# Center for Social Impact

## Chinese American Service League
華人諮詢服務霙

CASLservice.org/Impact

# A Quality Life

## Lessons from a Community Sample

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# SUMMARY

What's a quality life? Living well relies on one's own perception of where they are in relation to the world around them. This summer 2021, the Chinese American Service League, otherwise known as CASL, asked its clients about their quality of life. In its second time administering the World Health Organization Quality of Life-Brief (WHOQOL-BREF), CASL's Center for Social Impact (CSI) explored trends and identified key themes consistent with correlated sample characteristics. To find out more about this instrument, why we chose it and the reason we measure quality of life, check out our first report.

The point of measuring quality of life is to understand what factors in life contribute to living well. As seen in our most recent social determinants of health (SDoH) report, participant health is influenced by variables like economic security, safety, community, and built environment. While the SDoH reports contain useful information to capture what one's health is affected by, our quality of life initiative targets how those factors shape their perception or satisfaction with life.

Using both tools in tandem gives clients multiple outlets to express their needs and wants. Our findings contain broad implications for programming, policymaking and advocacy. This report highlights domain-specific takeaways from the most recent cohort of CASL clients. Following data collection, we analyzed responses based on sample characteristics and longitudinal differences. Statistical significance was calculated based on methods established during the previous collection period.

The value in having quality of life data is the ability to experience and respond to the needs of individuals and families we serve. Living well requires knowing what "well" is and our findings reflect that. As we continue our quality of life activities, we look forward to accompanying our community in living better together.

# ACKNOWLEDGEMENTS

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# OVERVIEW

In 1996, the [World Health Organization (WHO)](#) defined quality of life (QoL) as how individuals perceive their position in life in the cultural contexts where they live. Using this definition, the World Health Organization Quality of Life questionnaire (WHOQOL) seeks to assess life in 4 domains: physical, psychological, environment, and social relationships.

First launched in 2020, CASL used the WHOQOL (WHOQOL-BREF) to better understand how clients' perceived quality of life compares to their actual quality of life. To learn more about why the WHOQOL-BREF was selected, check out this [report](#).

# SURVEY METHODS AND SAMPLE CHARACTERISTICS

## METHODS

The 26-item questionnaire[1] was administered on paper translated in Chinese and English from July 12, 2021 to August 13, 2021. Taking approximately 5 minutes to complete, staff were instructed to collect finished surveys and drop them off securely. The first time the instrument was introduced, staff was required to manually record client responses in Salesforce. This requirement was eliminated with the support of designated CSI staff. By reducing the administrative burden on staff, we had greater control over distribution and quality control.

CSI staff provided weekly communication to all staff on target response acquisition and had higher response rates over last year. Descriptions of messaging can be found in the [supplementary materials](#).
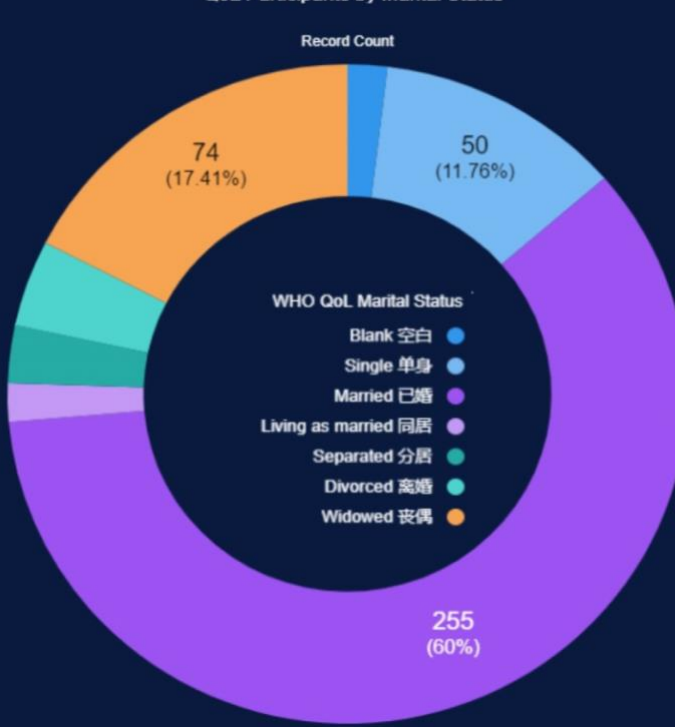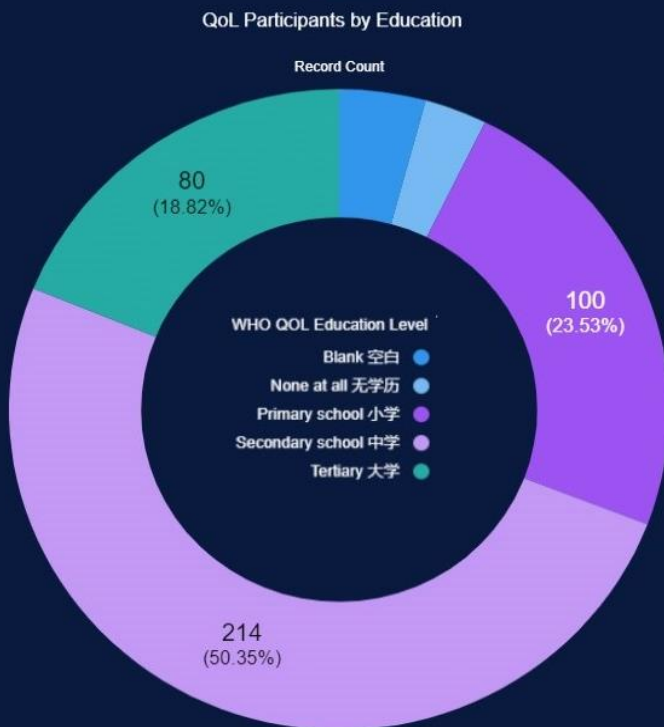
## MEET THE PARTICIPANTS

During the collection period, 452 participants responded, of which 425 responses were valid (click [here](#) for WHO criteria on validity). All CASL programs were instructed to meet a threshold of surveys collected. These thresholds ensure equal representation of clients enrolled in our programs. In this collection round, nearly 30% of all surveys were collected by our Wellness and Social Services (WSS) program serving older adults—WSS is a program housed in the Community & Family Wellness (CFW) department. Most programs met or exceeded their targets, representing the largest response collection to date.

It's important to note that although we had more participants this time around, only a fifth represents the same people. Caution is warranted when making direct comparisons between multiple samples. Sample characteristics for the most recent collection period are shown in [Figure 1](#). Click on the image to view full size.

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[1] "Survey," "assessment," "instrument," "questionnaire" and "tool" are used interchangeably throughout this report. Please note that these terms can signify different things for different disciplines and/or fields of study

**SAMPLE CHARACTERISTICS**

FIGURE 1: SAMPLE CHARACTERISTICS BY AGE (TOP LEFT), GENDER (TOP RIGHT), EDUCATION LEVEL (BOTTOM LEFT) AND MARITAL STATUS (BOTTOM RIGHT). TO ENLARGE, CLICK ON THE CORRESPONDING **DASHBOARD**.
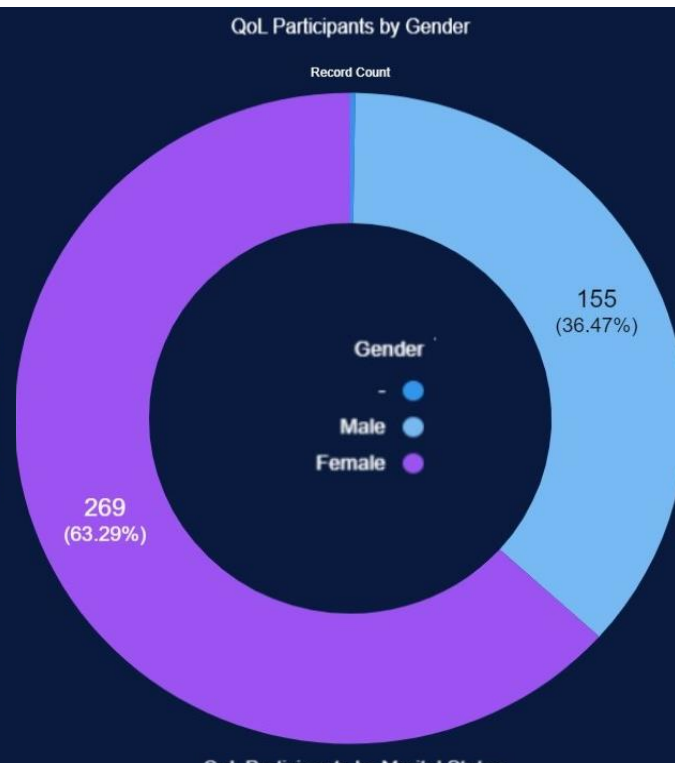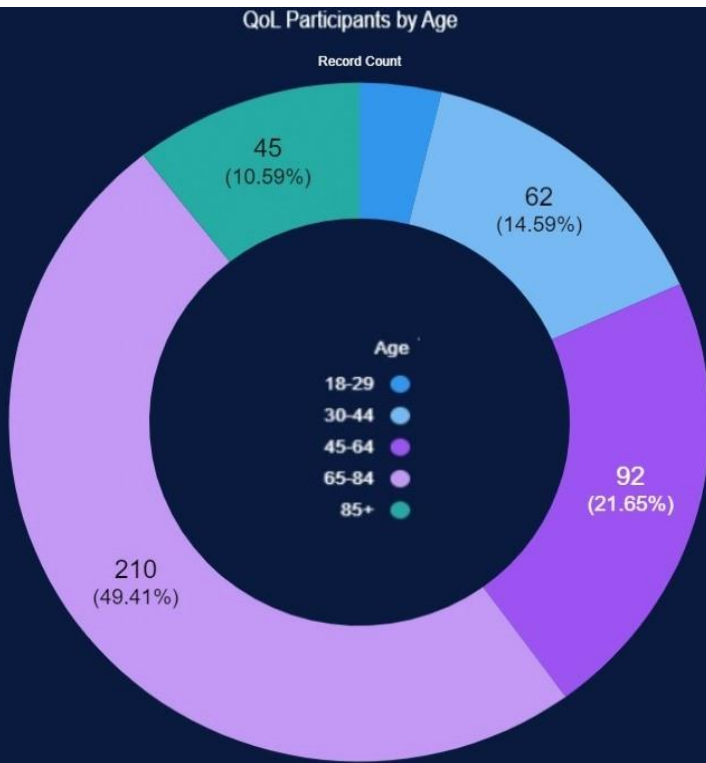
The benefit of having greater sample diversity is mapping a more accurate representation of the 5,000-plus clients CASL sees annually. During this collection period, there were a few participants who were participating in the survey a second time. There were 85 unique participants with multiple responses mapped longitudinally. By recording responses at different points throughout the year, we have the ability to chart changes in quality of life, drastic or not.

While the sample of participants with pre- and post- responses recorded is relatively small, we made several interesting observations, which we discuss in the results. The results section includes inferences drawn from this collection period and participants with longitudinal data available. Responses were analyzed by domain based on sample characteristics and adjusted as necessary. Check out our analytical procedures found in our initial report.

# RESULTS

While overall scoring paints a broad picture of quality of life, the differences mean little unless certain variables are held constant. For instance, age is an extremely influential factor that is likely to account for response variation. Holding certain characteristics constant, we are able to cut down "statistical noise[2]."

After accounting for sample differences between the 2 collection rounds, we can redirect our focus on participants with baseline data. The following section outlines dashboards limited to the most recent sample and offers insight into how demographics are correlated with participant responses.

## DASHBOARDS OVERVIEW

With 4 domains (physical, psychological, social relationships, and environment) in the WHOQOL-BREF, each asks a different set of questions which are scored accordingly. What overall quality of life scores miss in context, domain scores fill the gap. Domain scores from this collection period varied, mirroring the diversity of this round's sample.

Since the samples from both collection periods have different compositions, it's worth noting that certain characteristics like age corresponded with higher scores in some domains and lower scores in others. The following dashboard(s) indicate which of those characteristics had a relationship to response scoring. The characteristics we observed to be most significant this time around was age and educational attainment. In other words, participant age and education level were most likely to be predictive[3] of score changes across all 4 domains.

Captioned below each dashboard is a description of the most recent sample and how characteristics like age or educational attainment correlate with individual domain scores. Figure 2 and Figure 3 only show participants who responded to the survey during this collection period (July 12, 2021 to August 13, 2021). Click on the image(s) to view full size.

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[2] Statistical noise is unexplained variability within a data sample.
[3] Correlations are non-directional meaning no one characteristic or response 'caused' the other, only that there is a relationship that is not random.

# SELECT CHARACTERISTICS AND DOMAIN SCORES

## AGE
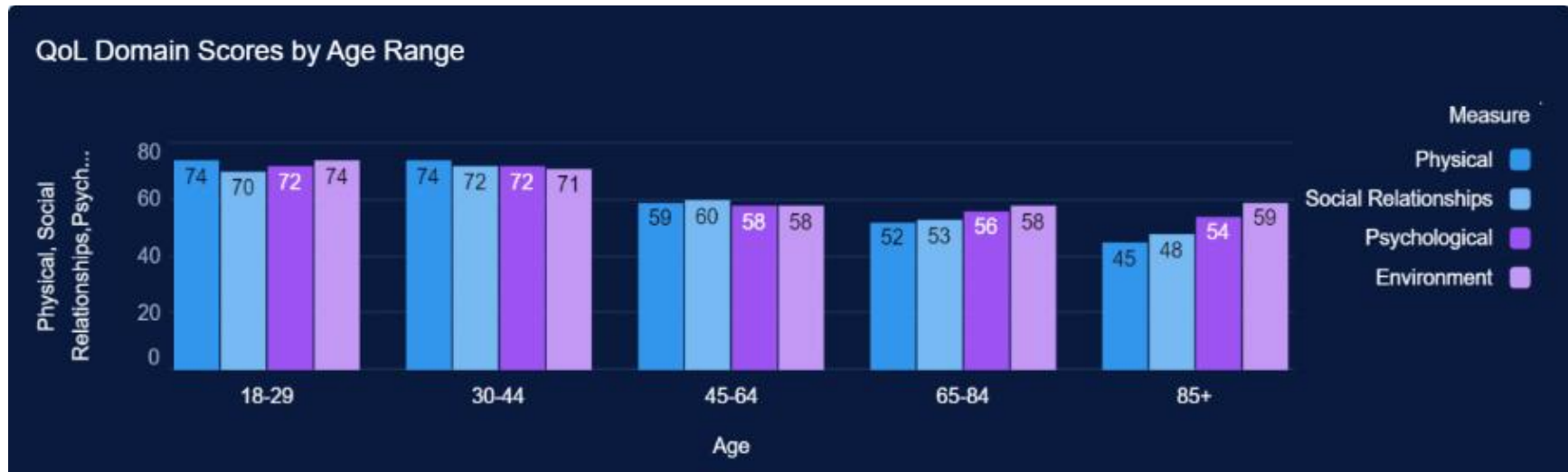


**FIGURE 2: AGE HAS A NEGATIVE CORRELATION WITH QOL SCORES IN ALL FOUR DOMAINS. TO ENLARGE, CLICK ON THE DASHBOARD.**

# EDUCATION



## QoL Domain Scores by Education Level

**Measure**
- Physical
- Psychological
- Social Relationships
- Environment

| | None at all 无学历 | Primary school 小学 | Secondary school 中学 | Tertiary 大学 |
|---|---|---|---|---|
| Physical | 36 | 49 | 59 | 65 |
| Psychological | 50 | 54 | 61 | 65 |
| Social Relationships | 39 | 54 | 59 | 61 |
| Environment | 56 | 57 | 60 | 66 |

Y-axis: Physical, Psychological, Social Relationships, Environment
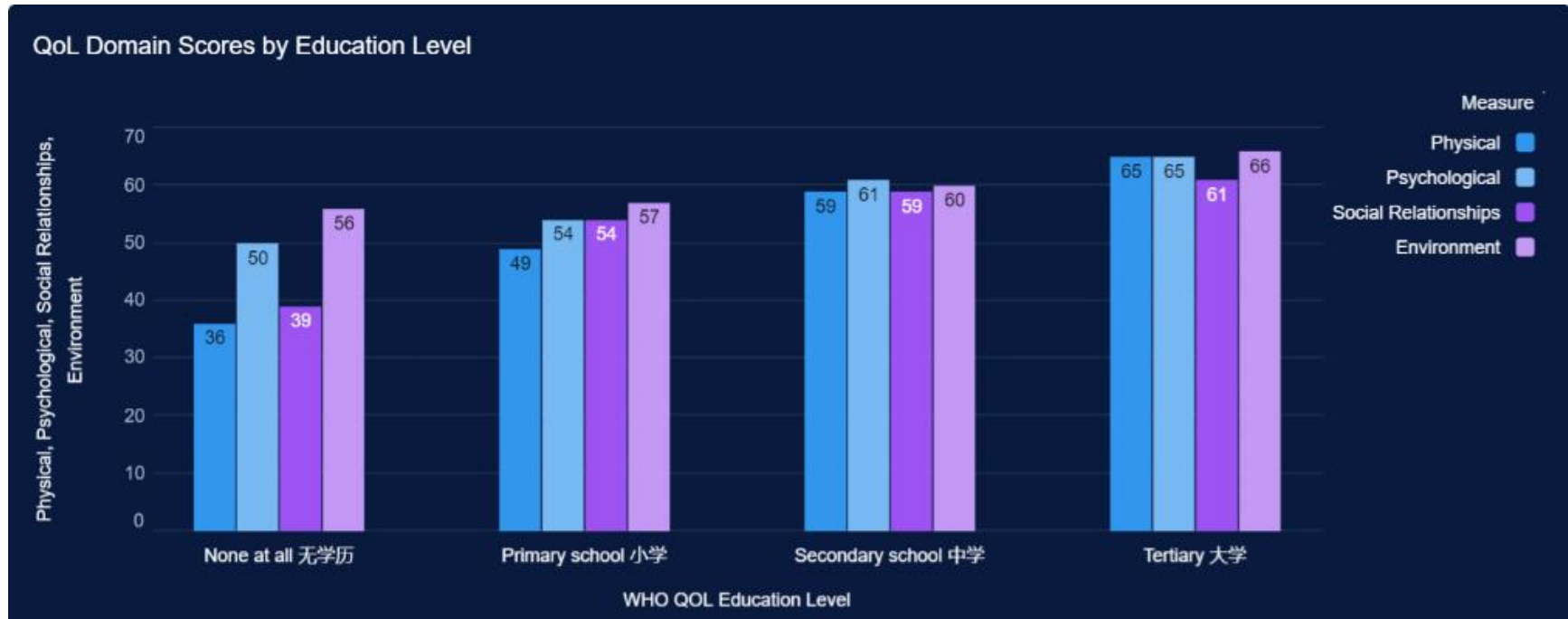X-axis: WHO QOL Education Level

FIGURE 3: CERTAIN EDUCATION LEVELS HAVE A POSITIVE CORRELATION WITH QoL SCORES IN ALMOST ALL DOMAINS. TO ENLARGE, CLICK ON THE DASHBOARD.

The following tables provide a snapshot of how the current participant sample responded to each domain. A summary of key takeaways are denoted by an asterisk(s) (*). The ▲ and ▼ icons represent the direction corresponding with a demographic variable followed by the degree (confidence interval—higher percentage indicates strong correlation) to which we can be certain the finding isn't random.

| Physical |
|---|
| **Domain description:** Activities of daily living; Dependence on medicinal substances and medical aids; Energy and fatigue; Mobility; Pain and discomfort; Sleep and rest; Work Capacity |

**Survey questions included in this domain:**

> 3. To what extent do you feel that physical pain prevents you from doing what you need to do?
> 4. How much do you need any medical treatment to function in your daily life?
> 10. Do you have enough energy for everyday life?
> 15. How well are you able to get around?
> 16. How satisfied are you with your sleep?
> 17. How satisfied are you with your ability to perform your daily living activities?
> 18. How satisfied are you with your capacity for work?

| Domain score average out of 100 (*higher score is better*) | Domain score by age | Domain score by education (no school, primary school, secondary school, tertiary school) | Domain score by marital status | Domain score by current illness (reported "feeling ill" at time of assessment) |
|---|---|---|---|---|
| **57** | Age*: Score<br>• 18-29: 74<br>• 30-44: 74<br>• 45-64: 59<br>• 65-84: 52<br>• 85+: 45 | • None: 36<br>• Primary: 49<br>• Secondary*: 59<br>• Tertiary*: 65 | • Single: 58<br>• Married*: 61<br>• Living as married: 55<br>• Separated: 48<br>• Divorced: 49<br>• Widowed: 47 | • Feeling ill*: 46<br>• Not feeling ill: 61<br>• Feeling ill (blank)*:51 |

* **Age** ▼ 0.36 points[4] per year at 99.9% confidence interval
* **Tertiary education** ▲ 13.24 points vs. **no education** at 95.3% confidence interval
* **Secondary education** ▲ 7.23 points vs. **no education** at 89.7% confidence interval
* **Married** ▲ 5.3 points vs. **single** at 97.3% confidence interval
* **Feeling ill** ▼ 13.25 points vs. **not feeling ill** at 99.9% confidence interval
* **Ill status (blank[5])** ▼ 7.76 points vs. **not feeling ill** at 95% confidence interval

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[4] Points correspond to transformed scores 0-100. Scoring guidelines and procedures for the WHOQOL-BREF can be found here.
[5] Participants who left this question blank.

# Psychological

**Domain description:** Bodily image and appearance; Negative feelings; Positive feelings; Self-esteem; Spirituality / Religion / Personal beliefs; Thinking, learning, memory and concentration

**Survey questions included in this domain:**

*5. How much do you enjoy life?*
*6. To what extent do you feel your life to be meaningful?*
*7. How well are you able to concentrate?*
*11. Are you able to accept your bodily appearance?*
*19. How satisfied are you with yourself?*
*26. How often do you have negative feelings such as blue mood, despair, anxiety, depression?*

| Domain score average out of 100 (*higher score is better*) | Domain score by age | Domain score by education (no school, primary school, secondary school, tertiary school) | Domain score by marital status | Domain score by current illness (reported "feeling ill" at time of assessment) |
|---|---|---|---|---|
| **57** | Age*: Score<br>• 18-29: 72<br>• 30-44: 72<br>• 45-64: 58<br>• 65-84: 56<br>• 85+: 54 | • None: 50<br>• Primary: 54<br>• Secondary: 61<br>• Tertiary: 65 | • Single: 58<br>• Married*: 62<br>• Living as married: 59<br>• Separated*: 47<br>• Divorced: 53<br>• Widowed: 53 | • Feeling ill*: 52<br>• Not feeling ill: 63 |

* **Age** ▼ 0.22 points per year at 99.9% confidence interval
* **Married** ▲ 6.15 points vs. **single** at 98.8% confidence interval
* **Separated** ▼ 7.44 points vs. **single** at 86% confidence interval
* **Feeling ill** ▼ 10.13 points vs. **not feeling ill** at 99.9% confidence interval

# Social Relationships

**Domain description:** Personal relationships; Social support; Sexual activity

**Survey questions included in this domain:**

*20. How satisfied are you with your personal relationships?*
*21. How satisfied are you with your sex life?*
*22. How satisfied are you with the support you get from your friends?*

| Domain score average out of 100 (*higher score is better*) | Domain score by age | Domain score by education (no school, primary school, secondary school, tertiary school) | Domain score by marital status | Domain score by current illness (reported "feeling ill" at time of assessment) |
|---|---|---|---|---|
| **59** | Age*: Score<br>• 18-29: 70<br>• 30-44: 72<br>• 45-64: 60<br>• 65-84: 53<br>• 85+: 48 | • None: 39<br>• Primary: 54<br>• Secondary: 59<br>• Tertiary: 61 | • Single: 57<br>• Married*: 62<br>• Living as married: 59<br>• Separated: 45<br>• Divorced: 48<br>• Widowed: 46 | • Feeling ill*: 45<br>• Not feeling ill: 58 |

* **Age ▼** 0.3 points per year at 99.9% confidence interval
* **Married ▲** 6.27 points vs. **single** at 97.3% confidence interval
* **Feeling ill ▼** 8.87 points vs. **not feeling ill** at 99.9% confidence interval

## Environment

**Domain description:** Financial resources; Freedom, physical safety and security; Health and social care: accessibility and quality; Home environment; Opportunities for acquiring new information and skills; Participation in and opportunities for recreation / leisure activities; Physical environment (pollution / noise / traffic / climate); Transport

**Survey questions included in this domain:**

*8. How safe do you feel in your daily life?*
*9. How healthy is your physical environment?*
*12. Have you enough money to meet your needs?*
*13. How available to you is the information that you need in your day-to-day life?*
*14. To what extent do you have the opportunity for leisure activities?*
*23. How satisfied are you with the conditions of your living place?*
*24. How satisfied are you with your access to health services?*
*25. How satisfied are you with your transport?*

| Domain score average out of 100 (*higher score is better*) | Domain score by age | Domain score by education (no school, primary school, secondary school, tertiary school) | Domain score by marital status | Domain score by current illness (reported "feeling ill" at time of assessment) |
|---|---|---|---|---|
| **60** | Age*: Score<br>• 18-29: 74<br>• 30-44: 71<br>• 45-64: 58<br>• 65-84: 58<br>• 85+: 59 | • None: 56<br>• Primary: 57<br>• Secondary: 60<br>• Tertiary: 66 | • Single: 60<br>• Married: 62<br>• Living as married: 59<br>• Separated: 57<br>• Divorced*: 49<br>• Widowed: 57 | • Feeling ill*: 55<br>• Not feeling ill: 62 |

* **Age** ▼0.19 points per year at 99.9% confidence interval
* **Divorced** ▼8.94 points vs. **single** at 94.4% confidence interval
* **Feeling ill** ▼5.76 points vs. **not feeling ill** at 99.2% confidence interval

# PARTICIPANTS WITH MORE THAN 1 RESPONSE RECORDED

We acknowledge that although the 2 samples from the first and second collection periods are different, there were 85 participants who responded both times (i.e. the same people from both samples). When looking at this subsample, caution is needed when reaching conclusions between pre- and post- observations.

Overall score increased slightly from 57.8 to 58.5 but a larger sample size is needed to test whether or not the trend is significant. Environmental scores increased from 58 to 62 but not at a significant level while all the other domains decreased (see Figure 4).
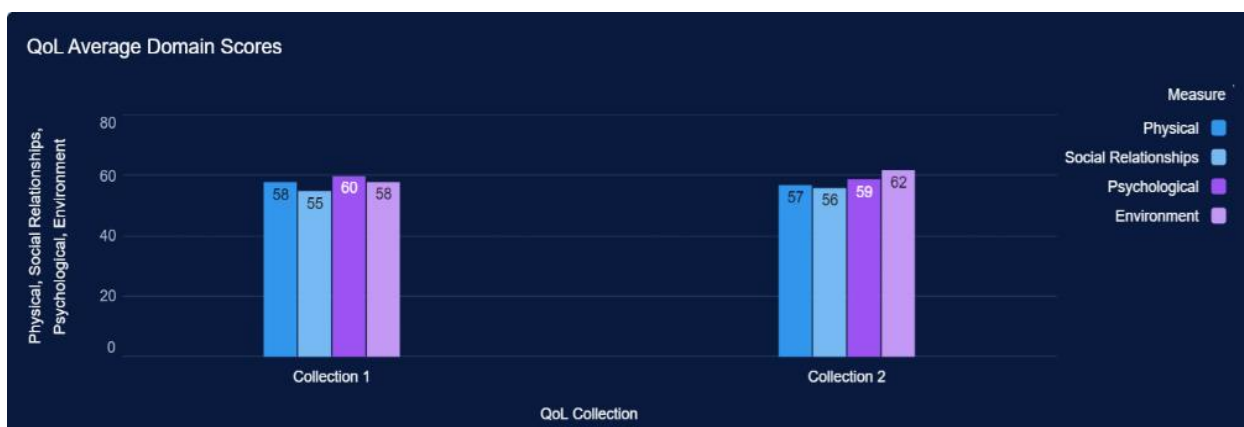


FIGURE 4: ENVIRONMENTAL SCORES INCREASED FROM THE FIRST COLLECTION PERIOD. TO ENLARGE, CLICK ON THE DASHBOARD

However, when isolated by gender, male participants ($n$=28, or 33%) reported increased overall scores compared with female participants ($n$=57, or 67%) at a significant level even after adjusting for Age[6] (see Figure 5). In particular, males had an average 3.12 point lead in social relationship scores compared to female participants which reported an average 0.31 point decrease.
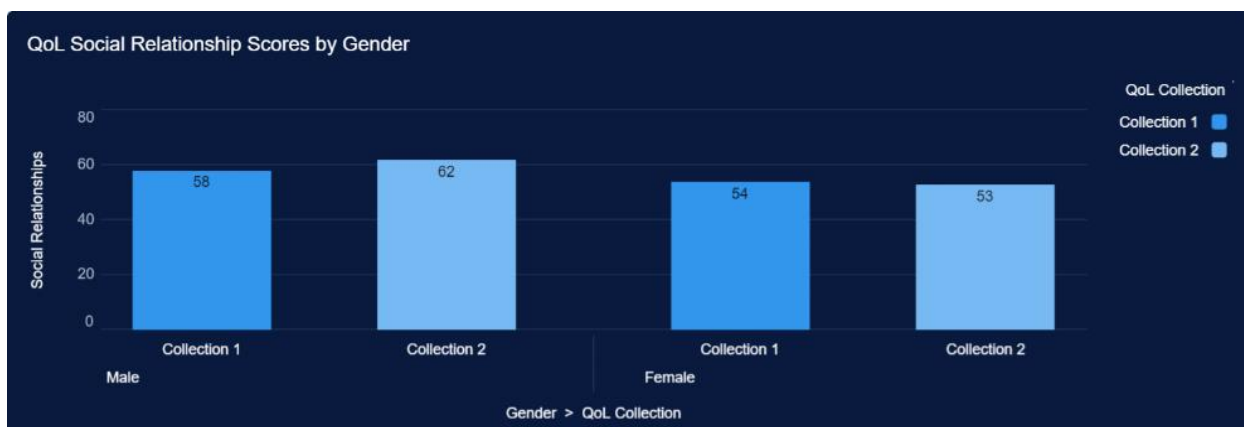


FIGURE 5: SOCIAL RELATIONSHIP SCORES BY GENDER. TO ENLARGE, CLICK ON THE DASHBOARD.

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[6] Age-adjusted scores are used because we know that Age has a big impact on overall scores and the two groups have a 3.91 years of age difference.(female age: 71.91 vs male age: 75.85).

We also looked at other factors such as education level and marital status but due to insufficient sample sizes, there wasn't conclusive evidence that those variables were predictive.

## QUALITY OF LIFE IN CONTEXT

Understanding quality of life requires context. During this round of data collection, COVID-19 vaccination efforts were well underway. While it's impossible to account for all external variables and how they affected the way participants responded, they cannot be ignored either.

A life "well-lived" relies on individual perceptions and definitions of *well*. Since there isn't a standard cut-off score offered by the WHO, further investigation is warranted when interpreting sample averages. This instrument is intended to promote client self-determination by providing more opportunities to communicate their needs and desires.

# DISCUSSION

## LIMITATIONS

Since the survey was self-administered, there were a few factors that may have affected response accuracy or completion. Some of the confusion may be attributed to how questions were ordered or how responses were formatted. Some participants selected multiple responses, rendering them void without further confirmation. Other technical details to consider included a few participants who skipped questions altogether. Despite these issues, it should be noted that great care was used to mitigate confusion when filling out the questionnaire. During this collection period, we observed an outstanding 94% completion rate, which attests to the validity of the instrument.

Other aspects to think about include whether or not participants felt more comfortable answering the questions since staff were no longer required to manually upload their responses to Salesforce. This means that their responses were only reviewed by CSI staff. All staff distributors were instructed to take completed surveys and deposit them in a secure drop box and/or designated location. In this way, response bias was kept to a minimum ensuring greater confidentiality.

Another factor to consider is the level of discomfort some questions pose. For example, question item 21 in the Social Relationships domain asks about satisfaction with participants' sex life, a topic that's not openly discussed. Whether or not this is due to cultural concerns or stigma, lower response rates indicate mild hesitancy towards this question. This was the only question item out of 3 in this domain that had any notable effect (i.e. lower response rate). A detailed explanation of the limitations to survey methods can be found [here](here).

## WHAT THE DATA MEANS

Our findings indicate that our participants' quality of life is made up of many dynamic components. Certain sample characteristics are correlated with certain responses. A transformed score only gets us so far though. The evidence we have is inconclusive of <u>why</u> participants responded the way they did. But by having multiple modes to capture participant well-being, we have the opportunity to start a conversation with them and learn more about their experiences both in and out of CASL.

Considering the events surrounding participating in this questionnaire, we acknowledge that our observations are a mere reflection of living well, not what actually drives it. Furthermore, the WHOQOL-BREF is not the only quality of life measure out there. We chose to use this tool given its availability and widespread use. The aim of researching quality of life data is to explore what conditions impact well-being. Measuring quality of life scores over time sets up the framework for understanding what our clients need to thrive and how we get there.

## NEXT STEPS

As our findings demonstrate, our clients come from a colorful array of lived experiences. Taking the next step in using this data involves deeper engagement and follow up with what caused clients to respond in certain ways. It may take the form of focus group discussions, discussions with staff, or regular program audits. The data we have allows us to forge a network of targeted resources in pursuit of health equity and accessibility.

## CONCLUSION

The Center for Social Impact is dedicated to empowering individuals and communities through participatory methods of evaluation. In tandem with CASL's Social Determinants of Health (SDoH) initiative, understanding quality of life is an agency-wide effort to bridge perceived and real needs with evidence-based solutions. For instance, where we ask participants to rate their satisfaction regarding their access to health services (question item 24) in the WHOQOL-BREF, our SDoH assessment asks participants to indicate the frequency of being able to get the [health] care they need. Part of living well is knowing how to be healthy, which drives home this idea that being able to get quality healthcare is reflected in ones satisfaction with having access to it.

Tracking quality of life as an outcome can help allocate physical, social, and mental resources where traditional measures of morbidity and mortality have fallen short. Quality of life is important for everyone.