



# AgrAbility Quality of Life Profile Transitions and Relationships with Independent Living and Working Levels

2025 AgrAbility National Training Workshop

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# Our Team



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## **AgrAbility Quality of Life Study: New Staff Training**

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Kristen VanValkenburg (WSU),  
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# Our AgrAbility Vision

“The vision of AgrAbility is to enhance the quality of life for farmers, ranchers, and other agricultural workers with disabilities, so that they, their families, and their communities continue to succeed in rural America.”

Source: Retrieved from [www.agrability.org/about/program/#mission](http://www.agrability.org/about/program/#mission)

# AgrAbility

- **Priorities** are to
  - Develop service capacity,
  - Encourage networking,
  - and Provide direct services to individuals and their families.
- **Outcomes** include gainful employment, access to assistive technology for work and life activities, treatment and rehabilitation of disabling conditions, support for individual and family, and increased Quality of Life levels.

# Quality of Life

- Quality of Life (QOL) is a multidimensional construct of a person's overall physical, emotional, social, financial, and spiritual well-being.
- QOL supports and is related to many aspects of our lives including finances, health, relationships, activities in our communities, recovery, and so on.

## Sources:

Bogue P, Phelan J. Exploring the quality of life of farm families in Ireland: implications for extension. *J Int Agri Ext Educ*. 2005;12(1):79-90.

Cummins RA. Assessing quality of life for people with disabilities. In: Brown RJ., ed. *Quality of Life for Handicapped People*. Cheltenham, UK: Stanley Thomas, 1997:116-150.

# Quality of Life Measures

QOL measures are multidimensional.

- **Physical well-being:**
  - Physical symptoms that impact daily life and overall health
- **Psychological well-being:**
  - Emotional health, including levels of anxiety, depression, and overall emotional stability
- **Existential well-being:**
  - Sense of meaning and purpose in life, acceptance of illness, and personal beliefs
- **Social support:**
  - Quality and availability of social relationships and support networks.
  
- Used in areas ranging from Special Education, Health, Aging, and Disabilities.

**PART C** Please choose the number which best describes your feelings and thoughts **OVER THE PAST TWO (2) DAYS.**

5. Over the past two (2) days, I have been depressed:

**not at all** 0 1 2 3 4 5 6 7 8 9 10 **extremely**

6. Over the past two (2) days, I have been nervous or worried:

**not at all** 0 1 2 3 4 5 6 7 8 9 10 **extremely**

7. Over the past two (2) days, how much of the time did you feel sad?

**never** 0 1 2 3 4 5 6 7 8 9 10 **always**

8. Over the past two (2) days, when I thought of the future, I was:

**not afraid** 0 1 2 3 4 5 6 7 8 9 10 **terrified**

9. Over the past two (2) days, my life has been:

**utterly meaningless and without purpose** 0 1 2 3 4 5 6 7 8 9 10 **very purposeful and meaningful**

10. Over the past two (2) days, when I thought about my whole life, I felt that in achieving life goals I have:

**made no progress whatsoever** 0 1 2 3 4 5 6 7 8 9 10 **progressed to complete fulfillment**

*Please continue on the next page...*

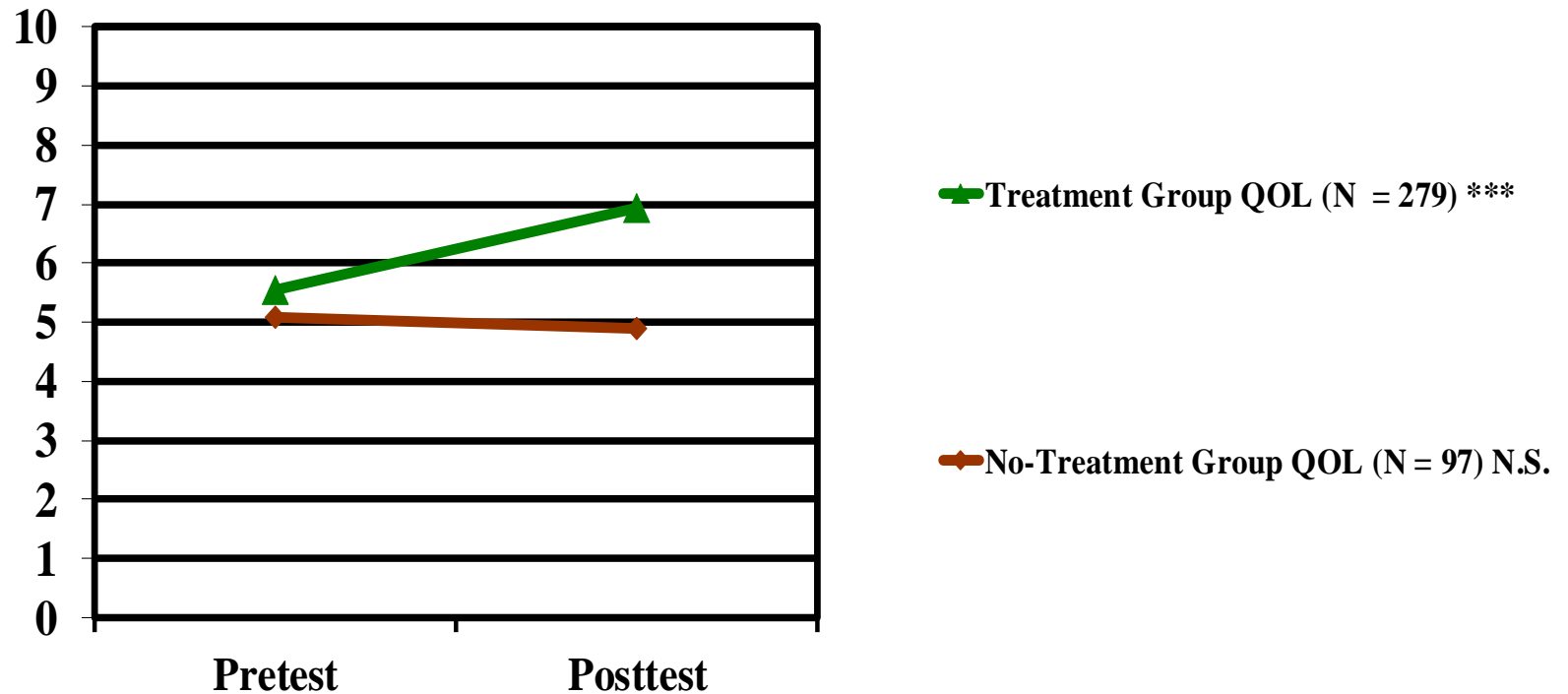
# Example of the McGill QOL items



# AgrAbility and Quality of Life

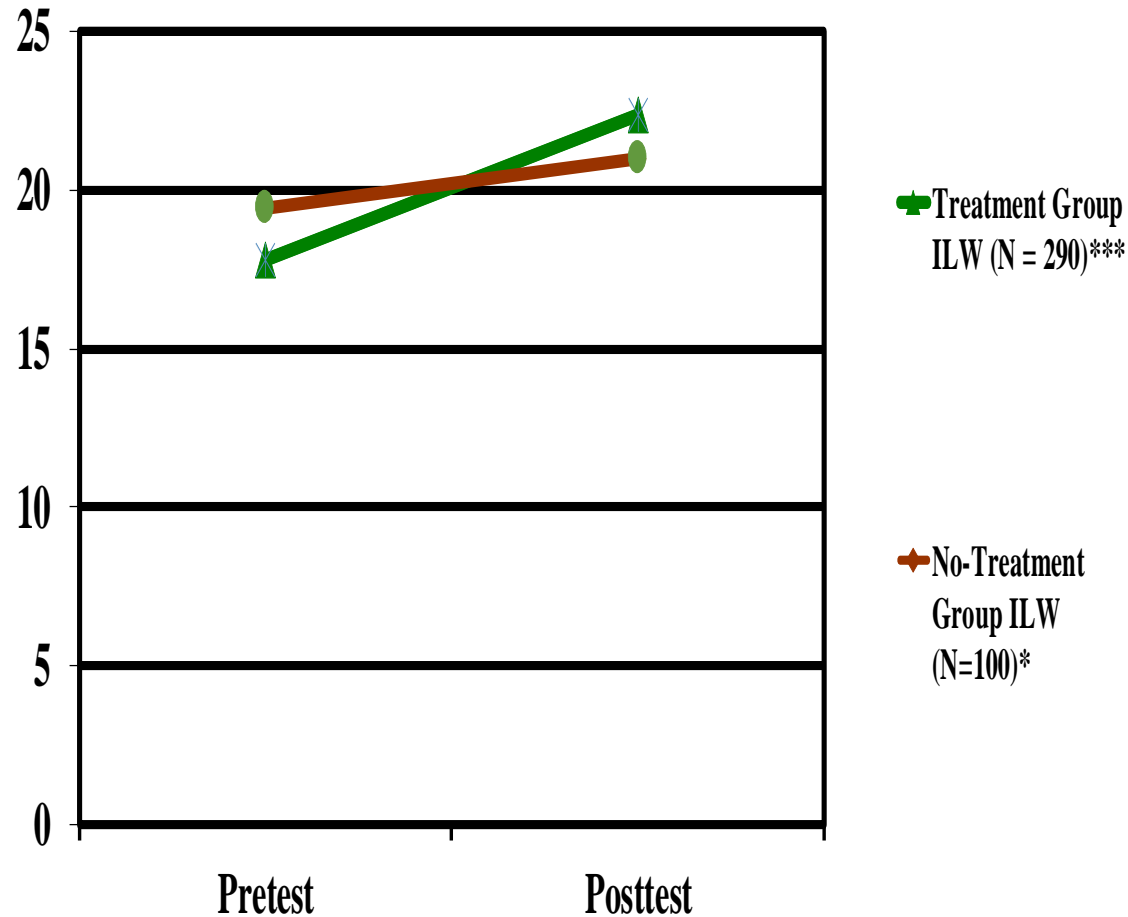
- Individuals involved in AgrAbility Improve on
  - Independent Living and Working
    - Fetsch, Jackman, & Collins, 2018
  - All domains of QOL
    - Physical, Psychological, & Existential well-being, Support, and Physical symptoms
      - Fetsch & Collins, 2018
- AgrAbility on-site visits with information, education and assistive technology was effective at increasing agriculturalists' QOL levels versus a non-AgrAbility comparison group
  - Fetsch & Turk, 2018

# McGill QOL Pretest-Posttest Overall QOL Score Changes for AgrAbility Treatment & Non- AgrAbility Treatment Comparison Groups



Source: Fetsch, R. J., & Collins, C. L. (2018). The effects of AgrAbility on the mental/behavioral health of farmers and ranchers with functional limitations: A comparison study. Medical Research Archives, 6(2). <http://www.journals.ke-i.org/index.php/mra/article/view/1691/1762> & Fetsch AAMcGillQOL10.0522 (Rev. 2.2623)

# ILW Pretest-Posttest Total Score Changes for AgrAbility Treatment and No-AgrAbility Treatment Groups



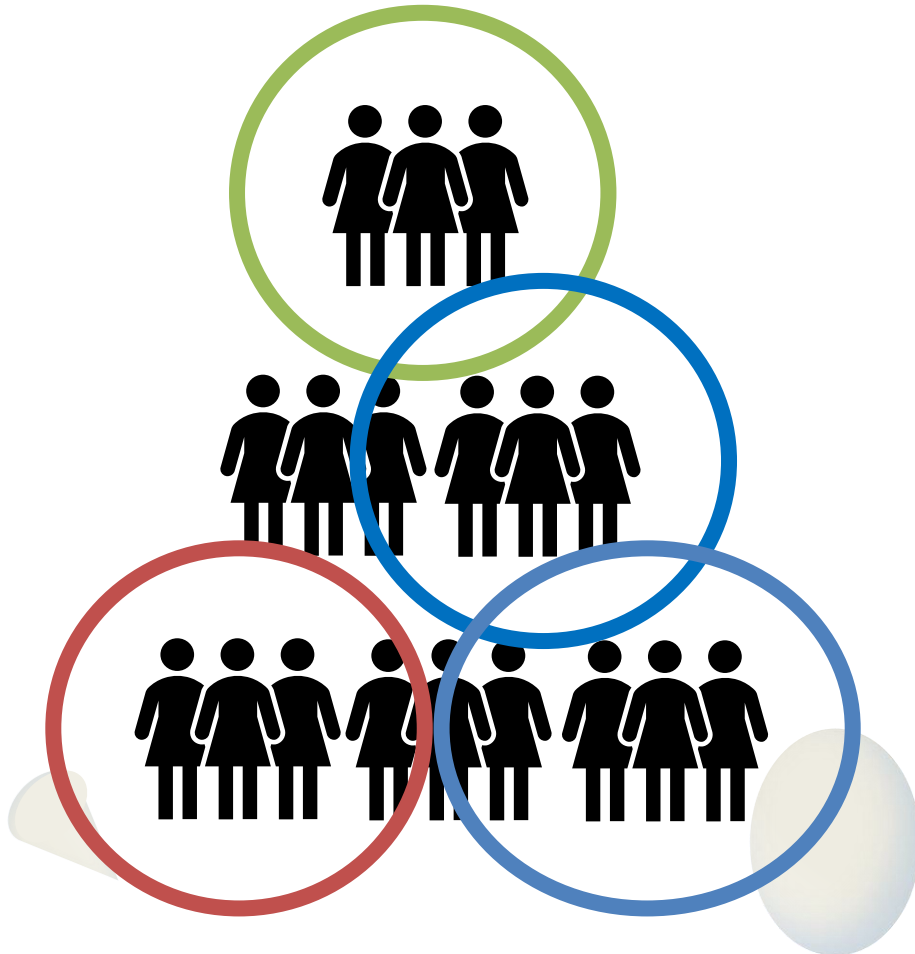
Source: Fetsch, R. J., & Collins, C. L. (2018). The effects of AgrAbility on the mental/behavioral health of farmers and ranchers with functional limitations: A comparison study. Medical Research Archives, 6(2). <http://www.journals.ke-i.org/index.php/mra/article/view/1691/1762> & Fetsch AAMcGillQOL10.0522 (Rev. 2.2623)

# QOL is *Multi-Dimensional*

- QOL is usually assessed globally
- The multi-dimensionality of QOL is an opportunity to break down dimensions
- Person centered approaches allow us to look at the different dimensions of QOL for a more nuanced understand

# Latent Profile Analysis

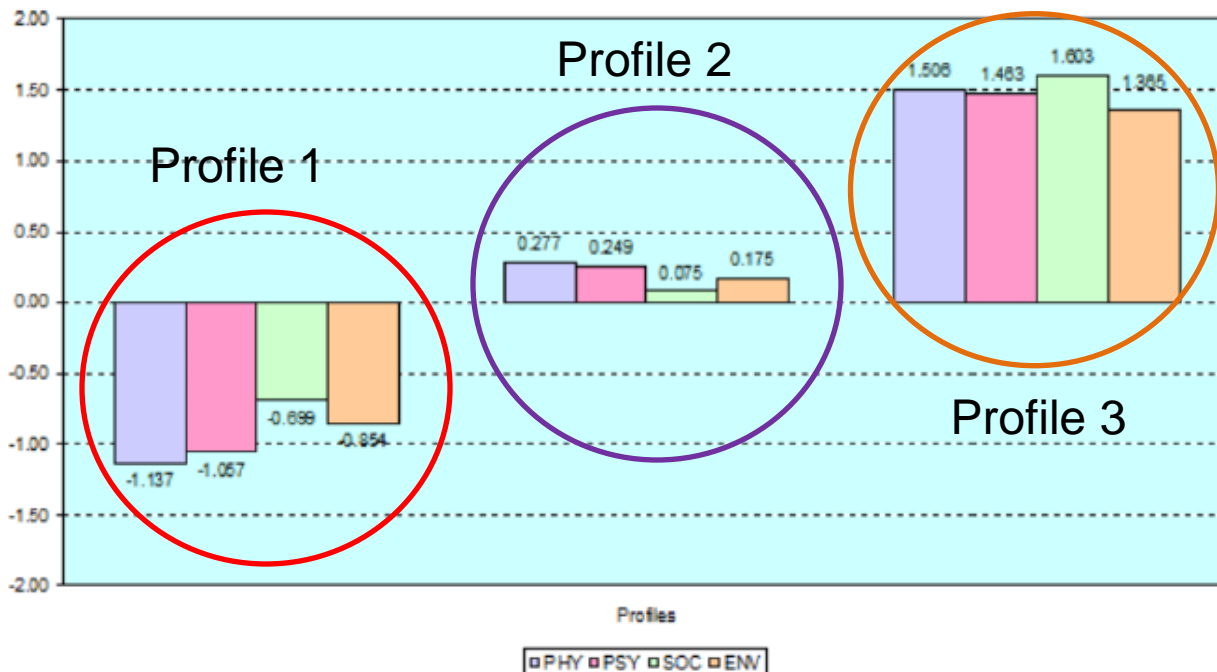
- Within-group subgroups, referred to as “profiles”



- Not preexisting or labeled groups
- Examining how individuals group together based on similar pattern of scores

# Quality of Life Profiles

- In many areas, QOL profiles have been identified.
- Aging Adults
  - Heterogeneity in aging across these domains



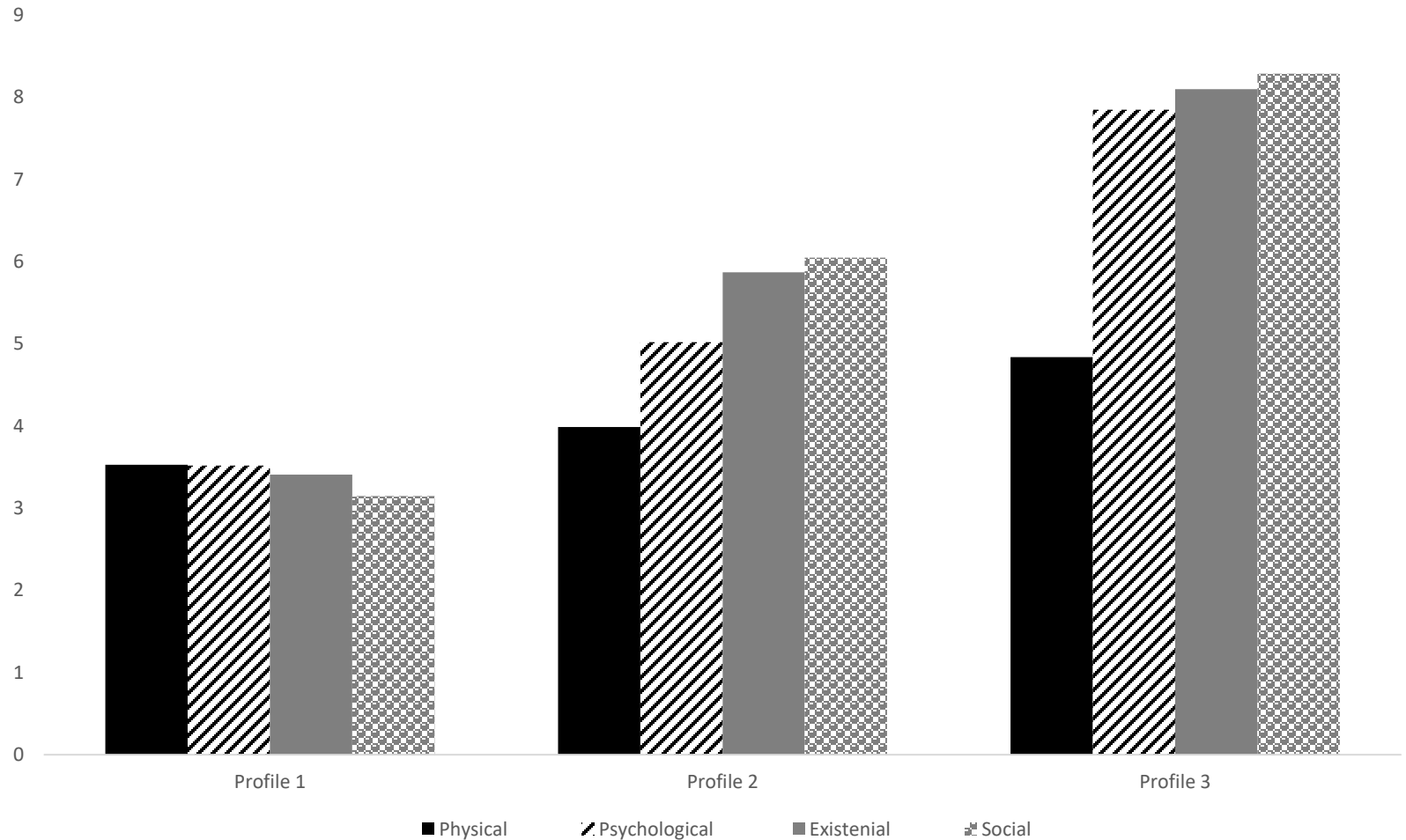
High, Medium, and Low profiles on Physical, Psychological, Social, & Environment domains for aging adults

Bajenaru et al., 2022

# Quality of Life Profiles

- Past results assume all individuals involved in AgrAbility are similar or homogenous on outcome measures....but maybe they are not.
- Last year we report on QoL of profiles with individuals in AgrAbility

# Last year we reported on Quality of Life Profiles





# Quality of Life Profiles

<b>Time 1 Profiles</b>			
	Low (n= 166)	Moderate (n = 687)	High (n=505)
<b>Age</b>	56.2 (11.9)	56.1 (13.9)	57.2 (14.5)
<b>Male</b>	71.1%	79.2%	83.0%
<b>Female</b>	28.9%	20.8%	17.0%
<b>Full time work status</b>	59.0%	65.5%	69.5%
<b>Years (months) in AgrAbility</b>	1.41 (1.37)	1.69 (1.33)	1.55 (1.45)

# Study Purpose

- Research Questions:
  - Can we replicate the QoL profiles for individuals who did and did not receive AgrAbility services?
  - What are the characteristics of individuals in QoL profiles?
  - How do individuals move between profiles after services?
    - And how does that movement compare to individuals who did not participate in AgAbility? How is this related to ILW?

# Method

**Time 1 and Time 2 Data are from QOL study for the years—  
2007-2023**

- $N = 459$ ; 14 states represented
  - Male = 73.3%, Female = 26.7%
  - Average Age = 58 years (SD = 14.5)
  - $N = 100$  did not receive AgrAbility services
  - 71% were owners or operators
  - Majority (56%) origins of disabilities were chronic or not incident-related
  - Primary disabilities: joint injury (12.4%), back injury (11.5%), arthritis (11.5%), visual impairment (6.1%), and orthopedic injury (5.9%).
  - Secondary disabilities: arthritis (15.2%), joint injury (10.3%), back injury (9.5%), none (8.4%), and orthopedic injury (7.2%).

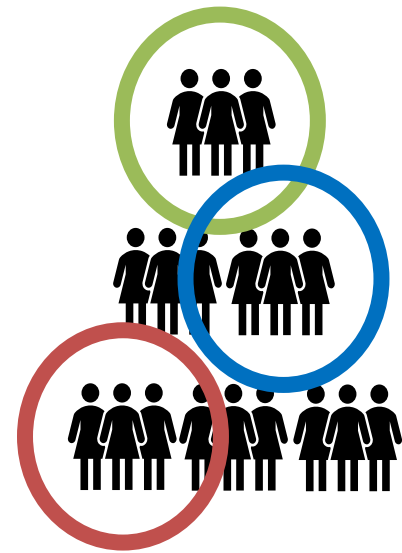
# Method

## *Instrument*

- McGill Quality of Life Survey by Robin Cohen
  - Domains assessed: Physical Symptoms, **Physical Well-Being, Psychological Well-Being, Existential Well-Being, and Social Well-being.**
- Independent Living and Working Scale
- Scales' technical quality is well used and supported in existing literature

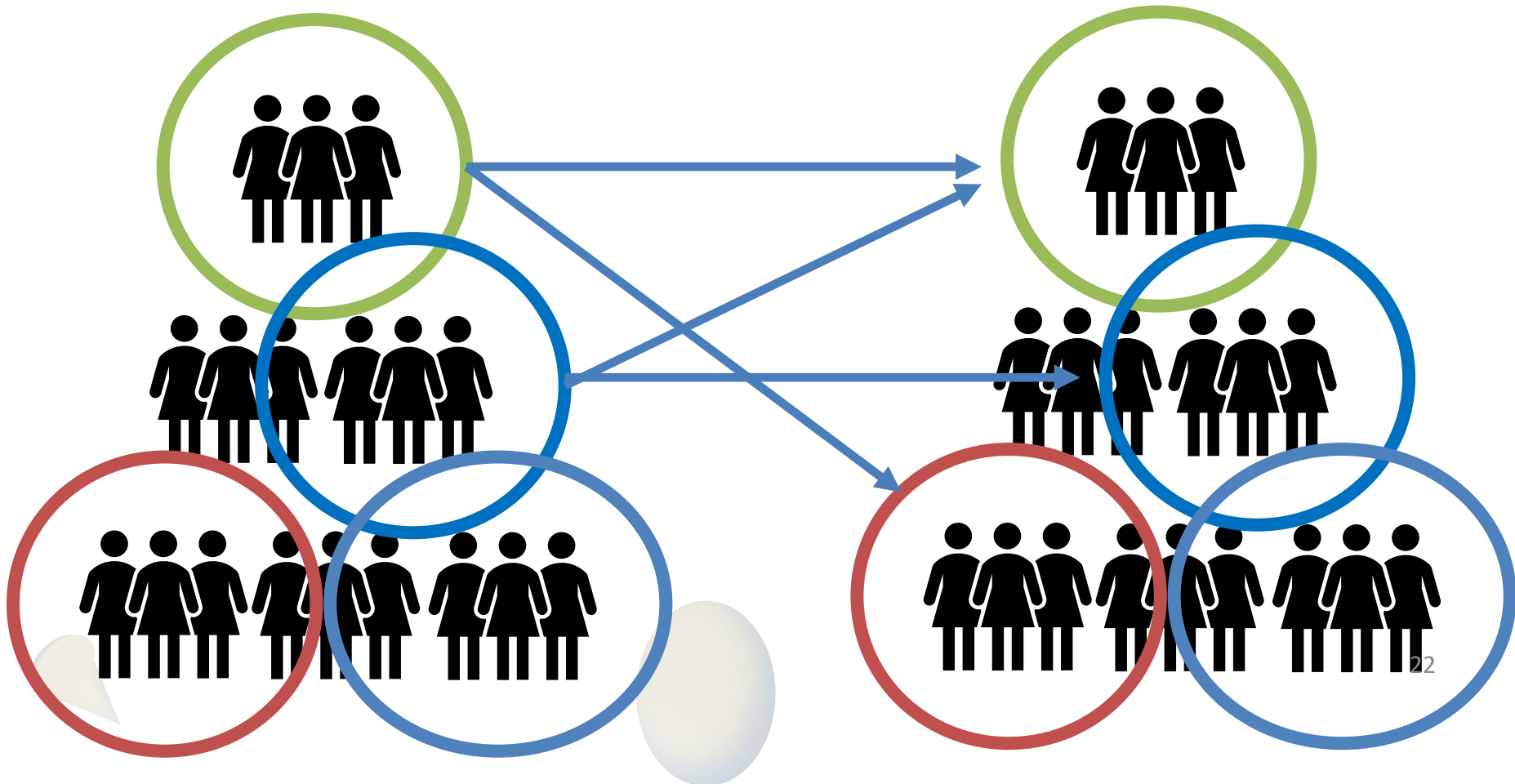
# Method

- Latent Profile and Transition Analysis
- Within-group subgroups, referred to as profiles
  - Not preexisting or labeled groups
  - Examining how individuals group together based on similar pattern of scores
  - Iterative procedure comparing different models and then selecting the best model (number of groups)
  - Indices used for model selection: AIC, BIC, SABIC, profile size and theory & interpretation, with the most important being theory and interpretation
  - Examine Transition from profile to profile over time and how it related to receiving or not receiving services.



# Profile Analysis Over Time

- Do people change profiles?



# Descriptive Information

	<b>Time One</b>		<b>Time Two</b>	
<b>QOL</b>	Mean	SD	Mean	SD
<b>Physical</b>	5.29	2.21	4.10	2.53
<b>Psychological</b>	4.28	2.27	3.23	2.28
<b>Existential</b>	5.99	1.90	6.80	1.96
<b>Social</b>	6.09	2.27	6.86	2.23

# Descriptive Information

	Time One				Time Two			
	AgrAbility		Comparison		AgrAbility		Comparison	
QOL	M	SD	M	SD	M	SD	M	SD
<b>Physical</b>	5.48	2.28	4.70	1.75	3.86	2.72	4.96	1.40
<b>Psychological</b>	4.14	2.46	4.80	1.31	2.73	2.23	5.01	1.37
<b>Existential</b>	6.27	1.98	4.99	1.17	7.34	1.81	4.90	1.11
<b>Social</b>	6.36	2.18	5.10	2.35	7.43	2.98	4.84	1.89

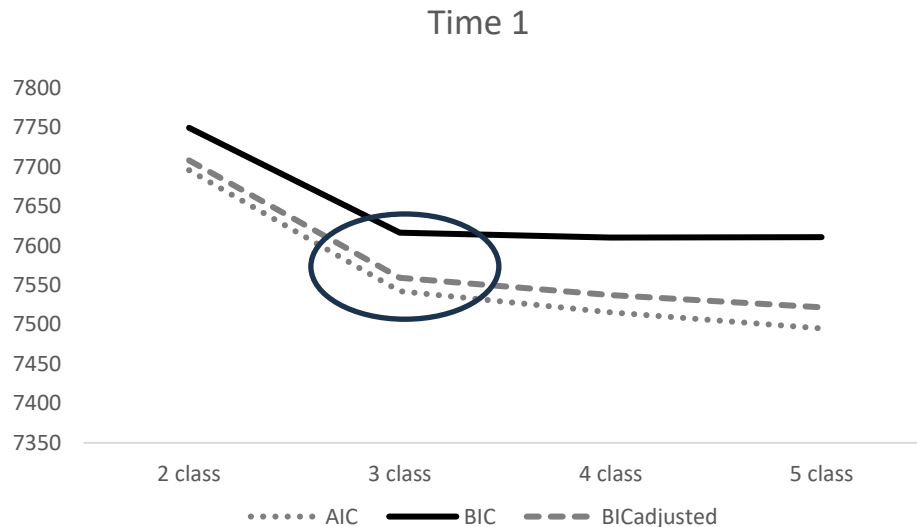


# Results

Table 1. *AgrAbility Sample One Model Fit Comparison for Profile 2-6 Solutions*

	<u>Time One</u>					LMR
	AIC	BIC	BIC adjusted	Entropy	Vuong-LMR p	adjusted p
2 class	7695.51	7749.19	7707.93	0.71	< 0.001	<0.001
<b>3 class</b>	<b>7542.01</b>	<b>7616.33</b>	<b>7559.20</b>	<b>0.77</b>	<b>0.0001</b>	<b>0.0002</b>
4 class	7515.17	7610.14	7537.15	0.77	0.0149	0.0167
5 class	7494.96	7610.57	7521.71	0.79	0.552	0.5638

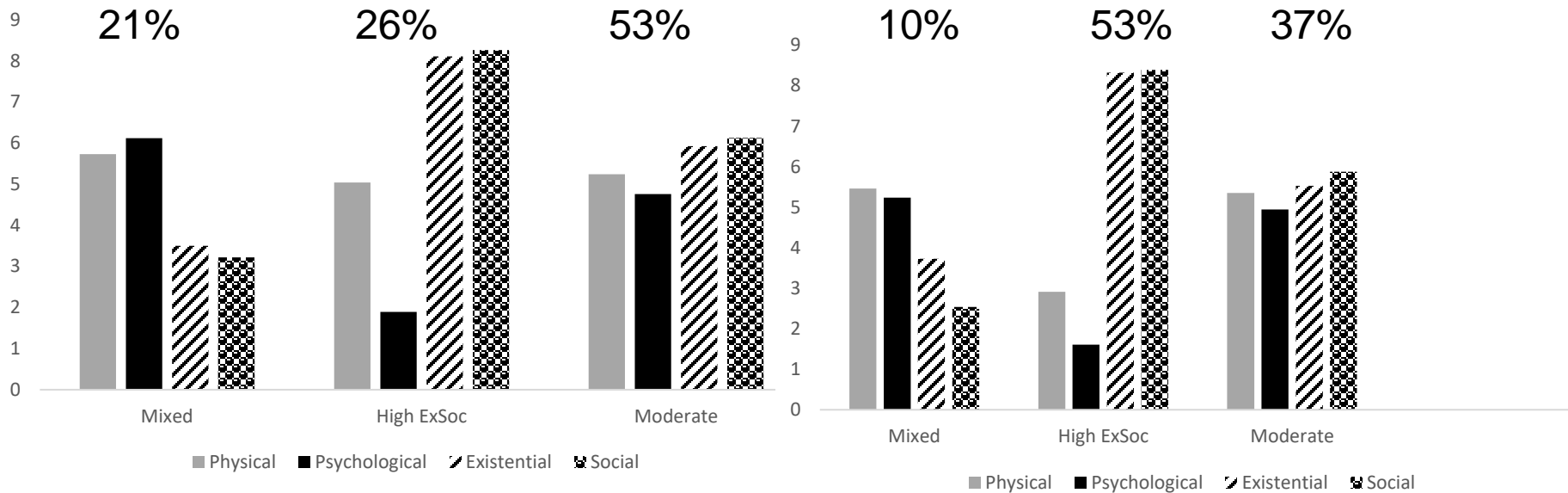
Figure 1. *Model Fit Comparison for Profile 2-6 Solutions*



**Model fit for Time 2 supports 3 profiles**

# Results

*Time 1 and Time 2 Profile QOL Means for Estimated Classification*



*Time 1*

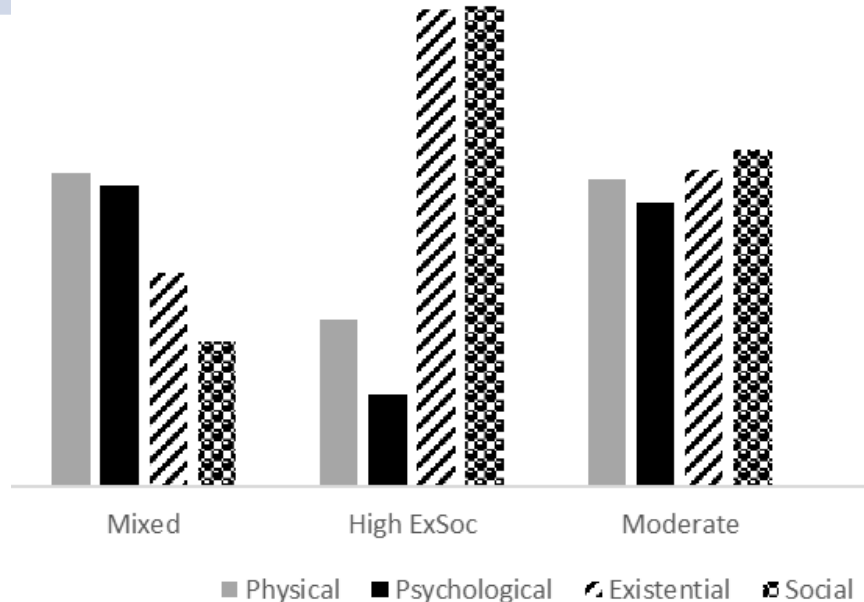
*Time 2*

# Results: Profile Characteristics

	Time 1			Time 2		
	Mixed	Moderate	HighExSoc	Mixed	Moderate	HighExSoc
<b>Age</b>	58.1 (12.5)	60.0 (13.5)	57.1(15.7)	55.2 (13.2)	57.7 (13.1)	58.8 (15.8)
<b>Male</b>	74.0%	68.0%	75.4%	72.1%	68.2%	73.3%
<b>Female</b>	22.9%	29.5%	21.3%	27.9%	29.5%	23.3%
<b>Full time work status</b>	45.8%	52.7%	66.4%	46.5%	49.1%	60.5%

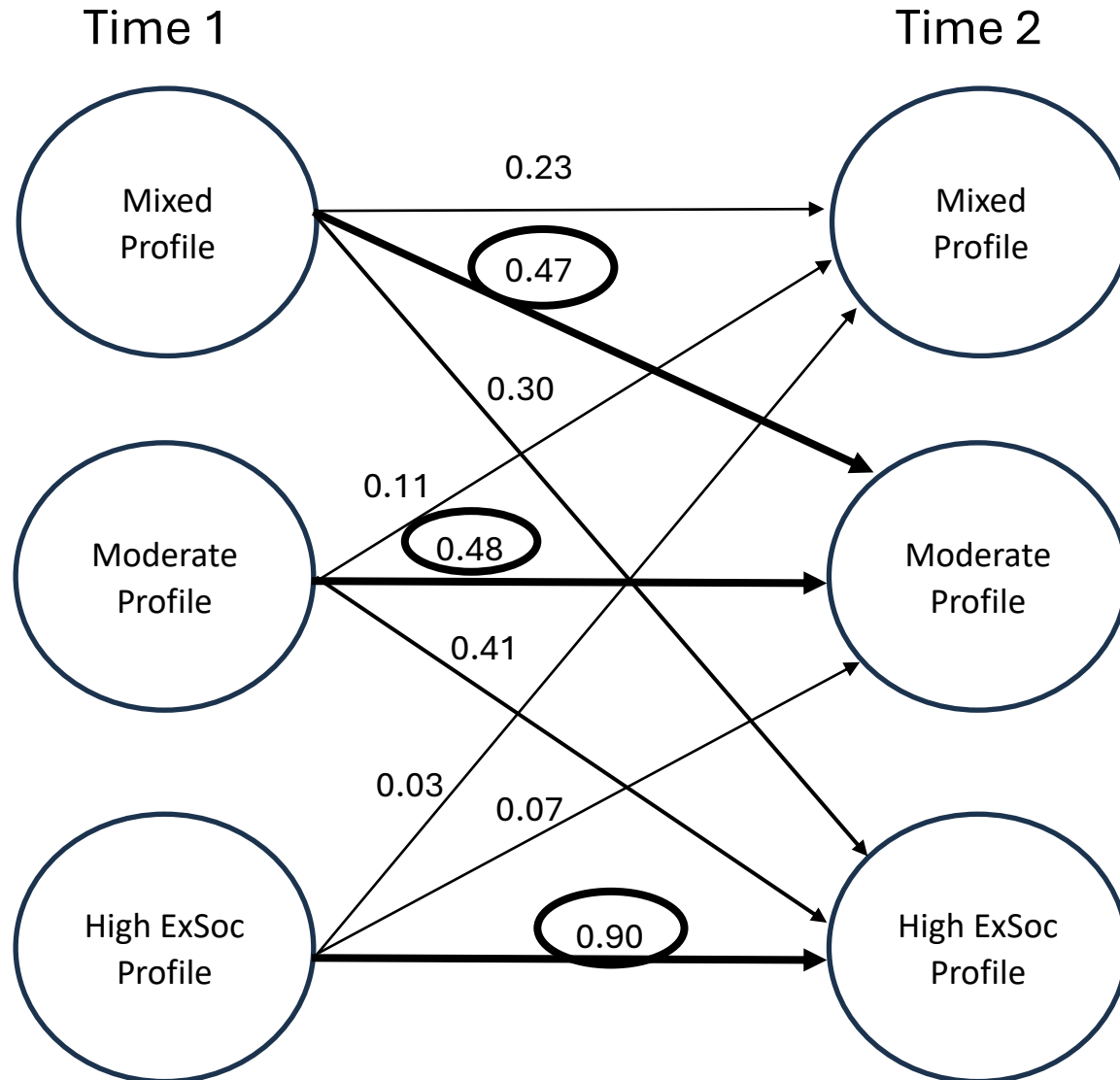
# Results: Profile proportions

	Time 1			Time 2		
	Mixed	Moderate	HighExSoc	Mixed	Moderate	HighExSoc
Comparison	28%	71%	1%	24%	75%	1%
AgrAbility	19%	48%	33%	5%	27%	68%

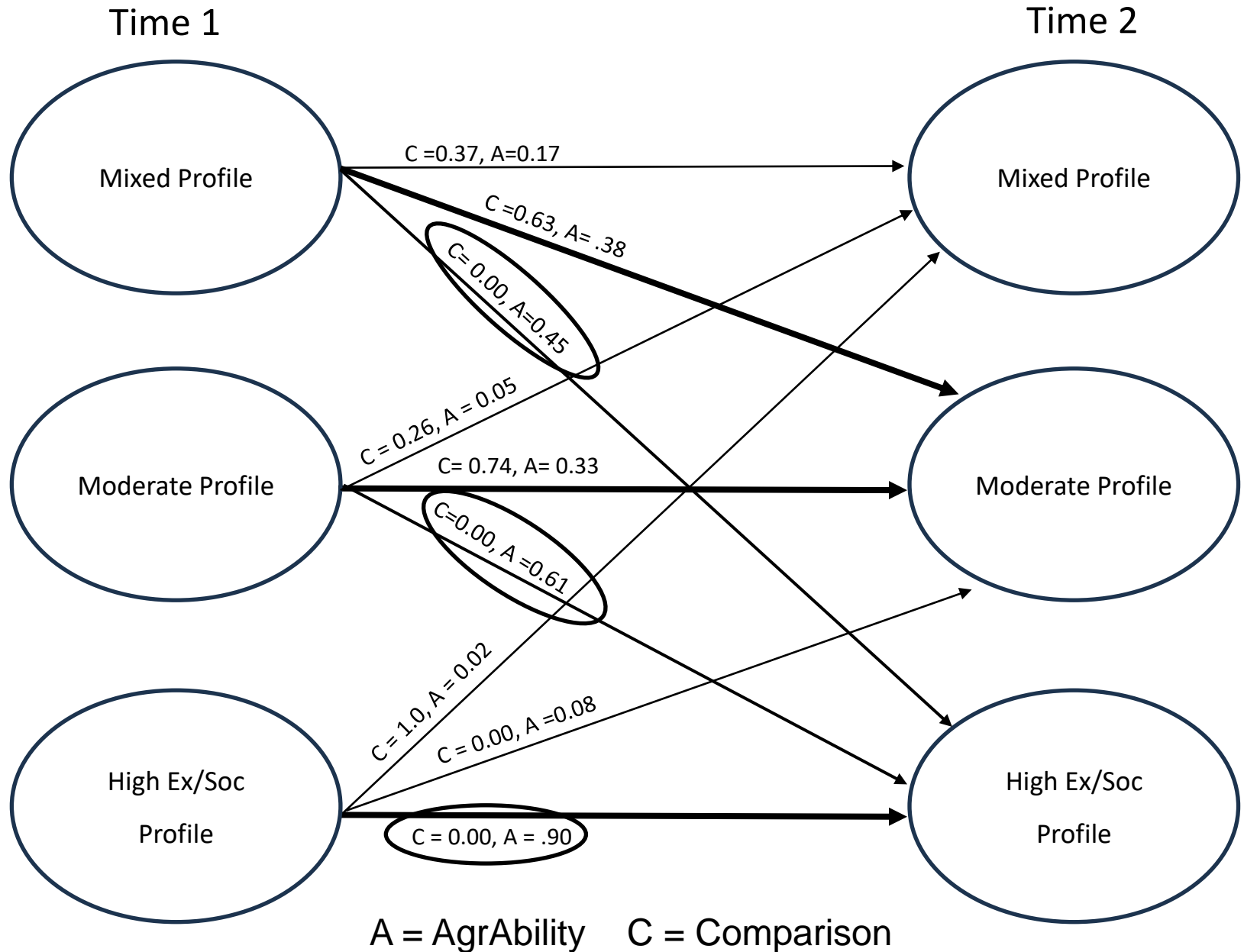


*Time 2*

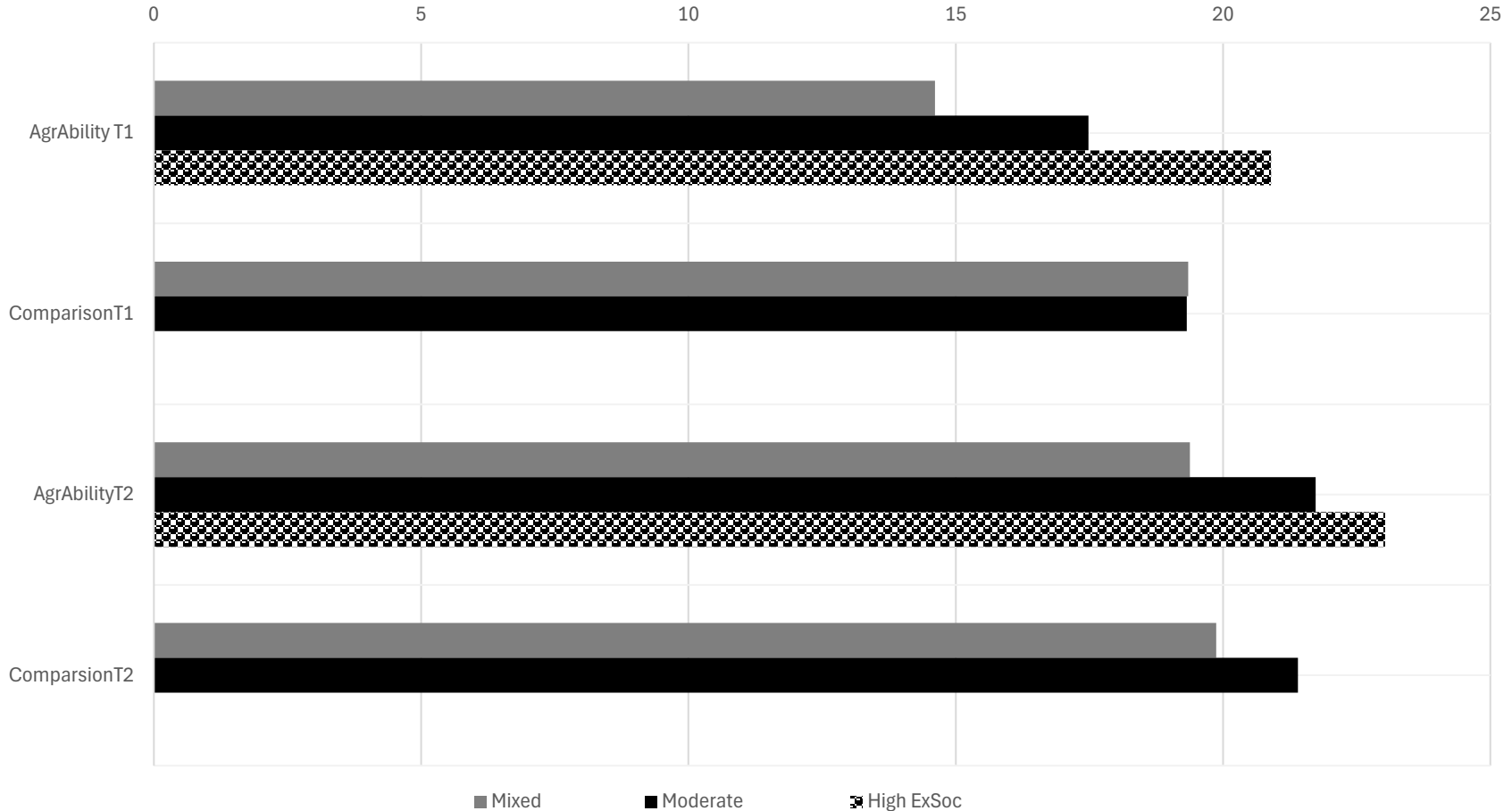
# Movement Between Profiles



# Movement Between Profiles By Group



# ILW Scores by Group and Profile Status



Time 1 AgrAbility < Comparison IWL scores; not at Time 2  
Time 1 AgrAbility Profiles differed; but not at Time 2

# Conclusions

- There are 3 unique QOL profiles (High ExSoc, Moderate, and Mixed) of individuals using the 4 QoL dimensions.
- These profiles are relatively stable over time.
- AgrAbility involvement is related to transitioning to profiles with high Existential and Social scores.
- Individuals not involved in AgrAbility show more profile stability.
- AgrAbility involvement is related to improved Independent Living and Working scores.



# Implications

- Looking at profiles assist in seeing patterns of QoL and adjusting interventions
  - QoL has different domains and profiles allow you to see if specific domains have higher or lower needs
  - Can target specific intervention strategies based on the areas of QoL that show more need
  - Can assess which specific interventions may be working for specific domains of QoL

# Implications

What these profiles tell us

- AgrAbility may be the best at targeting aspects of Social and Existential domains as they increased the most for AgrAbility clients
- The AgrAbility clients showed improvement in Independent Living and Working regardless of profile – all improved to some degree
- Independent Living and Working is higher for the profile with higher Social and Existential QoL – these domains are important for this outcome



# AgrAbility Quality of Life Profile Transitions and Relations to Independent Living and Working

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**2025 AgrAbility National Training**