent Flourishing Index
* Overall, how satisfied are you with life as a whole these days?
* In general, I consider myself a happy person.
* In general, how would you rate your physical health?
* How would you rate your overall mental health?
* Overall, to what extent do you feel the things you do in your life are worthwhile?
* I am doing things now that will help me achieve my goals in life.
* I always act to promote good in all circumstances, even in difficult and challenging situations.
* I am always able to give up some happiness now for greater happiness later.
* I am content with my friendships and relationships.
* I have people in my life I can talk to about things that really matter.
* My family has enough money to live a truly decent life.
* How often do you worry about safety, food, or housing?

All items used five ordered response options with anchors varying by item.

Big 5 Personality Traits

Openness to Experience, "I see myself as someone who has lots of ideas."
Conscientiousness, "I see myself as someone who organises themselves well."
Extraversion, "I see myself as someone who is very sociable."
Neuroticism, "I see myself as someone who is easily annoyed."
Agreeableness, "I see myself as someone who always think about other people's feelings."
Response categories: Strongly Disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree.

Table F1. Composite score descriptive statistics used in criterion correlations.

Variable	n	Mean	SD	Min	Max	alpha
Signs of Hope Total Score (18 item version)	4,606	2.95	0.66	0	4	0.91 (0.90, 0.92)
Compassion (3 items)	4,603	2.83	0.80	0	4	0.65 (0.64, 0.66)
Joy (3 items)	4,602	3.04	0.80	0	4	0.60 (0.59, 0.61)
Purpose (3 items)	4,602	2.93	0.79	0	4	0.68 (0.67, 0.69)
Resilience (3 items)	4,601	2.92	0.80	0	4	0.67 (0.66, 0.68)
Wisdom (3 items)	4,602	2.91	0.78	0	4	0.72 (0.71, 0.73)
Spiritual Life (3 items)	1,626	3.37	0.68	0	4	0.83 (0.82, 0.84)
Signs of Hope Total Score (34 item version)	4,606	2.95	0.66	0	4	0.95 (0.94, 0.95)
Compassion (5 items)	4,604	2.93	0.74	0	4	0.77 (0.76, 0.79)
Joy (6 items)	4,603	2.96	0.73	0	4	0.75 (0.74, 0.77)
Purpose (6 items)	4,604	2.98	0.73	0	4	0.81 (0.80, 0.82)
Resilience (6 items)	4,605	2.84	0.72	0	4	0.76 (0.74, 0.78)
Wisdom (5 items)	4,605	2.95	0.72	0	4	0.78 (0.76, 0.80)
Spiritual Life (6 items)	1,627	3.31	0.65	0	4	0.86 (0.84, 0.88)
WV Hope Indicator (FD01)	4,575	2.97	0.82	0	4	0.85 (0.84,0.85)
WV God's Love Indicator (FD02)	1,615	3.33	0.71	0	4	0.89 (0.89,0.90)
Snyder's Adolescent Hope Scale	4,599	3.22	1.01	0	5	0.87 (0.87,0.88)
Secure Flourishing Index (12 items)	4,604	2.91	0.52	0	4	0.78 (0.77,0.79)
Happiness & Life Satisfaction (2 items)	4,579	3.03	0.84	0	4	0.45*
Physical & Mental Health (2 items)	4,577	3.03	0.77	0	4	0.55*
Meaning & Purpose (2 items)	4,577	3.04	0.70	0	4	0.32*
Character & Virtue (2 items)	4,546	2.73	0.78	0	4	0.40*
Relationship Quality (2 items)	4,573	3.12	0.70	0	4	0.39*
Financial & Material Stability (2 items)	4,550	2.53	0.93	0	4	0.20*
Agreeableness (1-item)	4,518	3.97	0.90	1	5	
Conscientiousness (1-item)	4,534	3.97	0.93	1	5	
Extraversion (1-item)	4,538	4.02	0.97	1	5	
Neuroticism (1-item)	4,505	3.07	1.36	1	5	
Openness to Experience (1-item)	4,510	3.96	0.95	1	5	

*Correlation between items for two-item composites of the flourishing index.

Next, Table F2 provides the estimated correlation among the domains of the 18-item version of the Signs of Hope Scale with flourishing and personality.

Table F2. Criterion correlations of the domains of the WV Signs of Hope Scale with flourishing and personality.

Variable	Total Score	Compassion	Joy	Purpose	Resilience	Wisdom	Spiritual Life
Secure Flourishing Index (12 items)	0.30 (0.27,0.33)	0.19 (0.16,0.22)	0.25 (0.23,0.28)	0.23 (0.20,0.25)	0.25 (0.22,0.28)	0.21 (0.18,0.24)	0.25 (0.20,0.29)
Happiness & Life Satisfaction (2 items)	0.19 (0.16,0.22)	0.12 (0.09,0.15)	0.24 (0.21,0.27)	0.15 (0.12,0.18)	0.17 (0.15,0.20)	0.13 (0.11,0.16)	0.17 (0.12,0.22)
Physical & Mental Health (2 items)	0.15 (0.13,0.18)	0.09 (0.06,0.12)	0.16 (0.13,0.19)	0.15 (0.12,0.18)	0.15 (0.12,0.18)	0.12 (0.09,0.15)	0.23 (0.18,0.27)
Meaning & Purpose (2 items)	0.26 (0.23,0.29)	0.17 (0.14,0.20)	0.23 (0.20,0.26)	0.24 (0.22,0.27)	0.24 (0.22,0.27)	0.20 (0.17,0.23)	0.22 (0.17,0.26)
Character & Virtue (2 items)	0.25 (0.22,0.27)	0.21 (0.18,0.23)	0.16 (0.13,0.19)	0.24 (0.22,0.27)	0.22 (0.19,0.25)	0.22 (0.19,0.24)	0.15 (0.10,0.20)
Relationship Quality (2 items)	0.23 (0.20,0.25)	0.18 (0.15,0.21)	0.23 (0.20,0.25)	0.17 (0.14,0.19)	0.19 (0.16,0.22)	0.19 (0.16,0.21)	0.21 (0.16,0.25)
Financial & Material Stability (2 items)	-0.00 (-0.03,0.02)	0.01 (-0.02,0.04)	0.02 (-0.01,0.05)	-0.02 (-0.04,0.01)	0.03 (0.01,0.06)	0.00 (-0.03,0.03)	0.00 (-0.05,0.05)
Personality							
Agreeableness	0.43 (0.41,0.45)	0.42 (0.40,0.45)	0.34 (0.32,0.37)	0.32 (0.30,0.35)	0.32 (0.30,0.35)	0.37 (0.35,0.40)	0.27 (0.22,0.31)
Conscientiousness	0.45 (0.42,0.47)	0.33 (0.30,0.35)	0.38 (0.35,0.40)	0.39 (0.37,0.42)	0.39 (0.36,0.41)	0.39 (0.36,0.41)	0.32 (0.27,0.36)
Extraversion	0.47 (0.44,0.49)	0.37 (0.34,0.39)	0.42 (0.39,0.44)	0.39 (0.36,0.41)	0.39 (0.37,0.41)	0.38 (0.35,0.40)	0.33 (0.28,0.37)
Neuroticism	0.04 (0.01,0.07)	0.07 (0.04,0.09)	0.03 (0.00,0.06)	-0.00 (-0.03,0.03)	0.04 (0.01,0.07)	0.03 (-0.00,0.06)	0.03 (-0.02,0.08)
Openness to Experience	0.45 (0.42,0.47	0.35 (0.32,0.37)	0.34 (0.31,0.36)	0.41 (0.39,0.43)	0.40 (0.38,0.43)	0.38 (0.35,0.40)	0.27 (0.22,0.31)

Table F3 provides the estimated correlation among the domains of the 34-item version of the Signs of Hope Scale with existing indicator scores, Snyder's Hope scale, flourishing, and personality.

Table F3. Criterion correlations of the WV Signs of Hope Scale (34-item version)

Variable	Total Score	Compassion	Joy	Purpose	Resilience	Wisdom	Spiritual Life
Hope Indicator (FD01)	0.66 (0.64,0.67)	0.52 (0.50,0.54)	0.61 (0.59,0.63)	0.62 (0.60,0.64)	0.59 (0.57,0.61)	0.55 (0.53,0.57)	0.52 (0.48,0.55)
God's Love Indicator (FD02)	0.68 (0.66,0.71)	0.49 (0.45,0.52)	0.63 (0.59,0.65)	0.56 (0.53,0.60)	0.56 (0.52,0.59)	0.46 (0.42,0.50)	0.74 (0.72,0.77)
Snyder's Adolescent Hope	0.67 (0.65,0.69)	0.55 (0.53,0.57)	0.56 (0.54,0.58)	0.64 (0.62,0.65)	0.64 (0.62,0.65)	0.58 (0.57,0.60)	0.45 (0.41,0.49)

Table F3. Criterion correlations of the WV Signs of Hope Scale (34-item version)

Variable Scale	Total Score	Compassion	Joy	Purpose	Resilience	Wisdom	Spiritual Life
Secure Flourishing Index (12 items)	0.26 (0.24,0.29)	0.20 (0.18,0.23)	0.26 (0.24,0.29)	0.26 (0.23,0.28)	0.25 (0.23,0.28)	0.22 (0.20,0.25)	0.26 (0.22,0.31)
Happiness & Life Satisfaction (2 items)	0.20 (0.17,0.22)	0.13 (0.10,0.16)	0.24 (0.22,0.27)	0.17 (0.14,0.20)	0.18 (0.15,0.21)	0.14 (0.12,0.17)	0.19 (0.14,0.23)
Physical & Mental Health (2 items)	0.15 (0.12,0.17)	0.09 (0.06,0.12)	0.14 (0.11,0.17)	0.17 (0.14,0.19)	0.15 (0.12,0.17)	0.12 (0.10,0.15)	0.22 (0.17,0.27)
Meaning & Purpose (2 items)	0.26 (0.23,0.29)	0.19 (0.16,0.21)	0.23 (0.20,0.26)	0.28 (0.25,0.31)	0.25 (0.22,0.28)	0.23 (0.20,0.25)	0.21 (0.17,0.26)
Character & Virtue (2 items)	0.24 (0.21,0.27)	0.21 (0.18,0.24)	0.18 (0.16,0.21)	0.26 (0.23,0.29)	0.22 (0.19,0.25)	0.22 (0.19,0.24)	0.15 (0.10,0.20)
Relationship Quality (2 items)	0.23 (0.21,0.26)	0.21 (0.18,0.24)	0.24 (0.21,0.27)	0.20 (0.17,0.22)	0.20 (0.17,0.22)	0.20 (0.18,0.23)	0.24 (0.19,0.28)
Financial & Material Stability (2 items)	-0.00 (-0.03,0.02)	0.01 (-0.02,0.04)	0.02 (-0.01,0.05)	-0.01 (-0.04,0.02)	0.03 (0.00,0.06)	-0.00 (-0.03,0.03)	0.02 (-0.03,0.06)
Personality							
Agreeableness	0.44 (0.41,0.46)	0.44 (0.41,0.46)	0.40 (0.37,0.42)	0.35 (0.33,0.38)	0.36 (0.33,0.38)	0.40 (0.37,0.42)	0.31 (0.26,0.35)
Conscientiousness	0.46 (0.43,0.48)	0.37 (0.34,0.39)	0.39 (0.36,0.41)	0.43 (0.41,0.46)	0.42 (0.39,0.44)	0.41 (0.39,0.44)	0.33 (0.29,0.37)
Extraversion	0.48 (0.46,0.50)	0.41 (0.39,0.44)	0.43 (0.40,0.45)	0.44 (0.41,0.46)	0.43 (0.41,0.45)	0.41 (0.39,0.43)	0.35 (0.31,0.39)
Neuroticism	0.05 (0.02,0.08)	0.06 (0.03,0.09)	0.10 (0.07,0.13)	0.01 (-0.02,0.04)	0.03 (0.01,0.06)	0.02 (-0.01,0.04)	0.04 (-0.01,0.09)
Openness to Experience	0.45 (0.43,0.47)	0.36 (0.33,0.39)	0.36 (0.33,0.38)	0.46 (0.43,0.48)	0.42 (0.40,0.45)	0.40 (0.37,0.42)	0.27 (0.23,0.32)

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